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# IT314 - Software Engineering

## Lab - 5

### Static Analysis

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As we can see there is a trailing whitespace at line 5, the pylint output shows the error.

```

1  class main:
2      def __init__(self, key: dict) -> None:
3          self.key = key
4
5      def get_input(self) -> None: |
6          while True:
7              blank_string = str(input("Enter string to de

```

```

C:\Users\student\Downloads\python-mini-project-main\Caesar_cipher>python -m pylint Caesar_cipher.py
***** Module Caesar_cipher
Caesar_cipher.py:1:11: C0303: Trailing whitespace (trailing-whitespace)
Caesar_cipher.py:5:32: C0303: Trailing whitespace (trailing-whitespace)
Caesar_cipher.py:25:0: C0325: Unnecessary parens after 'return' keyword (superfluous-parens)
Caesar_cipher.py:28:19: C0303: Trailing whitespace (trailing-whitespace)
Caesar_cipher.py:32:0: C0325: Unnecessary parens after 'return' keyword (superfluous-parens)
Caesar_cipher.py:33:13: C0303: Trailing whitespace (trailing-whitespace)
Caesar_cipher.py:38:0: C0303: Trailing whitespace (trailing-whitespace)
Caesar_cipher.py:39:0: C0325: Unnecessary parens after 'return' keyword (superfluous-parens)
Caesar_cipher.py:42:0: C0301: Line too long (269/100) (line-too-long)
Caesar_cipher.py:1:0: C0114: Missing module docstring (missing-module-docstring)
Caesar_cipher.py:1:0: C0103: Module name "Caesar_cipher" doesn't conform to snake_case naming style (invalid-name)
Caesar_cipher.py:1:0: C0115: Missing class docstring (missing-class-docstring)
Caesar_cipher.py:1:0: C0103: Class name "main" doesn't conform to PascalCase naming style (invalid-name)
Caesar_cipher.py:2:22: W0621: Redefining name 'key' from outer scope (line 42) (redefined-outer-name)
Caesar_cipher.py:5:4: C0116: Missing function or method docstring (missing-function-docstring)
Caesar_cipher.py:8:12: R1723: Unnecessary "else" after "break", remove the "else" and de-indent the code inside it (no-else-break)
Caesar_cipher.py:16:4: C0116: Missing function or method docstring (missing-function-docstring)
Caesar_cipher.py:18:12: C0103: Variable name "c" doesn't conform to snake_case naming style (invalid-name)
Caesar_cipher.py:19:18: C0103: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Caesar_cipher.py:27:4: C0116: Missing function or method docstring (missing-function-docstring)
Caesar_cipher.py:31:8: R1705: Unnecessary "else" after "return", remove the "else" and de-indent the code inside it (no-else-return)
Caesar_cipher.py:34:16: C0103: Variable name "c" doesn't conform to snake_case naming style (invalid-name)
Caesar_cipher.py:35:22: C0103: Variable name "v" doesn't conform to snake_case naming style (invalid-name)
Caesar_cipher.py:10:16: W0201: Attribute 'blank_string' defined outside __init__ (attribute-defined-outside-init)
Caesar_cipher.py:24:8: W0201: Attribute 'decrypted_string' defined outside __init__ (attribute-defined-outside-init)

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Your code has been rated at 3.24/10


```

Pylint also gives errors for variable naming, unnecessary parenthesis, etc.

2

pylint gives the error that a final new line is missing at line 35

```
32     mail.login(email,password)
33     text=msg.as_string()
34     mail.sendmail(from_addr,to_addr[i],text)
35     mail.quit()
```



```
C:\Users\student\Downloads\python-mini-project-main\Automated_Mailing>python -m pylint mail.py
***** Module mail
mail.py:22:42: C0303: Trailing whitespace (trailing-whitespace)
mail.py:35:0: C0304: Final newline missing (missing-final-newline)
mail.py:1:0: C0114: Missing module docstring (missing-module-docstring)
mail.py:8:0: C0103: Constant name "from_addr" doesn't conform to UPPER_CASE naming style (invalid-name)
mail.py:26:4: C0103: Constant name "email" doesn't conform to UPPER_CASE naming style (invalid-name)
mail.py:27:4: C0103: Constant name "password" doesn't conform to UPPER_CASE naming style (invalid-name)
mail.py:3:0: C0411: standard import "import smtplib" should be placed before "import pandas as pd" (wrong-import-order)
mail.py:4:0: C0411: standard import "from email.mime.multipart import MIMEMultipart" should be placed before "import pandas as pd" (wrong-import-order)
mail.py:5:0: C0411: standard import "from email.mime.text import MIMEText" should be placed before "import pandas as pd" (wrong-import-order)


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Your code has been rated at 6.54/10

C:\Users\student\Downloads\python-mini-project-main\Automated_Mailing>
```

