

# **IT314 Software Engineering**

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**Date:** - 15/3/2023

**Lab:** - 5

## **Static Analysis**

**GitHub Repo link:** -

<https://github.com/UltiRequiem/python-projects-for-intermediates/tree/main/library-management-system>

**Tool:** - pylint

- README.md

```
PS C:\Users\vedan\Downloads\python-projects-for-intermediates-main\python-projects-for-intermediates-main\library-management-system> py -m pylint README.md
***** Module README
README.md:3:13: E0001: Parsing failed: 'invalid syntax (<unknown>, line 3)' (syntax-error)
```

- Main.py

```
ModuleNotFoundError: No module named 'pymysql'
PS C:\Users\vedan\Downloads\python-projects-for-intermediates-main\python-projects-for-intermediates-main\library-management-system> py -m pylint main.py
***** Module main
main.py:1:0: C0114: Missing module docstring (missing-module-docstring)
main.py:1:0: W0601: Wildcard import tkinter (wildcard-import)
main.py:1:0: W0614: Unused import(s) enum, sys, types, TclError, re, wantobjects, TkVersion, TclVersion, READABLE, WRITABLE, EXCEPTION, EventType, Event, NoDefaultRoot, Variable, StringVar, IntVar, DoubleVar, BooleanVar, mainloop, getint, getdouble, getboolean, Misc, CallWrapper, XView, YView, Wm, Tcl, Pack, Place, Grid, BaseWidget, Widget, TopLevel, Checkbutton, Entry, Listbox, Menu, Menubutton, Message, Radiobutton, Scale, Scrollbar, Text, OptionMenu, PhotoImage, BitmapImage, Image, image_names, image_types, Spinbox, LabelFrame, PanedWindow, NO, FALSE, OFF, YES, TRUE, ON, N, S, W, E, NW, SW, NE, SE, NS, EW, NSEW, CENTER, NONE, X, Y, LEFT, TOP, RIGHT, BOTTOM, RAISED, SUNKEN, FLAT, RIDGE, GROOVE, SOLID, HORIZONTAL, VERTICAL, NUMERIC, CHAR, WORD, BASELINE, INSIDE, OUTSIDE, SEL, SEL_FIRST, SEL_LAST, END, INSERT, CURRENT, ANCHOR, ALL, NORMAL, DISABLED, ACTIVE, HIDDEN, CASCADE, CHECKBUTTON, COMMAND, RADIOBUTTON, SEPARATOR, SINGLE, BROWSE, MULTIPLE, EXTENDED, DOTBOX, UNDERLINE, PIESLICE, CHORD, ARC, FIRST, LAST, BUTT, PROJECTING, ROUND, BEVEL, MITER, MOVETO, SCROLL, UNITS and PAGES from wildcard import of tkinter (unused-wildcard-import)
main.py:5:0: W0614: Unused import(s) cur, bookRegister, bookTable, bookInfo1, bookInfo2, bookInfo3 and bookInfo4 from wildcard import of AddBook (unused-wildcard-import)
main.py:6:0: W0614: Unused import(s) issueTable and deleteBook from wildcard import of DeleteBook (unused-wildcard-import)
main.py:8:0: W0614: Unused import(s) allBid, issue, status, labelFrame, lbl1, inf1, inf2, issueBtn and quitBtn from wildcard import of IssueBook (unused-wildcard-import)
main.py:9:0: W0614: Unused import(s) returnn and SubmitBtn from wildcard import of ReturnBook (unused-wildcard-import)
```

- AddBook.py

```
AddBook.py:1:0: C0114: Missing module docstring (missing-module-docstring)
AddBook.py:1:0: C0103: Module name "AddBook" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:1:0: W0601: Wildcard import tkinter (wildcard-import)
AddBook.py:4:0: E0401: Unable to import 'pymysql' (import-error)
AddBook.py:15:4: C0103: Variable name "insertBooks" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:32:4: W0702: No exception type(s) specified (bare-except)
AddBook.py:43:0: C0116: Missing function or method docstring (missing-function-docstring)
AddBook.py:43:0: C0103: Function name "addBook" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:45:4: W0601: Global variable 'bookInfo1' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'bookInfo2' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'bookInfo3' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'bookInfo4' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'Canvas1' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'con' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'cur' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'bookTable' undefined at the module level (global-variable-undefined)
AddBook.py:45:4: W0601: Global variable 'root' undefined at the module level (global-variable-undefined)
AddBook.py:69:4: C0103: Variable name "headingFrame1" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:72:4: C0103: Variable name "headingLabel" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:77:4: C0103: Variable name "labelFrame" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:109:4: C0103: Variable name "SubmitBtn" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:114:4: C0103: Variable name "quitBtn" doesn't conform to snake_case naming style (invalid-name)
AddBook.py:3:0: C0411: standard import "from tkinter import messagebox" should be placed before "from PIL import ImageTk, Image" (wrong-import-order)
AddBook.py:2:0: W0611: Unused ImageTk imported from PIL (unused-import)
AddBook.py:1:0: W0614: Unused import(s) enum, sys, types, TclError, re, wantobjects, TkVersion, TclVersion, READABLE, WRITABLE, EXCEPTION, EventType, Event, NoDefaultRoot, Variable, StringVar, IntVar, DoubleVar, BooleanVar, mainloop, getint, getdouble, getboolean, Misc, CallWrapper, XView, YView, Wm, Tcl, Pack, Place, Grid, BaseWidget, Widget, TopLevel, Checkbutton, Listbox, Menu, Menubutton, Message, Radiobutton, Scale, Scrollbar, Text, OptionMenu, Image, PhotoImage, BitmapImage, image_names, image_types, Spinbox, LabelFrame, PanedWindow, NO, FALSE, OFF, YES, TRUE, ON, N, S, W, E, NW, SW, NE, SE, NS, EW, NSEW, CENTER, NONE, X, Y, LEFT, TOP, RIGHT, BOTTOM, RAISED, SUNKEN, FLAT, RIDGE, GROOVE, SOLID, HORIZONTAL, VERTICAL, NUMERIC, CHAR, WORD, BASELINE, INSIDE, OUTSIDE, SEL, SEL_FIRST, SEL_LAST, END, INSERT, CURRENT, ANCHOR, ALL, NORMAL, DISABLED, ACTIVE, HIDDEN, CASCADE, CHECKBUTTON, COMMAND, RADIOBUTTON, SEPARATOR, SINGLE, BROWSE, MULTIPLE, EXTENDED, DOTBOX, UNDERLINE, PIESLICE, CHORD, ARC, FIRST, LAST, BUTT, PROJECTING, ROUND, BEVEL, MITER, MOVETO, SCROLL, UNITS and PAGES from wildcard import of tkinter (unused-wildcard-import)

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Your code has been rated at 5.08/10
```

