

---

# **PWBS Documentation**

***Release 0.4.0-dev0***

**Patryk Adamczyk**

**Aug 01, 2019**



---

## Contents:

---

<b>1</b>	<b>PAiP Web Build System</b>	<b>1</b>
1.1	Actual Version : v.0.4.0-dev0	1
<b>2</b>	<b>Indices and tables</b>	<b>3</b>
2.1	PAiP Web Build System	3
2.1.1	Documented Version : v.0.4.0-dev0	3
2.1.1.1	Features	4
2.1.2	Credits	4
2.1.2.1	Development Lead	4
2.1.2.2	Contributors	4
2.2	PWBS CLI Usage	4
2.2.1	Quickstart	4
2.2.2	Full CLI Usage Documentation	5
2.2.2.1	Help	5
2.2.2.2	Special Tasks	5
2.2.2.3	Tasks	5
2.3	PWBS Installation Guide	6
2.3.1	Stable Release from PyPi	6
2.3.2	Latest Development Release	6
2.4	pwbs.json Configuration File	6
2.4.1	Tasks	6
2.4.1.1	Single Task	6
2.4.1.2	MultiCommand Task	7
2.4.1.3	Multi Task	7
2.4.1.4	Watcher	8
2.4.1.5	Scheduler	8
2.4.2	JSON Schemas	9
2.4.2.1	PWBS_LCF-pwbs.json Working Draft	9
2.4.2.2	PWBS_LCF-pwbs.json v.0.3	14
2.4.2.3	PWBS_LCF-pwbs.json v.0.2	20
2.4.2.4	PWBS_LCF-commands.json v.0.1	21
2.4.3	<b>FUTURE:</b> Full PWBS pwbs.json Config File	22
2.5	Contribution Guide	24
2.5.1	Welcome in our Contribution Guide	24
2.5.2	How can i contribute?	24
2.5.2.1	Types of Contributions	25

	2.5.2.1.1	Submit Feedback	25
	2.5.2.1.2	Write Documentation	25
	2.5.2.1.3	Report Bugs	25
	2.5.2.1.4	Fix Bugs	25
	2.5.2.1.5	Implement Features	25
2.5.3	Rules and Additional Information		25
	2.5.3.1	Rules	25
	2.5.3.1.1	Pull Request Guidelines	25
	2.5.3.1.2	Tests	26
	2.5.3.2	Templates	26
	2.5.3.2.1	Feedback Issue Template	26
	2.5.3.2.2	Bug Report Issue Template	26
2.6	License		26
	2.6.1	Informations about license	26
	2.6.2	License Text	27
2.7	CHANGELOG		27
	2.7.1	Branch v.0.5.X	27
	2.7.1.1	0.5.0-dev2	27
	2.7.1.2	0.5.0-dev0	27
	2.7.2	Branch v.0.4.X	28
	2.7.2.1	0.4.0-alpha0	28
	2.7.2.2	0.4.0-dev0	28
	2.7.3	Branch v.0.3.X	28
	2.7.3.1	0.3.0-dev1 (22.12.2017)	28
	2.7.4	Branch v.0.2.X	28
	2.7.4.1	0.2.0-dev3 (20.12.2017)	29
	2.7.4.2	0.2.0-dev2 (16.12.2017)	29
	2.7.4.3	0.2.0-dev1 (16.12.2017)	29
	2.7.5	Branch v.0.1.X	29
	2.7.5.1	0.1.0-dev2 (13.12.2017-16.12.2017)	29
	2.7.5.2	0.1.0-dev1 (12.12.2017-13.12.2017)	29
	2.7.6	Branch v.0.0.X	29
	2.7.6.1	0.0.1-dev4 (09.12.2017-12.12.2017)	30
	2.7.6.2	0.0.1-dev3 (09.12.2017)	30
	2.7.6.3	0.0.1-dev2 (09.12.2017)	30
	2.7.6.4	0.0.1-dev0 (09.12.2017)	30
2.8	PWBS Code Documentation		30
	2.8.1	Basic Informations	30
	2.8.2	Documentation Convention	30
	2.8.3	Code Documentation: Modules	30
	2.8.3.1	pwbs	30
	2.8.3.2	pwbs.api	31
	2.8.3.3	pwbs.command	31
	2.8.3.4	pwbs.config	31
	2.8.3.5	pwbs.core	31
	2.8.3.6	pwbs.lib	31
	2.8.3.7	pwbs.log	31
	2.8.3.8	pwbs.tests	31
	2.8.4	Code Documentation: Submodules	31
	2.8.4.1	pwbs	31
	2.8.4.1.1	pwbs.__init__	31
	2.8.4.1.2	pwbs.__main__	32
	2.8.4.2	pwbs.command.command	32
	2.8.4.3	pwbs.config.config_manager	36

2.8.4.4	pwbs.config.pwbs_config	36
2.8.4.5	pwbs.core	37
2.8.4.6	pwbs.log.logger	38
2.8.4.7	pwbs.pwbs_class	42
2.8.4.8	pwbs.tests	43
2.8.4.8.1	Test Runner	43
2.8.4.8.2	Tests	44
2.8.4.8.2.1	Test 0	44
2.8.4.8.2.2	Test 1	44
2.8.4.8.2.3	Test 2	45
2.8.4.8.2.4	Test 3	45
2.8.4.8.2.5	Test 4	45
2.8.4.8.2.6	Test 5	45
2.9	Roadmap to FUTURE:	45
2.9.1	Core Features	45
2.9.2	Features	46
<b>Python Module Index</b>		<b>47</b>
<b>Index</b>		<b>49</b>



# CHAPTER 1

---

PAiP Web Build System

---

## 1.1 Actual Version : v.0.4.0-dev0





- [genindex](#)
- [modindex](#)
- [search](#)

## 2.1 PAiP Web Build System

### 2.1.1 Documented Version : v.0.4.0-dev0

**PWBS** is Build System for easy automation process. This project makes one command for all what you can't remember or it's just too long to rewrite all over every time.

- **Licensed under MIT License**

—

- **PyPi Package:** <https://pypi.org/project/pwbs/>

—

—

—

—

—

- **Documentation on readthedocs.io**

—

### 2.1.1.1 Features

- Single Tasks - `pwbs task` executes one command
- **NOT\_IMPLEMENTED:** Multi Tasks - `pwbs task` executes other tasks
- MultiCommand Tasks - `pwbs task` executes multiple commands
- **NOT\_IMPLEMENTED:** Watcher Tasks - `pwbs task` starting watcher which watching specified files for changes and executing specified commands on file modification
- **NOT\_IMPLEMENTED:** Scheduler Tasks - `pwbs task` starting scheduler which executing commands on specified schedule
- **NOT\_IMPLEMENTED:** Argumented Tasks - `pwbs task "Hello World"` starting specified commands and/or tasks with special argument (This task have to be used alone in execution of `pwbs`)

## 2.1.2 Credits

### 2.1.2.1 Development Lead

- Patryk Adamczyk <[patrykadamczyk@patrykadamczyk.net](mailto:patrykadamczyk@patrykadamczyk.net)>

### 2.1.2.2 Contributors

None yet. Why not be the first?

## 2.2 PWBS CLI Usage

### 2.2.1 Quickstart

1. Install Python 3 [>3.5]
2. Install PWBS [`pip install pwbs` OR `pip3 install pwbs` (Platform Depending)]
3. Go to your project where you want to use `pwbs`
4. Create `pwbs.json` file [FUTURE: `pwbs --new-config`]
5. Create in that file that structure:

```
{
  "commands" : {
  }
}
```

6. Add your tasks to `pwbs.json` file [Just add normal json key:value pair where key is taskname and value is command]
7. Run you tasks `pwbs <task>`

## 2.2.2 Full CLI Usage Documentation

### 2.2.2.1 Help

**-h, -help**  
Show help message and exit

### 2.2.2.2 Special Tasks

**-v {0,1,2,3,255}, --verbose {0,1,2,3,255}**  
Changing Verbosity

0. No Information about running
1. Normal Information about running [Default Level]
2. More Information about running
3. More Information about running and work behind the scenes

255. Debug Verbosity Mode

**--debug**  
Debug Mode  
  
Debug Mode is turned off by default.

**--version**  
Showing Version of PWBS

**--new-config**  
[FUTURE:]  
  
Creating Blank Configuration File from basic template

**-l, --log**  
Enabling Active Logging

**-lf LOGFILE, --logfile LOGFILE, --log-file LOGFILE**  
Specifying Log File  
  
Default Log File: ./pwbs.log

**-c CONFIGFILE, --configfile CONFIGFILE, --config-file CONFIGFILE**  
Specifying Configuration File  
  
Default Configuration File: ./pwbs.json

**--test-mode**  
Enabling Test Mode  
  
What it doing behind the scenes? Changing Verbosity to: 255. Changing to Debug Mode.