3

pylint shown the error of bad indentation at line 17

```
12
13     gray = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY)
14     faces = face_cascade.detectMultiScale(gray, 1.3, 5)
15
16     for (x, y, width, height) in faces:
17         cv2.rectangle(frame, (x, y), (x + width, y + height), (255, 0, 0), 3)
18
19     cv2.imshow("Camera", frame)
20
21     if cv2.waitKey(1) == ord('q'):
```



```
C:\Users\student\Downloads\python-mini-project-main\Face_Recognition>python -m pylint main.py
***** Module main
main.py:17:0: W0311: Bad indentation. Found 7 spaces, expected 8 (bad-indentation)
main.py:1:0: C0114: Missing module docstring (missing-module-docstring)
main.py:3:6: E1101: Module 'cv2' has no 'VideoCapture' member (no-member)
main.py:5:15: E1101: Module 'cv2' has no 'CascadeClassifier' member (no-member)
main.py:7:15: E1101: Module 'cv2' has no 'CascadeClassifier' member (no-member)
main.py:13:11: E1101: Module 'cv2' has no 'cvtColor' member (no-member)
main.py:13:31: E1101: Module 'cv2' has no 'COLOR_BGR2GRAY' member (no-member)
main.py:17:7: E1101: Module 'cv2' has no 'rectangle' member (no-member)
main.py:19:4: E1101: Module 'cv2' has no 'imshow' member (no-member)
main.py:21:7: E1101: Module 'cv2' has no 'waitKey' member (no-member)
main.py:25:0: E1101: Module 'cv2' has no 'destroyAllWindows' member (no-member)

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Your code has been rated at 0.00/10

C:\Users\student\Downloads\python-mini-project-main\Face_Recognition>
```

The argument 'event' at line 57 is not used. So pylint displays the error.

```

54         c.happy_level = 10
55     return
56
57     def hide_happy(event):
58         c.itemconfigure(cheek_left, state = HIDDEN)
59         c.itemconfigure(cheek_right, state = HIDDEN)
60         c.itemconfigure(mouth_happy, state = HIDDEN)
61         c.itemconfigure(mouth_normal, state = NORMAL)
62         c.itemconfigure(mouth_sad, state = HIDDEN)
63     return
64
65     def sad():
66         if c.happy_level == 0:
67             c.itemconfigure(mouth_happy, state = HIDDEN)
68             c.itemconfigure(mouth_normal, state = HIDDEN)
69             c.itemconfigure(mouth_sad, state = NORMAL)
70         else:

```

```

C:\Users\student\Downloads\python-mini-project-main\Screenpet>python -m pylint screenpet.py
***** Module screenpet
screenpet.py:62:46: C0303: Trailing whitespace (trailing-whitespace)
screenpet.py:63:10: C0303: Trailing whitespace (trailing-whitespace)
screenpet.py:115:0: C0304: Final newline missing (missing-final-newline)
screenpet.py:1:0: C0114: Missing module docstring (missing-module-docstring)
screenpet.py:2:0: E0611: No name 'fillcolor' in module 'turtle' (no-name-in-module)
screenpet.py:4:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:14:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:19:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:29:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:39:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:39:0: R1711: Useless return at end of function or method (useless-return)
screenpet.py:47:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:47:0: R1711: Useless return at end of function or method (useless-return)
screenpet.py:57:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:57:0: R1711: Useless return at end of function or method (useless-return)
screenpet.py:57:15: W0613: Unused argument 'event' (unused-argument)
screenpet.py:65:0: C0116: Missing function or method docstring (missing-function-docstring)
screenpet.py:2:0: W0611: Unused fillcolor imported from turtle (unused-import)

```

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Your code has been rated at 7.58/10

```

Since line 46 has more than 100 characters, pylint displays the 'Line too long' warning.

```

45
46 listOfMails = ['mail1@gmail.com', 'mail2@gmail.com'] #Modify the list contents here to suit you. If you would like to view mails
47 # from say, 'abc@gmail.com' change 'mail1@gmail.com' to 'abc@gmail.com'
48 for addresses in listOfMails:
49     readMails(addresses)

```

```

C:\Users\student\Downloads\python-mini-project-main\Mail_Checker>python -m pylint mail_checker.py
***** Module mail_checker
mail_checker.py:17:155: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:17:0: C0301: Line too long (155/100) (line-too-long)
mail_checker.py:20:25: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:23:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:26:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:31:0: C0301: Line too long (129/100) (line-too-long)
mail_checker.py:32:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:34:0: C0301: Line too long (123/100) (line-too-long)
mail_checker.py:35:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:37:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:38:0: C0301: Line too long (113/100) (line-too-long)
mail_checker.py:43:0: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:46:137: C0303: Trailing whitespace (trailing-whitespace)
mail_checker.py:46:0: C0301: Line too long (137/100) (line-too-long)
mail_checker.py:47:0: C0301: Line too long (172/100) (line-too-long)
mail_checker.py:49:0: C0304: Final newline missing (missing-final-newline)
mail_checker.py:1:0: C0114: Missing module docstring (missing-module-docstring)
mail_checker.py:6:0: C0103: Constant name "user" doesn't conform to UPPER_CASE naming style (invalid-name)
mail_checker.py:7:0: C0103: Constant name "password" doesn't conform to UPPER_CASE naming style (invalid-name)
mail_checker.py:16:0: C0116: Missing function or method docstring (missing-function-docstring)
mail_checker.py:16:0: C0103: Function name "readMails" doesn't conform to snake_case naming style (invalid-name)
mail_checker.py:17:4: W0612: Unused variable 'result' (unused-variable)

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Your code has been rated at 0.83/10

```