- DeleteBook.py

```

DeleteBook.py:16:0: C0103: Constant name "issueTable" doesn't conform to UPPER_CASE naming style (invalid-name)
DeleteBook.py:17:0: C0103: Constant name "bookTable" doesn't conform to UPPER_CASE naming style (invalid-name)
DeleteBook.py:20:0: C0116: Missing function or method docstring (missing-function-docstring)
DeleteBook.py:20:0: C0103: Function name "deleteBook" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:24:4: C0103: Variable name "deleteSql" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:25:4: C0103: Variable name "deleteIssue" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:32:4: W0702: No exception type(s) specified (bare-except)
DeleteBook.py:41:0: C0116: Missing function or method docstring (missing-function-docstring)
DeleteBook.py:45:4: C0103: Variable name "deleteSql" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:46:4: C0103: Variable name "deleteIssue" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:53:4: W0702: No exception type(s) specified (bare-except)
DeleteBook.py:62:0: C0116: Missing function or method docstring (missing-function-docstring)
DeleteBook.py:64:4: W0601: Global variable 'bookInfo1' undefined at the module level (global-variable-undefined)
DeleteBook.py:64:4: W0602: Using global for 'bookInfo2' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0602: Using global for 'bookInfo3' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0602: Using global for 'bookInfo4' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0601: Global variable 'Canvas1' undefined at the module level (global-variable-undefined)
DeleteBook.py:64:4: W0602: Using global for 'con' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0602: Using global for 'cur' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0602: Using global for 'bookTable' but no assignment is done (global-variable-not-assigned)
DeleteBook.py:64:4: W0601: Global variable 'root' undefined at the module level (global-variable-undefined)
DeleteBook.py:76:4: C0103: Variable name "headingFrame1" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:79:4: C0103: Variable name "headingLabel" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:84:4: C0103: Variable name "labelFrame" doesn't conform to snake_case naming style (invalid-name)
DeleteBook.py:88:62: E0602: Undefined variable 'white' (undefined-variable)
DeleteBook.py:95:4: C0103: Variable name "SubmitBtn" doesn't conform to snake_case naming style (invalid-name)
MenuButton, Message, Radiobutton, Scale, Scrollbar, Text, OptionMenu, Image, PhotoImage, BitmapImage, image_names, image_types, S
pinbox, LabelFrame, PanedWindow, NO, FALSE, OFF, YES, TRUE, ON, N, S, W, E, NW, SW, NE, SE, NS, EW, NSEW, CENTER, NONE, X, Y, LEF
T, TOP, RIGHT, BOTTOM, RAISED, SUNKEN, FLAT, RIDGE, GROOVE, SOLID, HORIZONTAL, VERTICAL, NUMERIC, CHAR, WORD, BASELINE, INSIDE, O
UTSIDE, SEL, SEL_FIRST, SEL_LAST, INSERT, CURRENT, ANCHOR, ALL, NORMAL, DISABLED, ACTIVE, HIDDEN, CASCADE, CHECKBUTTON, COMMAND,
RADIOBUTTON, SEPARATOR, SINGLE, BROWSE, MULTIPLE, EXTENDED, DOTBOX, UNDERLINE, PIESLICE, CHORD, ARC, FIRST, LAST, BUTT, PROJECTIN
G, ROUND, BEVEL, MITER, MOVETO, SCROLL, UNITS and PAGES from wildcard import of tkinter (unused-wildcard-import)

```

## Pylint output message types

- Convention(C)

It is displayed when the program is not following the standard rules.

- Refactor(R)

It is displayed for bad code smell.

- Warning(W)

It is displayed when that line execution results some error.

- Error(E)

It is displayed when that particular line execution results some error.

- Fatal(F)

It is displayed when pylint has no access to further process that line.

## Issues

- 1) README.md:3:13: E0001: Parsing failed: 'invalid syntax (<unknown>, line 3)' (syntax-error)
  - Used when a syntax error is raised for a module
- 2) main.py:1:0: C0114: Missing module docstring (missing-module-docstring)
  - Used when a module has no docstring. Empty modules do not require a docstring.
- 3) main.py:1:0: W0401: Wildcard import tkinter (wildcard-import)
  - Used when `from module import *` is detected.
- 4) main.py:3:0: E0401: Unable to import 'pymysql'
  - Used when pylint has been unable to import a module.