**--run-tests**  
Starting PWBS Test Runner

### 2.2.2.3 Tasks

**TASK**  
Task to be executed

## 2.3 PWBS Installation Guide

### 2.3.1 Stable Release from PyPi

- Install Python>3.6 from here [Python Downloads Website](#) (if it's not already installed)

- Install PWBS

- Windows

In CMD or other Command Line Interpreter execute: `pip install pwbs`

- Linux and others

In Command Line execute: `pip3 install pwbs`

### 2.3.2 Latest Development Release

- Install Python>3.6 from here [Python Downloads Website](#) (if it's not already installed)

- Install Git (if it's not already installed)

- In CMD or other Command Line Interpreter execute:

- `git clone https://gitlab.com/paip-web/pwbs.git`

- `cd pwbs`

- `pip install -e .` or linux: `pip3 install -e .`

## 2.4 pwbs.json Configuration File

### 2.4.1 Tasks

#### 2.4.1.1 Single Task

Reimplemented in v.0.4.0dev0

Description

Maps task name to one command.

When you run this task you execute exactly one command which specified.

Example pwbs.json

```
{
  "commands" : {
    "task" : "command"
  }
}
```

Example Description

task - Task Name

command - Command which you want to run when you run this task

### 2.4.1.2 MultiCommand Task

Reimplemented in v.0.4.0dev0

#### Description

Maps task name to commands.

When you run this task you execute **all** commands which you specified you want to run, **↪with** this task.

#### Example pwbs.json

```
{
  "commands" : {
    "task" : {
      "mode" : "mc",
      "commands" : [
        "command1",
        "command2"
      ]
    }
  }
}
```

#### Example Description

task - Task Name  
command1, command2 - Command which you want to run when you run this task [For sure, **↪you** can to specify more than 2]

### 2.4.1.3 Multi Task

Not implemented in v.0.4.0dev0

#### Description

Maps task name to other tasks.

When you run this task you execute commands **from the** tasks you specified.

#### Example pwbs.json

```
{
  "commands" : {
    "task" : [
      "task1",
      "task2"
    ]
  }
}
```

#### Example Description

task - Task Name  
task1, task2 - Tasks which you want to run when you run this task [For sure you can, **↪to** specify more than 2]

#### 2.4.1.4 Watcher

Not implemented in v.0.4.0dev0

##### Description

Maps task name to watcher task.

When you run this task it waits (**or** execute commands **and** waits) **for** changes **in**,  
→ specified directories **and** after change it executes commands.

##### Example pwbs.json

```
{
  "commands" : {
    "task-1" : {
      "mode" : "wc0",
      "context" : [
        "path/to/watch/*"
      ],
      "commands" : [
        "command1"
      ]
    },
    "task-2" : {
      "mode" : "wc",
      "context" : [
        "path/to/watch/*"
      ],
      "commands" : [
        "command1"
      ]
    }
  }
}
```

##### Example Description

task-1 **is** example of the Run, Execute, Watch Task  
task-2 **is** example of the Run, Watch Task

task-1, task-2 - Task Name

path/to/watch/\* - Path you want to watch [You can specify more than one]

command1 - Commands you want to execute when context **is** changed

#### 2.4.1.5 Scheduler

Not implemented in v.0.4.0dev0

##### Description

Maps task name to scheduler task.

When you run this task it waits (**or** execute commands **and** waits) until every specified,  
→ time.

##### Example pwbs.json

```
{
  "commands" : {
    "task-1" : {
      "mode" : "sc0",
      "context" : 00000000000,
      "commands" : [
        "command1"
      ]
    },
    "task-2" : {
      "mode" : "sc",
      "context" : 00000000000,
      "commands" : [
        "command1"
      ]
    }
  }
}
```

### Example Description

task-1 **is** example of the Run, Execute, Wait Task  
 task-2 **is** example of the Run, Wait Task

task-1, task-2 - Task Name

00000000000 - Time you want to wait until execute [Time specify **in** seconds] [You can **↪** specify more time than one]

command1 - Commands you want to execute when context **is** changed

## 2.4.2 JSON Schemas

PWBS Local Configuration File [It's schemas with not implemented features too]

### 2.4.2.1 PWBS\_LCF-pwbs.json Working Draft

"\$schema" : "https://gitlab.com/paip-web/pwbs/raw/develop/docs/source/schema/PWBS\_LCF\_WD.json"

```
{
  "$schema": "http://json-schema.org/draft-07/schema#",
  "description": "PAiP Web Build System - LCF Working Draft [Last-Modified: 03.09.2018] [PWBS Local Configuration File] [Filename: pwbs.json]",
  "type": "object",
  "definitions": {
    "command" : {
      "type" : "array",
      "items": {
        "anyOf": [
          {
            "type" : "string"
          },
          {
            "type" : "object",

```

(continues on next page)

(continued from previous page)

```

        "additionalProperties": false,
        "properties": {
            "task" : {
                "type" : "string"
            },
            "args" : {
                "type" : ["array", "object"]
            },
            "context" : {
                "type" : "array"
            },
            "comment" : {
                "type" : "string"
            }
        }
    }
}

},
"properties": {
    "commands" : {
        "description": "Place for all definitions of Tasks",
        "type" : "object",
        "additionalProperties": false,
        "patternProperties" : {
            "^.+$": {
                "anyOf": [
                    {
                        "description": "Advanced Task",
                        "type" : "object",
                        "additionalProperties": false,
                        "properties" : {
                            "mode" : {
                                "description": "Task Mode:\nst - Single
↪Task\nmt - Multi Task\nnmc - MultiCommand Task\nnwc0 - Watcher (Run,Execute,
↪Wait)\nnwc - Watcher (Run, Wait)\nnsc0 - Scheduler (Run,Execute,Wait)\nnsc -
↪Scheduler (Run,Wait)",
                                "type" : "string"
                            }
                        },
                        "commands" : {
                            "description": "Commands of Task",
                            "anyOf" : [
                                {
                                    "type" : "array",
                                    "$ref": "#/definitions/command"
                                },
                                {
                                    "type" : "object",
                                    "additionalProperties": false,
                                    "properties": {
                                        "windows" : {
                                            "type" : "array",
                                            "$ref": "#/definitions/
↪command"
                                        }
                                    },
                                    "win" : {

```

(continues on next page)



(continued from previous page)

`↪command"``"type" : "array",  
"$ref": "#/definitions/``},``"linux" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"lin" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"macos" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"macosx" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"mac" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"other" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"any" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"Windows" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"Win" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"Linux" : {``"type" : "array",  
"$ref": "#/definitions/``↪command"``},``"Lin" : {``"type" : "array",`

(continues on next page)

(continued from previous page)

↪command"	"\$ref": "#/definitions/
	},
	"Macos" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"Macosx" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"Mac" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"Other" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"Any" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"WINDOWS" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"WIN" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"LINUX" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"LIN" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"MACOS" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
	"MACOSX" : {
	"type" : "array",
↪command"	"\$ref": "#/definitions/
	},
↪command"	

(continues on next page)

(continued from previous page)

```

    },
    "MAC" : {
        "type" : "array",
        "$ref": "#/definitions/
↪command"
    },
    "OTHER" : {
        "type" : "array",
        "$ref": "#/definitions/
↪command"
    },
    "ANY" : {
        "type" : "array",
        "$ref": "#/definitions/
↪command"
    }
}

]
},
"task" : {
    "type" : "string"
},
"args" : {
    "type" : ["array", "object"]
},
"context" : {
    "type" : "array"
},
"comment" : {
    "type" : "string"
}
},
{
    "description": "Single Task",
    "type" : "string"
},
{
    "description": "Multi Task",
    "type" : "array"
}
]
}
},
"config" : {
    "type" : "object",
    "additionalProperties": false,
    "properties": {
        "settings" : {
            "description": "Settings of PWBS",
            "type" : "object",
            "additionalProperties": false,
            "properties": {
                "json-plugins" : {
                    "type" : "boolean"

```

(continues on next page)

(continued from previous page)

```

    },
    "py-plugins" : {
        "type" : "boolean"
    },
    "verbose-mode" : {
        "type" : "integer"
    },
    "os-tasks" : {
        "type" : "boolean"
    },
    "debug-mode" : {
        "type" : "boolean"
    },
    "test-mode" : {
        "type" : "boolean"
    },
    "pwbs-integrated-tasks" : {
        "type" : "boolean"
    },
    "pwbs-integrated-plugins" : {
        "type" : "boolean"
    },
    "lcf-plugins" : {
        "type" : "boolean"
    }
}
},
"use" : {
    "description": "Define what plugins you want to use",
    "type" : "object",
    "additionalProperties": false,
    "properties": {
        "py-plugins" : {
            "type" : "array"
        },
        "json-plugins" : {
            "type" : "array"
        },
        "lcf-plugins" : {
            "type" : "array"
        }
    }
}
}
},
"additionalProperties": false
}

```

### 2.4.2.2 PWBS\_LCF-pwbs.json v0.3

"\$schema" : "https://gitlab.com/paip-web/pwbs/raw/develop/docs/source/schema/PWBS\_LCF\_v\_0\_3.json"

```

{
  "$schema": "http://json-schema.org/draft-07/schema#",
  "description": "PAiP Web Build System - LCF v.0.2 [Used in PWBS E2 to
↪and with v.0.3.0dev1] [Filename: pwbs.json]",
  "type": "object",
  "definitions": {
    "command": {
      "type": "array",
      "items": {
        "anyOf": [
          {
            "type": "string"
          },
          {
            "type": "object",
            "additionalProperties": false,
            "properties": {
              "task": {
                "type": "string"
              },
              "args": {
                "type": "array"
              }
            }
          }
        ]
      }
    }
  },
  "properties": {
    "commands": {
      "description": "Place for all definitions of Tasks",
      "type": "object",
      "additionalProperties": false,
      "patternProperties": {
        "^.+$": {
          "anyOf": [
            {
              "description": "Advanced Task",
              "type": "object",
              "additionalProperties": false,
              "properties": {
                "mode": {
                  "description": "Task Mode:\nst - Single
↪Task\mnt - Multi Task\nmc - MultiCommand Task\nwc0 - Watcher (Run,Execute,
↪Wait)\nwc - Watcher (Run, Wait)\nsc0 - Scheduler (Run,Execute,Wait)\nsc -
↪Scheduler (Run,Wait)",
                  "type": "string"
                },
                "commands": {
                  "description": "Commands of Task",
                  "anyOf": [
                    {
                      "type": "array",
                      "$ref": "#/definitions/command"
                    }
                  ]
                }
              }
            }
          ]
        }
      }
    }
  }
}

```

(continues on next page)

(continued from previous page)

```

↪command"
    "type" : "object",
    "additionalProperties": false,
    "properties": {
        "windows" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "win" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "linux" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "lin" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "macos" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "macosx" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "mac" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "other" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "any" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "Windows" : {
            "type" : "array",
            "$ref": "#/definitions/

↪command"
        },
        "Win" : {
            "type" : "array",
            "$ref": "#/definitions/

```

(continues on next page)

(continued from previous page)

```

↪command"
    },
    "Linux" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Lin" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Macos" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Macosx" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Mac" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Other" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "Any" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "WINDOWS" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "WIN" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "LINUX" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },
    "LIN" : {
        "type" : "array",
        "$ref": "#/definitions/

↪command"
    },

```

(continues on next page)

(continued from previous page)

```

"MACOS" : {
  "type" : "array",
  "$ref" : "#/definitions/
↪command"
},
"MACOSX" : {
  "type" : "array",
  "$ref" : "#/definitions/
↪command"
},
"MAC" : {
  "type" : "array",
  "$ref" : "#/definitions/
↪command"
},
"OTHER" : {
  "type" : "array",
  "$ref" : "#/definitions/
↪command"
},
"ANY" : {
  "type" : "array",
  "$ref" : "#/definitions/
↪command"
}
}
}
]
},
"context" : {
  "type" : "array"
},
"comment" : {
  "type" : "string"
},
"arg" : {
  "type" : "object"
}
},
{
  "description": "Single Task",
  "type" : "string"
},
{
  "description": "Multi Task",
  "type" : "array"
}
]
}
}
},
"config" : {
  "type" : "object",
  "additionalProperties": false,
  "properties": {
    "settings" : {

```

(continues on next page)



(continued from previous page)

```

        "description": "Settings of PWBS",
        "type" : "object",
        "additionalProperties": false,
        "properties": {
            "json-plugins" : {
                "type" : "boolean"
            },
            "py-plugins" : {
                "type" : "boolean"
            },
            "verbose-mode" : {
                "type" : "integer"
            },
            "os-tasks" : {
                "type" : "boolean"
            },
            "debug-mode" : {
                "type" : "boolean"
            },
            "test-mode" : {
                "type" : "boolean"
            },
            "pwbs-integrated-tasks" : {
                "type" : "boolean"
            },
            "pwbs-integrated-plugins" : {
                "type" : "boolean"
            },
            "lcf-plugins" : {
                "type" : "boolean"
            }
        }
    },
    "use" : {
        "description": "Define what plugins you want to use",
        "type" : "object",
        "additionalProperties": false,
        "properties": {
            "py-plugins" : {
                "type" : "array"
            },
            "json-plugins" : {
                "type" : "array"
            },
            "lcf-plugins" : {
                "type" : "array"
            }
        }
    }
}

},
"additionalProperties": false
}

```

### 2.4.2.3 PWBS\_LCF-pwbs.json v.0.2

"\$schema" : "https://gitlab.com/paip-web/pwbs/raw/develop/docs/source/schema/PWBS\_LCF\_v\_0\_2.json"

```
{
  "$schema": "http://json-schema.org/draft-07/schema#",
  "description": "PAiP Web Build System - LCF v.0.2 [Used in PWBS E2 to_
→ and with v.0.3.0dev1] [Filename: pwbs.json]",
  "type": "object",
  "properties": {
    "commands" : {
      "type" : "object",
      "properties": {
        "^.+$": {
          "anyOf": [
            {
              "type" : "string"
            },
            {
              "type" : "array"
            },
            {
              "type" : "object",
              "properties" : {
                "mode" : {
                  "type" : "string"
                },
                "commands" : {
                  "type" : "array"
                },
                "context" : {
                  "type" : "array"
                }
              }
            }
          ]
        }
      }
    },
    "config" : {
      "type" : "object",
      "properties": {
        "json-mods" : {
          "type" : "boolean"
        },
        "py-mods" : {
          "type" : "boolean"
        },
        "verbose-mode" : {
          "type" : "integer"
        },
        "os-commands" : {
          "type" : "boolean"
        },
        "detailos-commands" : {
          "type" : "boolean"
        }
      }
    }
  }
}
```

(continues on next page)

(continued from previous page)

```

    }
  },
  "mods" : {
    "type" : "array"
  },
  "json-mods" : {
    "type" : "array"
  },
  "py-mods" : {
    "type" : "array"
  },
  "os-commands" : {
    "type" : "object",
    "properties": {
      "linux" : {
        "type" : "object"
      },
      "windows" : {
        "type" : "object"
      },
      "macos" : {
        "type" : "object"
      },
      "other" : {
        "type" : "object"
      }
    }
  }
},
"patternProperties": {
  "^.+.$": {
    "$id": "/properties/any",
    "anyOf": [
      {
        "type" : "string"
      },
      {
        "type" : "array"
      },
      {
        "type" : "object"
      }
    ]
  }
},
"additionalProperties": false
}

```

#### 2.4.2.4 PWBS\_LCF-commands.json v0.1

"\$schema" : "https://gitlab.com/paip-web/pwbs/raw/develop/docs/source/schema/PWBS\_LCF\_v\_0\_1.json"

```

{
  "$schema": "http://json-schema.org/draft-07/schema#",

```

(continues on next page)

(continued from previous page)

```

    "description": "PAiP Web Build System - LCF v.0.1 [Used in PWBS E1 to
↪and with v.0.9.1.0] [Filename: pwbs.commands.json]",
    "type": "object",
    "patternProperties": {
        "^.+$": {
            "anyOf": [
                {
                    "type" : "string"
                },
                {
                    "type" : "array"
                },
                {
                    "type" : "object"
                }
            ]
        }
    },
    "additionalProperties": false
}

```

## 2.4.3 FUTURE: Full PWBS pwbs.json Config File

Not implemented [additional features] in any way in v.0.4.0dev0

Full Example pwbs.json

```

/* PWBS Local Configuration File
* pwbs.json
* PWBS_LCF-pwbs.json v.0.3
*/
{
    "config" : {
        "settings" : {
            "json-plugins" : true,                // Enabling JSON Plugins [Default
↪False]
            "py-plugins" : true,                  // Enabling Python Plugins
↪[Default False]
            "verbose-mode" : 255,                 // Changing Verbose Mode [Default
↪1] (This setting can be overwritten in the run of pwbs by the --verbose flag)
            "os-tasks" : true,                    // Enabling Operating System
↪Specific Tasks [Default False]
            "debug-mode" : true,                  // Enabling Debug Mode [Default
↪False] (This setting can be overwritten in the run of pwbs by the --debug flag)
            "test-mode" : true,                   // Enabling Test Mode [Default
↪False] (This setting can be overwritten in the run of pwbs by the --test-mode flag)
            "pwbs-integrated-tasks" : true,       // Enabling PWBS Integrated Tasks
↪[Default False]
            "pwbs-integrated-plugins" : true,     // Enabling PWBS Integrated
↪Plugins [Default False]
            "lcf-plugins" : true                  // Enabling PWBS Local
↪Configuration File - Plugins [Default False] (This option is like importing tasks
↪from another pwbs.json)
        },
        "use" : {

```

(continues on next page)

(continued from previous page)

```

    "py-plugins" : [ // Python Plugins
        "coffeescript",
        "stylus",
        "concatenate",
        "git"
    ],
    "json-plugins" : [ // JSON Plugins
        "test"
    ],
    "lcf-plugins" : [ // Local Configuration File - Plugins
        "test.pwbs.json"
    ]
}
},
"commands" : {
    "deps-install" : {
        "mode" : "st", // Single Task
        "commands" : { // Commands
            "windows" : { // Commands for Windows
                "pip install -r requirements.txt"
            },
            "other" : { // Commands for everything else
                "pip3 install -r requirements.txt"
            }
        },
        "comment" : "Installs Dependencies" // Comment
    },
    "compile" : {
        "mode" : "wc0", // Watcher Task
        "context" : [ // Watcher Context
            "website/blog/static/blog/stylus",
            "website/blog/static/blog/coffee"
        ],
        "comment" : "Compiling your files to normal static files.", // Comment
        "arg" : { // Arguments to be used in this task (used from template_
↪language)
            "tmpdir" : "compiled_tmpdir",
            "compiledir" : "website/blog/static/blog/res"
        },
        "commands" : [
            { // Argumented Task
                "task" : "--git--add",
                "args" : [
                    "all"
                ]
            },
            {
                "task" : "--git--commit",
                "args" : [
                    {
                        "message" : "$(%tl->>date('d-m-Y H:M:s')) - PWBS Auto_
↪Compiler Task" // Argument with template language interpolation
                    }
                ]
            },
            "--coffeescript--init", // Normal task
            "--stylus--init",

```

(continues on next page)

(continued from previous page)

```

        {
            "task" : "--coffeescript--compile",
            "args" : [
                "$(%this->>context)", // Argument with template language
                interpolation using task arguments and task context
                "$(%this->>arg->tmpdir)",
                [
                    "bare",
                    "map"
                ]
            ]
        },
        {
            "task" : "--stylus--compile",
            "args" : [
                "$(%this->>context)",
                "$(%this->>arg->tmpdir)",
                [
                    "compress",
                    "map",
                    "autoprefix"
                ]
            ]
        },
        {
            "task" : "--concatenate--compile",
            "args" : [
                "$(%this->>arg->tmpdir)",
                "$(%this->>arg->compiledir)",
                [
                    "main.css",
                    "main.js"
                ]
            ]
        },
        "--test--testcompiled",
        "--lcf--cleanup"
    ]
}

```

## 2.5 Contribution Guide

### 2.5.1 Welcome in our Contribution Guide

Contributions are welcome, and they are greatly appreciated!

Every little bit helps a lot, and credit will always be given.

### 2.5.2 How can i contribute?

You can contribute and help in many ways.

### 2.5.2.1 Types of Contributions

#### 2.5.2.1.1 Submit Feedback

The best way to send feedback is to file an issue at <https://gitlab.com/paip-web/pwbs/issues> .

Issue template is in another section of that document.

If you are proposing a feature explain in detail how it would work.

#### 2.5.2.1.2 Write Documentation

PWBS (PAiP Web Build System) could always use more documentation and always can have better constructed documentation. Whether as part of official PWBS docs, in docstrings, or even on the web in blog posts, articles, and such.

If you find mistyped word then file an issue or change and submit merge request.

#### 2.5.2.1.3 Report Bugs

Report bugs at <https://gitlab.com/paip-web/pwbs/issues> .

Issue template is in another section of that document.

If you are reporting a bug, please include:

- Your operating system name and version
- Any details about your local setup that might be helpful in troubleshooting.
- Detailed steps to reproduce bug.

#### 2.5.2.1.4 Fix Bugs

Look through the GitLab issues for bugs. Anything tagged with “bug” is open to whoever wants to implement it.

#### 2.5.2.1.5 Implement Features

Look through the Roadmap in documentation and check what wasn't done. Everything what will be there is open to whoever wants to implement it.

## 2.5.3 Rules and Additional Information

### 2.5.3.1 Rules

#### 2.5.3.1.1 Pull Request Guidelines

Before you submit a pull request, check that it meets these guidelines:

1. The pull request should include tests.
2. Add your changes to ChangeLogs
  - docs/source/n\_changelog.rst (Every even small change)

- HISTORY.rst (For every big change in functionality)
3. The pull request should work for Python  $\geq 3.6$  and be OS independent.

### 2.5.3.1.2 Tests

To run tests run any of these:

- `pytest`
- `pwbs --run-tests`
- `python -m pwbs --run-tests`

If you make tests keep ordering don't fillout missing numbers. Last Documented Test is 5? Then make test 6 not 4 because it's missing number.

### 2.5.3.2 Templates

#### 2.5.3.2.1 Feedback Issue Template

There where in this template is <Something> that means your data.

Issue

```
Title | Feedback: <Name or Nick>
Description | <Your Feedback and/or Your Feature Proposal>
Milestone | NEXT
Label | FEEDBACK
```

#### 2.5.3.2.2 Bug Report Issue Template

There where in this template is <Something> that means your data.

Issue

```
Title | BUG: <Name of Bug>
Description | <Your Information about the bug>
Milestone | BUG
Label | BUG
```

## 2.6 License

### 2.6.1 Informations about license

License: MIT

Copyright: Patryk Adamczyk © 2017-2019



## 2.6.2 License Text

The MIT License (MIT)

Copyright (c) 2019 Patryk Adamczyk

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the “Software”), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED “AS IS”, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

## 2.7 CHANGELOG

### 2.7.1 Branch v.0.5.X

Description:

```
# This version was:
# - changes in code style
# - Quality of Life improvements
# - Upgrades to newer versions of dependencies
```

#### 2.7.1.1 0.5.0-dev2

- Relative imports changed to absolute imports
- Added more information on Error Dumping

It's for better understanding errors on Sentry

#### 2.7.1.2 0.5.0-dev0

- Code Style changes
- Sentry Error Tracking
- Help on no arguments
- PWBS Event Manager (deprecated)
- PWBS LCF Schema v.0.4
- Deleted old PWBS used for automation
- Stopped handling STDOUT of Commands
- Base ChangeLog Format Changed

- Some rephrase of Documentation

## 2.7.2 Branch v.0.4.X

Description:

```
# This version branch was:  
# - complete rewrite of the project
```

### 2.7.2.1 0.4.0-alpha0

- First alpha version

### 2.7.2.2 0.4.0-dev0

- Rewrite of the project:

```
# Too much to write all details here  
# In the easy words of this version:  
# - I deleted pwbs 0.3.0-dev1 code  
# - I wrote pwbs code from zero again
```

## 2.7.3 Branch v.0.3.X

Description:

```
# This version branch was:  
# - adding multi tasking
```

### 2.7.3.1 0.3.0-dev1 (22.12.2017)

- Release 8 on PyPi
- Added Multi Tasking

## 2.7.4 Branch v.0.2.X

Description:

```
# This version branch was:  
# - Adding first mode of tasks  
# - Fixing some RST errors again  
# - Fixing some bugs [Hardcoded path and wrong default for one function]
```

#### 2.7.4.1 0.2.0-dev3 (20.12.2017)

- Repaired Code Errors (Showing when using OS other then Windows)
- Repaired 4 Tests Failed on Linux
- Repaired pwbs.pwm.pwm\_json (Wrong Default | Now Default is dict not list)

#### 2.7.4.2 0.2.0-dev2 (16.12.2017)

- Release 7 on PyPi
- Repaired RST Errors

#### 2.7.4.3 0.2.0-dev1 (16.12.2017)

- Release 6 on PyPi
- Added Single Tasking

### 2.7.5 Branch v.0.1.X

Description:

```
# This version branch was:  
# - fixing some errors in repository and package basic documentation  
# - added some tests  
# - added some cli options
```

#### 2.7.5.1 0.1.0-dev2 (13.12.2017-16.12.2017)

- Release 5 on PyPi
- Added --new-config option as Working
- Added --config <file> option as Working

#### 2.7.5.2 0.1.0-dev1 (12.12.2017-13.12.2017)

- Release 4 on PyPi
- Added collective.checkdocs as setup requirement
- Repaired RST Errors
- Tests for pwm submodule and for pwbs module

### 2.7.6 Branch v.0.0.X

Description:

```
# This Version Branch was first version of project PAiP Web Build System Edition 2  
# This was as Edition 2 by existance of my own PWBS project  
# I wanted to rewrite it to be more readable and better as well as add it to PyPi
```

#### 2.7.6.1 0.0.1-dev4 (09.12.2017-12.12.2017)

- Release 3 on PyPi
- Adding Command Interpreter
- Repairing setup.py Script
- Added Tox as Test Runner for checking with which version pwbs is compatible
- Added Command `-help`
- Added Command `-verbose <mode>`

#### 2.7.6.2 0.0.1-dev3 (09.12.2017)

- Release 2 on PyPi
- Adding Baner

#### 2.7.6.3 0.0.1-dev2 (09.12.2017)

- First Release in PyPi

#### 2.7.6.4 0.0.1-dev0 (09.12.2017)

- First packaging

## 2.8 PWBS Code Documentation

### 2.8.1 Basic Informations

Documentation Version: v.0.4.0-dev0+documentation-1

Documented PWBS Repository Version: v.0.4.0-dev0

Documented PWBS PyPi Release: <NOT PUBLISHED> [TO BE PUBLISHED as v.0.4.0-dev1]

### 2.8.2 Documentation Convention

Convention of this documentation:

*# Every function and module have own RST file in DOCUMENTATION\_ROOT/code\_docs/ folder*

### 2.8.3 Code Documentation: Modules

#### 2.8.3.1 pwbs

This module is package of PWBS.

### 2.8.3.2 pwbs.api

This module is place for future api to make plugins for PWBS.

### 2.8.3.3 pwbs.command

This module is place for Commands Classes. Commands classes are used to interpret config into objects and by that they can invoke run method which runs commands which was specified in config file.

### 2.8.3.4 pwbs.config

This module is place of configuration classes and loading configuration classes.

### 2.8.3.5 pwbs.core

This module is place for core PWBS features.

### 2.8.3.6 pwbs.lib

This module is place for all dependencies which are made as part of PWBS for no dependencies version complications. This module will not be ever well documented here because of type of files it has.

### 2.8.3.7 pwbs.log

This module is place for Logger Classes and everything related to logging (to file and stdout).

### 2.8.3.8 pwbs.tests

This module is place for tests. This module will be documented together (In 2 parts: first about test runner and second about all tests).

## 2.8.4 Code Documentation: Submodules

### 2.8.4.1 pwbs

This module is place for running pwbs and package initialization.

#### 2.8.4.1.1 pwbs.\_\_init\_\_

Place for initialization of the package.

Here is script for running this script by `python pwbs/__init__.py`.

```
pwbs.__init__.main()
```

Main function of PWBS

```
pwbs.__version__
```

Version of the PWBS

### 2.8.4.1.2 pwbs.\_\_main\_\_

Place for running the package.

Here is script for running this script by `python -m pwbs` and `pwbs`.

### 2.8.4.2 pwbs.command.command

This module is place for main PWBS Program Class.

```
class pwbs.command.command.CommandType
    This class is Enum of Task Types.

    NullTask = 0x000
        This type is Null Task (Special type to make null type task).

    InitialNullTask = 0x001
        This type is Null Task type that are used to initialize CommandType Object in Command Class.

    SpecialTask = 0x101
        This type is Special Task type.

    SingleTask = 0x201
        This type is Single Task type.

    MultiTask = 0x202
        This type is Multi Task type.

    MultiCommandTask = 0x203
        This type is Multi Command Task type.

    WatcherTask = 0x204
        This type is Watcher Task type. [FUTURE:]

    SchedulerTask = 0x205
        This type is Scheduler Task type. [FUTURE:]

    TestTask = 0xFF0
        This type is Test Task type. This type is for tests only.

    ErrorTask = 0xFF1
        This type is Error Task type. This type is for error catching purposes.

    NullTaskF = 0xFFF
        This type is Null Task type (Special type for make null task).

class pwbs.command.command.Platform
    This class is for making specific platform tasks. [FUTURE:]

    NullOS = 0b0000
        This is for no platform.

    Windows = 0b0001
        This is for Windows platform.

    Linux = 0b0010
        This is for Linux platform.

    MacOS = 0b0100
        This is for Mac OS X platform.
```

**Other = 0b1000**  
This is for other platforms.

**Any = 0b1111**  
This is for any platform.

**class pwbs.command.command.CommandMode**  
This class is for Tasks Modes.

**SingleTask\_Standard = 0x2201001**  
This is Single Task - Standard Mode.

**MultiTask\_Standard = 0x2202001**  
This is Multi Task - Standard Mode.

**MultiCommandTask\_Standard = 0x22030001**  
This is Multi Command Task - Standard Mode

**WatcherTask\_StartAndRun = 0x22040001**  
This is Watcher Task - Start, Run Commands and Wait Mode.

**WatcherTask\_StartAndWait = 0x22040002**  
This is Watcher Task - Start and Wait Mode.

**Scheduler\_StartAndRun = 0x22050001**  
This is Scheduler Task - Start, Run Commands and Wait Mode.

**Scheduler\_StartAndWait = 0x22050002**  
This is Scheduler Task - Start and Wait Mode.

**NullMode = 0x00000000**  
This is null mode.

**ModeNotSpecified = 0x00000001**  
This is Mode for not specified mode.

**TestTask\_TestMode = 0xFFFF00000**  
This is Test Task - Test Mode.

**ErrorTask\_ErrorMode = 0xFFFF1FFFF**  
This is Error Task - Error Mode.

**NullTask\_NullMode = 0xF000FFF0**  
This is Null Task - Null Mode.

**NullTaskF\_NullMode = 0xFFFFFFFFF0**  
This is Null Task F - Null Mode.

**ErrorMode = 0xFFFFFFFFF**  
This is Error Mode.

**class pwbs.command.command.Command**(name, cmd\_type: *CommandType* = *CommandType.InitialNullTask*, commands: *list* = *None*, comment: *str* = "", mode: *CommandMode* = *CommandMode.NullMode*, arguments: *dict* = *None*, special: *dict* = *None*, platform: *Platform* = *Platform:Any*) → *None*

This is Command Class. It's used to make Tasks from JSON to Python object.

Constructor making this steps:

- Making Logger Object
- Defining Variables

**Parameters**

- **name** (*str*) – Name of the Command (Task).
- **cmd\_type** (*CommandType*) – Type of Command.  
Default it's set to `pwbs.command.command.CommandType.InitialNullTask`.
- **commands** (*list*) – List of Commands.  
Default it's set to `None`.
- **mode** (*CommandMode*) – Mode of Command (Task).  
Default it's set to `pwbs.command.command.CommandMode.NullMode`.
- **arguments** (*dict*) – Arguments of Command (Task).  
Default it's set to `None`.
- **special** (*dict*) – Special Arguments of Commands (Task).  
Default it's set to `None`.
- **platform** (*Platform*) – Platform of Command (Task).  
Default it's set to `pwbs.command.command.Platform.Any`

**Returns** `None`**Return type** `None`

**\_log** = `pwbs.log.logger.Logger()`  
Logger Object

**name**  
Name of Command

**type**  
Type of Command

**commands**  
Commands specified to execute when task is called.

**comment**  
Comment to Command

**mode**  
Mode of Command

**arguments**  
Arguments of Command

**special**  
Special Arguments of the Command

**platform**  
Platform for the Command

**\_\_eq\_\_** (*self, other*)  
This thunder method is for Equation Operator Overload for this class.

**run** ()  
This method is used to run task and commands associated with it.  
TODO: MultiTask

**Raises**



- **Exception** – Error Task Reached. [TODO: Change exception]
- **NotImplementedError** – If not supported task type is reached.

**Returns** None

**Return type** None

This method is making these steps:

- Checking type
- Running Special `execute_as_XXXXXXX()` method for specified type

**execute\_as\_singletask\_or\_multicommand()**

This method is executing that Command object as SingleTask or MultiCommandTask.

**prefixer** (*text*)

Text Prefixer needed for that function. Used to time command outputs.

**Parameters** *text* (*str*) – Text to prefix

**execute\_as\_watcher()**

**Raises** **NotImplementedError** – Feature not Implemented! [TODO:]

**execute\_as\_scheduler()**

**Raises** **NotImplementedError** – Feature not Implemented! [TODO:]

**\_\_add\_\_** (*self*, *other*)

This thunder method is for Adding Operator Overload for this class.

**argument\_parser()**

This method is for argument\_parser.

**Returns** `pwbs.command.command.Command.comment`

**Return type** `str`

**class** `pwbs.command.command.CommandList` (*value: Command*) → None

This class is for making list Commands Class Objects.

**Parameters** *value* (`Command`) – Array of values [Type: List of Command Class Objects]

**Returns** None

**Return type** None

**values**

Values of the CommandList

**\_\_getitem\_\_** (*self*, *key*)

This thunder method is for X[Y] Operator Overload for this class.

**\_\_setitem\_\_** (*self*, *key*, *value*)

This thunder method is for X[Y] = Z Operator Overload for this class.

**\_\_delitem\_\_** (*self*, *key*)

This thunder method is for del X[Y] Operator Overload for this class.

**\_\_contains\_\_** (*self*, *item*)

This thunder method is for Y in X Operator Overload for this class.

**items()**

This method returns all items in CommandList.

**Returns** `pwbs.command.command.CommandList.values`

**Return type** list

### 2.8.4.3 pwbs.config.config\_manager

This module is place for Configuration Manager.

**exception** pwbs.config.config\_manager.PWBSConfigFileDontExistError  
Exception for handling Local Config File Don't Exist

**exception** pwbs.config.config\_manager.PWBSInvalidConfigFile  
Exception for handling Invalid Format of Local Config File

**class** pwbs.config.config\_manager.ConfigManager (filename="pwbs.json")  
This class is for Managing Configuration File.

**Parameters** filename (str) – Filename of Configuration File.

Defaults to pwbs.json.

**Raises** PWBSConfigFileDontExistError – Local Configuration File Don't Exist

**config\_filename**  
Configuration File Filename

**config\_filename\_path**  
Configuration File Path

**error = None**  
Variable contains errors when they occur.

**filemanager = pwbs.lib.pwm.pwm\_json.JSON\_IO(self.config\_filename\_path)**  
File Manager Object

**config\_dict**  
Configuration File Dictionary Object

**load()**  
This method is trying to load Configuration File Data.

**Returns** pwbs.config.config\_manager.ConfigManager.config\_dict

**Return type** dict

**Raises** PWBSInvalidConfigFile – If in Configuration File doesn't exist commands key  
(Which means that config file is invalid).

**write(newdata)**  
This method is overwriting Configuration File with new data.

**Returns** New data provided but returned from writing and reading config file.

**Return type** dict

### 2.8.4.4 pwbs.config.pwbs\_config

This module is place for PWBS Configuration Manager.

**class** pwbs.config.pwbs\_config.PWBS\_ConfigManager  
This class is holding PWBS Config Manager.

**log = pwbs.log.logger.Logger()**  
Logger

```

verbose = 1
    Verbose Level

debug = False
    Debug Mode

configmanager = pwbs.config.configmanager.ConfigManager()
    Local Configuration File Manager

commands = pwbs.command.command.CommandList([])
    Commands List

config_file()
    Configuration File Loader

    Returns Data from Configuration File

    Return type dict

commands_to_commandlist()
    Method for changing Configuration File Data to CommandList Object

    Raises PWBSInvalidConfigFile – Invalid Configuration File

static ctcl__cmdtype (commandbody)
    This method is to change Command Dict Object into pwbs.command.command.CommandType.

    Parameters commandbody (dict) – Command Dict Object

static ctcl__comment (commandbody)
    This method is to change Command Dict Object into str with comment.

    Parameters commandbody (dict) – Command Dict Object

static ctcl__cmdmode (commandbody)
    This method is to change Command Dict Object into pwbs.command.command.CommandMode.

    Parameters commandbody (dict) – Command Dict Object

static ctcl__arguments (commandbody)
    This method is to change Command Dict Object into list with arguments.

    Parameters commandbody (dict) – Command Dict Object

static ctcl__commands (commandbody)
    This method is to change Command Dict Object into list with commands.

    Parameters commandbody (dict) – Command Dict Object

static ctcl__platform (commandbody)
    This method is to change Command Dict Object into pwbs.command.command.Platform.

    Parameters commandbody (dict) – Command Dict Object

```

#### 2.8.4.5 pwbs.core

This module is place for PWBS core things like exceptions.

```

pwbs.core.prefix_text (text="")
    Default Prefixer

exception pwbs.core.NotImplementedFeatureError
    Error for Not Implemented Functionality

```

### 2.8.4.6 pwbs.log.logger

This module is place for PWBS logging things.

**exception** `pwbs.log.logger.LoggerAssertionError`  
Error to show when `Logger.log_assertion` failed assertion.

**class** `pwbs.log.logger.BaseLogger`  
Base Logger Class

That Logger logging to STDOUT.

**debug\_delayed\_story**  
Story Log for Delayed Debug

**debug\_state**  
Debug Mode State

**verbose\_state**  
Verbose Mode State

**debug** (*state=False*)  
Debug Mode Changer  
**Parameters** **state** (*bool*) – State to change to  
Defaults to False. [Debug Mode Disabled]

**verbose** (*state=1*)  
Verbose Mode Changer  
**Parameters** **state** (*int*) – State to change to  
Defaults to 1.  
Levels:  
0. No Verbose  
1. Small Verbose  
2. Medium Verbose  
3. Full Verbose  
  
255. Debug Verbose Mode

**log** (*text, prefix=pwbs.core.prefix\_text*)  
Log Function  
**Parameters**  
• **text** (*str*) – Text to Log  
• **prefix** (*function*) – Prefixer to Use

**log\_wop** (*text*)  
Log Function [Without prefixer]  
**Parameters** **text** (*str*) – Text to Log

**log\_verbose** (*text, verbose=1*)  
Log Verbose Function (Logs when message verbose is smaller than Configuration Verbosity)  
**Parameters**

- **text** (*str*) – Text to Log
  - **verbose** (*int*) – Verbose Level for Message
- Defaults to 1.

**log\_debug** (*text*)  
Log Debug Function (Logs when debug mode is turned on)

**Parameters** **text** (*str*) – Text to Log

**log\_assertion** (*assertion*, *name=None*)  
Log Assertion Function

**Parameters**

- **assertion** (*bool*) – Assertion to check
- **name** (*str*) – Name of the Assertion [To name Log Assertions]

**class** pwbs.log.logger.**LogLogger**

Log Logger Class

That Logger logging to file.

**story** = []  
Story Log

**logfile** = "pwbs.log"  
Log File Variable

**activelogging** = **False**  
Active Logging Variable

When Active Logging is active then every any log function call it save to log file.

**debug\_delayed\_story**  
Story Log for Delayed Debug

**debug\_state**  
Debug Mode State

**verbose\_state**  
Verbose Mode State

**debug** (*state=False*)  
Debug Mode Changer

**Parameters** **state** (*bool*) – State to change to  
Defaults to False. [Debug Mode Disabled]

**verbose** (*state=1*)  
Verbose Mode Changer

**Parameters** **state** (*int*) – State to change to  
Defaults to 1.

Levels:

0. No Verbose
1. Small Verbose
2. Medium Verbose
3. Full Verbose

## 255. Debug Verbose Mode

**log** (*text*, *prefix*=*pwbs.core.prefix\_text*)  
Log Function

**Parameters**

- **text** (*str*) – Text to Log
- **prefix** (*function*) – Prefixer to Use

**log\_wop** (*text*)  
Log Function [Without prefixer]

**Parameters** **text** (*str*) – Text to Log

**log\_verbose** (*text*, *verbose*=1)  
Log Verbose Function (Logs when message verbose is smaller than Configuration Verbosity)

**Parameters**

- **text** (*str*) – Text to Log
  - **verbose** (*int*) – Verbose Level for Message
- Defaults to 1.

**log\_debug** (*text*)  
Log Debug Function (Logs when debug mode is turned on)

**Parameters** **text** (*str*) – Text to Log

**log\_assertion** (*assertion*, *name*=None)  
Log Assertion Function

**Parameters**

- **assertion** (*bool*) – Assertion to check
- **name** (*str*) – Name of the Assertion [To name Log Assertions]

**log\_file\_write** (*file*=None)  
Log File Writer

**Parameters** **file** (*str*) – Filename to write log.

Defaults to None. (Which using self.logfile class attribute)

**class** *pwbs.log.logger.Logger*  
Logger Class

That Logger logging to file and STDOUT.

**log\_logger** = *pwbs.log.logger.LogLogger* ()  
File Logger

**locker\_log\_logger** = **False**  
Log Logger Lock Variable

**debug\_delayed\_story**  
Story Log for Delayed Debug

**debug\_state**  
Debug Mode State

**verbose\_state**  
Verbose Mode State

**debug** (*state=False*)

Debug Mode Changer

**Parameters** **state** (*bool*) – State to change to

Defaults to False. [Debug Mode Disabled]

**verbose** (*state=1*)

Verbose Mode Changer

**Parameters** **state** (*int*) – State to change to

Defaults to 1.

Levels:

0. No Verbose
1. Small Verbose
2. Medium Verbose
3. Full Verbose

255. Debug Verbose Mode

**log** (*text, prefix=pwbs.core.prefix\_text*)

Log Function

**Parameters**

- **text** (*str*) – Text to Log
- **prefix** (*function*) – Prefixer to Use

**log\_wop** (*text*)

Log Function [Without prefixer]

**Parameters** **text** (*str*) – Text to Log

**log\_verbose** (*text, verbose=1*)

Log Verbose Function (Logs when message verbose is smaller than Configuration Verbosity)

**Parameters**

- **text** (*str*) – Text to Log
- **verbose** (*int*) – Verbose Level for Message

Defaults to 1.

**log\_debug** (*text*)

Log Debug Function (Logs when debug mode is turned on)

**Parameters** **text** (*str*) – Text to Log

**log\_assertion** (*assertion, name=None*)

Log Assertion Function

**Parameters**

- **assertion** (*bool*) – Assertion to check
- **name** (*str*) – Name of the Assertion [To name Log Assertions]

**log\_file\_write** (*file=None*)

Log File Writer

**Parameters** `file (str)` – Filename to write log.

Defaults to None. (Which using self.logfile class attribute)

**story ()**

Log Logger Story Variable Getter

**Returns** `pwbs.log.logger.Logger.log_logger.story`

**Return type** `list`

#### 2.8.4.7 pwbs.pwbs\_class

This module is place for main PWBS Program Class.

**class** `pwbs.pwbs_class.PWBS`

This class is main PWBS Program Class.

Constructor is making these steps:

- Making Argument Parser [Parser of CLI Arguments]
- Initialize Parser
- Making PWBS Config Manager Object
- Check for errors of PWBS Config Manager Object
- Initialize Config Manager

**argparser**

Argument Parser

**argparser\_specialtasks**

Argument Parser Argument Group for Special Tasks

**argparser\_localconfigtasks**

Argument Parser Argument Group for Local Configuration Tasks

**pwbscm**

PWBS Config Manager

**args**

Arguments from argparser

**parser\_initializer ()**

This method is to initialize parser.

This method is making these steps:

- Making Special Tasks Argument Group
- Adding Special Tasks Commands: [`-verbose`, `-debug`, `-version`, `-new-config`, `-log`, `-log-file`, `-config-file`, `-test-mode`, `-run-tests`]
- Adding Task Argument [This argument takes everything which is after special tasks commands or everything if there isn't any special task command]
- Adding Local Configuration Tasks Argument Group

**localconfig\_parser\_initializer ()**

This method is to initialize parser of local configuration.

This method is:



- Trying to change json tasks into Commands Class Object changing it into one CommandList Class Object with all commands.

**special\_tasks\_interpreter()**

This method is to interpret special tasks.

This method is:

- Checking is any of special task was called.
- If yes then it executes that special task that was called.

**task\_runner()**

This method is to run local configurations tasks.

This method is:

- Calling run method on every Command object that was called.

**main()**

This method is main function of Program.

This method is:

- Parsing Arguments
- Interpreting Special Tasks
- Interpreting Normal Tasks

## 2.8.4.8 pwbs.tests

This module is place for PWBS tests.

### 2.8.4.8.1 Test Runner

**exception pwbs.tests.TestSucceed**

Exception for Passed Test

**exception pwbs.tests.TestFailed**

Exception for Failed Test

**pwbs.tests.tests\_prefix\_text(text)**

Test Runner Prefixer

**Parameters** **text** (*str*) – Text to Prefixer

**pwbs.tests.run\_test(test\_function, test\_name: str, test\_comment: str, test\_module: str, test\_except\_to\_fail=False)**

Function for running tests in Test Runner.

**Parameters**

- **test\_function** (*function*) – Test Function
- **test\_name** (*str*) – Name of the Test
- **test\_comment** (*str*) – Comment of the Test
- **test\_module** (*str*) – Tested Module
- **test\_except\_to\_fail** (*bool*) – Test Excepted to Fail

`pwbs.tests.test_runner()`  
Test Runner

## 2.8.4.8.2 Tests

### 2.8.4.8.2.1 Test 0

`pwbs.tests.test_0.test_0_0()`  
Test testing assertions

`pwbs.tests.test_0.test_0_1()`  
Test testing excepted failed assertions

### 2.8.4.8.2.2 Test 1

`pwbs.tests.test_1.test_1_0()`  
Checking `pwbs.command.command.CommandType`

`pwbs.tests.test_1.test_1_1()`  
Checking `pwbs.command.command.Platform`

`pwbs.tests.test_1.test_1_2()`  
Checking `pwbs.command.command.CommandMode`

`pwbs.tests.test_1.test_1_3()`  
Checking `pwbs.command.command.Command`

Tested:

- `Command.__init__()`
- `Command.__eq__()`

`pwbs.tests.test_1.test_1_4()`  
Checking `pwbs.command.command.Command`

Tested:

- `Command.run()`
- `Command.argument_parser()`

`pwbs.tests.test_1.test_1_5()`  
Checking `pwbs.command.command.Command`

Tested:

- `Command.execute_as_singletask_or_multicommand()`

`pwbs.tests.test_1.test_1_6()`  
Checking `pwbs.command.command.Command`

Tested:

- `Command.execute_as_watcher()` [TODO: Testing `NotImplementedFeatureError`]

`pwbs.tests.test_1.test_1_7()`  
Checking `pwbs.command.command.Command`

Tested:

- `Command.execute_as_scheduler()`

```
pwbs.tests.test_1.test_1_8()
    Checking pwbs.command.command.Command
    Tested:
        • Command.__add__()
pwbs.tests.test_1.test_1_9()
    Checking pwbs.command.command.CommandList
```

#### 2.8.4.8.2.3 Test 2

```
pwbs.tests.test_2.test_2_0()
    Checking pwbs.config.config_manager Exceptions Tests
pwbs.tests.test_2.test_2_1()
    Checking pwbs.config.config_manager.ConfigManager
pwbs.tests.test_2.test_2_2()
    Checking pwbs.config.pwbs_config.PWBS_ConfigManager
```

#### 2.8.4.8.2.4 Test 3

```
pwbs.tests.test_3.test_3_0()
    Checking pwbs.core.NotImplementedFeatureError
pwbs.tests.test_3.test_3_1()
    Checking pwbs.core.prefix_text
```

#### 2.8.4.8.2.5 Test 4

Test has been deleted in commit: db38a705d725e65c999843e3f25f84a4b201ec54. This test has been deleted by copying Test 5.

#### 2.8.4.8.2.6 Test 5

```
pwbs.tests.test_5.test_5_0()
    Checking pwbs.log.logger.LoggerAssertionError
pwbs.tests.test_5.test_5_1()
    Checking pwbs.log.logger.BaseLogger
pwbs.tests.test_5.test_5_2()
    Checking pwbs.log.logger.LogLogger
pwbs.tests.test_5.test_5_3()
    Checking pwbs.log.logger.Logger
```

## 2.9 Roadmap to FUTURE:

### 2.9.1 Core Features

- Multi Tasks

- Watcher Tasks
- Scheduler Tasks
- Argumented Tasks

## 2.9.2 Features

- Server Mode
  - PWBS is making little server with interface by which can be executed tasks and you can see output afterwards by that interface.
- Python PWBS API
  - Making available some functions as PWBS API in Python.
  - Plugins written in Python to extend PWBS.
- Special Integrated Tasks PWBS API
  - Making available some special tasks as PWBS API in JSON.
  - Plugins written in JSON to extend PWBS.
- Better Logging
- Make use of verbose\_mode and debug\_mode (and test\_mode(255,True) too)
- Better Logging Levels
- Global Configuration File (Or Local User Configuration File)
- Better STDOUT with colorama or something
- Better and more tests

### p

- `pwbs`, 31
- `pwbs.__init__`, 31
- `pwbs.__main__`, 32
- `pwbs.api`, 31
- `pwbs.command`, 31
- `pwbs.command.command`, 32
- `pwbs.config`, 31
- `pwbs.config.config_manager`, 36
- `pwbs.config.pwbs_config`, 36
- `pwbs.core`, 37
- `pwbs.lib`, 31
- `pwbs.log`, 31
- `pwbs.log.logger`, 38
- `pwbs.pwbs_class`, 42
- `pwbs.tests`, 43
- `pwbs.tests.test_0`, 44
- `pwbs.tests.test_1`, 44
- `pwbs.tests.test_2`, 45
- `pwbs.tests.test_3`, 45
- `pwbs.tests.test_5`, 45



## Symbols

`-debug`  
     pwbs command line option, 5  
`-new-config`  
     pwbs command line option, 5  
`-run-tests`  
     pwbs command line option, 5  
`-test-mode`  
     pwbs command line option, 5  
`-version`  
     pwbs command line option, 5  
`-c CONFIGFILE, -configfile CONFIGFILE,`  
     `-config-file CONFIGFILE`  
     pwbs command line option, 5  
`-h, -help`  
     pwbs command line option, 5  
`-l, -log`  
     pwbs command line option, 5  
`-lf LOGFILE, -logfile LOGFILE,`  
     `-log-file LOGFILE`  
     pwbs command line option, 5  
`-v {0,1,2,3,255}, -verbose`  
     {0,1,2,3,255}  
     pwbs command line option, 5  
`__add__()` (pwbs.command.command.Command  
     method), 35  
`__contains__()` (pwbs.command.command.CommandList  
     method), 35  
`__delitem__()` (pwbs.command.command.CommandList  
     method), 35  
`__eq__()` (pwbs.command.command.Command  
     method), 34  
`__getitem__()` (pwbs.command.command.CommandList  
     method), 35  
`__setitem__()` (pwbs.command.command.CommandList  
     method), 35

## A

`argparser` (pwbs.pwbs\_class.PWBS attribute), 42

`argparser_localconfigtasks`  
     (pwbs.pwbs\_class.PWBS attribute), 42  
`argparser_specialtasks`  
     (pwbs.pwbs\_class.PWBS attribute), 42  
`args` (pwbs.pwbs\_class.PWBS attribute), 42  
`argument_parser()`  
     (pwbs.command.command.Command method),  
     35  
`arguments` (pwbs.command.command.Command at-  
     tribute), 34

## B

`BaseLogger` (class in pwbs.log.logger), 38

## C

`Command` (class in pwbs.command.command), 33  
`Command.prefixer()` (in module  
     pwbs.command.command), 35  
`CommandList` (class in pwbs.command.command), 35  
`CommandMode` (class in pwbs.command.command), 33  
`commands` (pwbs.command.command.Command  
     attribute), 34  
`commands_to_commandlist()`  
     (pwbs.config.pwbs\_config.PWBS\_ConfigManager  
     method), 37  
`CommandType` (class in pwbs.command.command), 32  
`comment` (pwbs.command.command.Command at-  
     tribute), 34  
`config_dict` (pwbs.config.config\_manager.ConfigManager  
     attribute), 36  
`config_file()` (pwbs.config.pwbs\_config.PWBS\_ConfigManager  
     method), 37  
`config_filename` (pwbs.config.config\_manager.ConfigManager  
     attribute), 36  
`config_filename_path`  
     (pwbs.config.config\_manager.ConfigManager  
     attribute), 36  
`ConfigManager` (class in  
     pwbs.config.config\_manager), 36

`ctcl__arguments()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`ctcl__cmdmode()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`ctcl__cmdtype()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`ctcl__commands()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`ctcl__comment()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`ctcl__platform()` (*pwbs.config.pwbs\_config.PWBS\_ConfigManager* static method), 37  
`log_assertion()` (*pwbs.log.logger.BaseLogger* method), 39  
`log_assertion()` (*pwbs.log.logger.Logger* method), 41  
`log_assertion()` (*pwbs.log.logger.LogLogger* method), 40  
`log_debug()` (*pwbs.log.logger.BaseLogger* method), 39  
`log_debug()` (*pwbs.log.logger.Logger* method), 41  
`log_debug()` (*pwbs.log.logger.LogLogger* method), 40  
`log_write()` (*pwbs.log.logger.Logger* method), 41  
`log_file_write()` (*pwbs.log.logger.LogLogger* method), 40  
`log_verbose()` (*pwbs.log.logger.BaseLogger* method), 38  
`log_verbose()` (*pwbs.log.logger.Logger* method), 41  
`log_verbose()` (*pwbs.log.logger.LogLogger* method), 40  
`log_wop()` (*pwbs.log.logger.BaseLogger* method), 38  
`log_wop()` (*pwbs.log.logger.Logger* method), 41  
`log_wop()` (*pwbs.log.logger.LogLogger* method), 40  
`Logger` (class in *pwbs.log.logger*), 40  
`LoggerAssertionError`, 38  
`LogLogger` (class in *pwbs.log.logger*), 39

## D

`debug()` (*pwbs.log.logger.BaseLogger* method), 38  
`debug()` (*pwbs.log.logger.Logger* method), 40  
`debug()` (*pwbs.log.logger.LogLogger* method), 39  
`debug_delayed_story` (*pwbs.log.logger.BaseLogger* attribute), 38  
`debug_delayed_story` (*pwbs.log.logger.Logger* attribute), 40  
`debug_delayed_story` (*pwbs.log.logger.LogLogger* attribute), 39  
`debug_state` (*pwbs.log.logger.BaseLogger* attribute), 38  
`debug_state` (*pwbs.log.logger.Logger* attribute), 40  
`debug_state` (*pwbs.log.logger.LogLogger* attribute), 39

## E

`execute_as_scheduler()` (*pwbs.command.command.Command* method), 35  
`execute_as_singletask_or_multicommand()` (*pwbs.command.command.Command* method), 35  
`execute_as_watcher()` (*pwbs.command.command.Command* method), 35

## I

`items()` (*pwbs.command.command.CommandList* method), 35

## L

`load()` (*pwbs.config.config\_manager.ConfigManager* method), 36  
`localconfig_parser_initializer()` (*pwbs.pwbs\_class.PWBS* method), 42  
`log()` (*pwbs.log.logger.BaseLogger* method), 38  
`log()` (*pwbs.log.logger.Logger* method), 41  
`log()` (*pwbs.log.logger.LogLogger* method), 40

## M

`main()` (*pwbs.pwbs\_class.PWBS* method), 43  
`mode` (*pwbs.command.command.Command* attribute), 34

## N

`name` (*pwbs.command.command.Command* attribute), 34  
`NotImplementedFeatureError`, 37

## P

`parser_initializer()` (*pwbs.pwbs\_class.PWBS* method), 42  
`Platform` (class in *pwbs.command.command*), 32  
`platform` (*pwbs.command.command.Command* attribute), 34  
`prefix_text()` (in module *pwbs.core*), 37  
`PWBS` (class in *pwbs.pwbs\_class*), 42  
`pwbs` (module), 30, 31  
`pwbs` command line option  
    `-debug`, 5  
    `-new-config`, 5  
    `-run-tests`, 5  
    `-test-mode`, 5  
    `-version`, 5



-c CONFIGFILE, -configfile  
     CONFIGFILE, -config-file  
     CONFIGFILE, 5  
 -h, -help, 5  
 -l, -log, 5  
 -lf LOGFILE, -logfile LOGFILE,  
     -log-file LOGFILE, 5  
 -v {0,1,2,3,255}, -verbose  
     {0,1,2,3,255}, 5  
 TASK, 5  
 pwbs.\_\_init\_\_ (module), 31  
 pwbs.\_\_init\_\_.main() (in module pwbs.\_\_init\_\_),  
     31  
 pwbs.\_\_main\_\_ (module), 32  
 pwbs.\_\_version\_\_ (in module pwbs.\_\_init\_\_), 31  
 pwbs.api (module), 31  
 pwbs.command (module), 31  
 pwbs.command.command (module), 32  
 pwbs.config (module), 31  
 pwbs.config.config\_manager (module), 36  
 pwbs.config.pwbs\_config (module), 36  
 pwbs.core (module), 31, 37  
 pwbs.lib (module), 31  
 pwbs.log (module), 31  
 pwbs.log.logger (module), 38  
 pwbs.pwbs\_class (module), 42  
 pwbs.tests (module), 31, 43  
 pwbs.tests.test\_0 (module), 44  
 pwbs.tests.test\_1 (module), 44  
 pwbs.tests.test\_2 (module), 45  
 pwbs.tests.test\_3 (module), 45  
 pwbs.tests.test\_5 (module), 45  
 PWBS\_ConfigManager (class  
     pwbs.config.pwbs\_config), 36  
 pwbscm (pwbs.pwbs\_class.PWBS attribute), 42  
 PWBSConfigFileDontExistError, 36  
 PWBSInvalidConfigFile, 36

## R

run() (pwbs.command.command.Command method),  
     34  
 run\_test() (in module pwbs.tests), 43

## S

special (pwbs.command.command.Command at-  
     tribute), 34  
 special\_tasks\_interpreter()  
     (pwbs.pwbs\_class.PWBS method), 43  
 story() (pwbs.log.logger.Logger method), 42

## T

TASK  
     pwbs command line option, 5  
 task\_runner() (pwbs.pwbs\_class.PWBS method), 43

test\_0\_0() (in module pwbs.tests.test\_0), 44  
 test\_0\_1() (in module pwbs.tests.test\_0), 44  
 test\_1\_0() (in module pwbs.tests.test\_1), 44  
 test\_1\_1() (in module pwbs.tests.test\_1), 44  
 test\_1\_2() (in module pwbs.tests.test\_1), 44  
 test\_1\_3() (in module pwbs.tests.test\_1), 44  
 test\_1\_4() (in module pwbs.tests.test\_1), 44  
 test\_1\_5() (in module pwbs.tests.test\_1), 44  
 test\_1\_6() (in module pwbs.tests.test\_1), 44  
 test\_1\_7() (in module pwbs.tests.test\_1), 44  
 test\_1\_8() (in module pwbs.tests.test\_1), 45  
 test\_1\_9() (in module pwbs.tests.test\_1), 45  
 test\_2\_0() (in module pwbs.tests.test\_2), 45  
 test\_2\_1() (in module pwbs.tests.test\_2), 45  
 test\_2\_2() (in module pwbs.tests.test\_2), 45  
 test\_3\_0() (in module pwbs.tests.test\_3), 45  
 test\_3\_1() (in module pwbs.tests.test\_3), 45  
 test\_5\_0() (in module pwbs.tests.test\_5), 45  
 test\_5\_1() (in module pwbs.tests.test\_5), 45  
 test\_5\_2() (in module pwbs.tests.test\_5), 45  
 test\_5\_3() (in module pwbs.tests.test\_5), 45  
 test\_runner() (in module pwbs.tests), 43  
 TestFailed, 43  
 tests\_prefix\_text() (in module pwbs.tests), 43  
 TestSucceed, 43  
 type (pwbs.command.command.Command attribute),  
     34

## V

values (pwbs.command.command.CommandList at-  
     tribute), 35  
 verbose() (pwbs.log.logger.BaseLogger method), 38  
 in verbose() (pwbs.log.logger.Logger method), 41  
 verbose() (pwbs.log.logger.LogLogger method), 39  
 verbose\_state (pwbs.log.logger.BaseLogger at-  
     tribute), 38  
 verbose\_state (pwbs.log.logger.Logger attribute),  
     40  
 verbose\_state (pwbs.log.logger.LogLogger at-  
     tribute), 39

## W

write() (pwbs.config.config\_manager.ConfigManager  
     method), 36