

## *Les captures*

- flakes: Verifier la conformite aux conventions de codage PEP 8.

```
PS C:\Users\bmd tech\Desktop\projetpython> flake8 app.py
app.py:3:1: E302 expected 2 blank lines, found 1
app.py:8:1: E302 expected 2 blank lines, found 1
app.py:9:80: E501 line too long (127 > 79 characters)
app.py:17:1: E302 expected 2 blank lines, found 1
app.py:27:1: E302 expected 2 blank lines, found 1
app.py:32:1: E302 expected 2 blank lines, found 1
app.py:38:1: E302 expected 2 blank lines, found 1
app.py:43:1: E302 expected 2 blank lines, found 1
app.py:47:1: E302 expected 2 blank lines, found 1
app.py:49:80: E501 line too long (80 > 79 characters)
app.py:51:1: E302 expected 2 blank lines, found 1
app.py:59:1: E302 expected 2 blank lines, found 1
app.py:60:80: E501 line too long (106 > 79 characters)
app.py:82:80: E501 line too long (85 > 79 characters)
app.py:99:80: E501 line too long (82 > 79 characters)
app.py:103:80: E501 line too long (86 > 79 characters)
app.py:106:19: F541 f-string is missing placeholders
app.py:109:80: E501 line too long (80 > 79 characters)
app.py:110:80: E501 line too long (87 > 79 characters)
app.py:116:80: E501 line too long (157 > 79 characters)
app.py:122:80: E501 line too long (111 > 79 characters)
```

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app.py:32:1: E302 expected 2 blank lines, found 1
app.py:38:1: E302 expected 2 blank lines, found 1
app.py:43:1: E302 expected 2 blank lines, found 1
app.py:47:1: E302 expected 2 blank lines, found 1
app.py:49:80: E501 line too long (80 > 79 characters)
app.py:51:1: E302 expected 2 blank lines, found 1
app.py:59:1: E302 expected 2 blank lines, found 1
app.py:60:80: E501 line too long (106 > 79 characters)
app.py:82:80: E501 line too long (85 > 79 characters)
app.py:99:80: E501 line too long (82 > 79 characters)
app.py:103:80: E501 line too long (86 > 79 characters)
app.py:106:19: F541 f-string is missing placeholders
app.py:109:80: E501 line too long (80 > 79 characters)
app.py:110:80: E501 line too long (87 > 79 characters)
app.py:116:80: E501 line too long (157 > 79 characters)
app.py:122:80: E501 line too long (111 > 79 characters)
app.py:125:80: E501 line too long (95 > 79 characters)
app.py:129:1: E305 expected 2 blank lines after class or function definition, found 1
app.py:132:80: E501 line too long (137 > 79 characters)
app.py:137:80: E501 line too long (147 > 79 characters)
app.py:138:80: E501 line too long (137 > 79 characters)
PS C:\Users\bmd tech\Desktop\projetpython>

```

- **pylint : Identifier les erreurs de programmation, les conventions de codage non respectées, etc.**

```

PS C:\Users\bmd tech\Desktop\projetpython> pylint app.py
***** Module app
app.py:9:0: C0301: Line too long (127/100) (line-too-long)
app.py:60:0: C0301: Line too long (106/100) (line-too-long)
app.py:116:0: C0301: Line too long (157/100) (line-too-long)
app.py:122:0: C0301: Line too long (111/100) (line-too-long)
app.py:132:0: C0301: Line too long (137/100) (line-too-long)
app.py:137:0: C0301: Line too long (147/100) (line-too-long)
app.py:138:0: C0301: Line too long (137/100) (line-too-long)
app.py:1:0: C0114: Missing module docstring (missing-module-docstring)
app.py:3:0: C0115: Missing class docstring (missing-class-docstring)
app.py:3:0: R0903: Too few public methods (0/2) (too-few-public-methods)
app.py:8:0: C0115: Missing class docstring (missing-class-docstring)
app.py:9:4: R0913: Too many arguments (7/5) (too-many-arguments)
app.py:8:0: R0903: Too few public methods (0/2) (too-few-public-methods)
app.py:17:0: C0115: Missing class docstring (missing-class-docstring)
app.py:21:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:24:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:27:0: C0115: Missing class docstring (missing-class-docstring)
app.py:27:0: R0903: Too few public methods (0/2) (too-few-public-methods)
app.py:32:0: C0115: Missing class docstring (missing-class-docstring)

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app.py:32:0: R0903: Too few public methods (0/2) (too-few-public-methods)
app.py:38:0: C0115: Missing class docstring (missing-class-docstring)
app.py:38:0: R0903: Too few public methods (0/2) (too-few-public-methods)
app.py:43:0: C0115: Missing class docstring (missing-class-docstring)
app.py:44:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:43:0: R0903: Too few public methods (1/2) (too-few-public-methods)
app.py:47:0: C0115: Missing class docstring (missing-class-docstring)
app.py:47:0: R0903: Too few public methods (1/2) (too-few-public-methods)
app.py:51:0: C0115: Missing class docstring (missing-class-docstring)
app.py:55:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:51:0: R0903: Too few public methods (1/2) (too-few-public-methods)
app.py:59:0: C0115: Missing class docstring (missing-class-docstring)
app.py:59:0: R0902: Too many instance attributes (12/7) (too-many-instance-attributes)
app.py:60:4: R0913: Too many arguments (6/5) (too-many-arguments)
app.py:73:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:76:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:80:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:84:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:88:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:88:29: W0621: Redefining name 'risque' from outer scope (line 141) (redefined-outer-name)
app.py:92:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:92:28: W0621: Redefining name 'jalon' from outer scope (line 143) (redefined-outer-name)
app.py:96:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:101:4: C0116: Missing function or method docstring (missing-function-docstring)

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app.py:101:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:105:4: C0116: Missing function or method docstring (missing-function-docstring)
app.py:118:12: W0621: Redefining name 'jalon' from outer scope (line 143) (redefined-outer-name)
app.py:121:12: W0621: Redefining name 'risque' from outer scope (line 141) (redefined-outer-name)
app.py:106:18: W1309: Using an f-string that does not have any interpolated variables (f-string-without-interpolation)
app.py:81:8: W0201: Attribute 'budget' defined outside __init__ (attribute-defined-outside-init)

```

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Your code has been rated at 6.07/10

PS C:\Users\bmd tech\Desktop\projetpython> █

- **mypy: Verifier le typage statique et detecte les erreurs de typage.**

```

PS C:\Users\bmd tech\Desktop\projetpython> mypy app.py
app.py:66: error: Need type annotation for "taches" (hint: "taches: list[<type>] = ...") [var-annotated]
app.py:68: error: Need type annotation for "risques" (hint: "risques: list[<type>] = ...") [var-annotated]
app.py:69: error: Need type annotation for "jalons" (hint: "jalons: list[<type>] = ...") [var-annotated]
app.py:70: error: Need type annotation for "changements" (hint: "changements: list[<type>] = ...") [var-annotated]
app.py:74: error: Incompatible types in assignment (expression has type "NotificationContext", variable has type "None") [assignment]
Found 5 errors in 1 file (checked 1 source file)
PS C:\Users\bmd tech\Desktop\projetpython> █

```

- **coverage : Analyser la couverture de code de vos tests.**

```

PS C:\Users\bmd tech\Desktop\projetpython> coverage run --source=app -m unittest discover
Notification envoyée à Modou par email: Christian a été ajouté à l'équipe
Notification envoyée à Christian par email: Christian a été ajouté à l'équipe
....Notification envoyée à Modou par email: Modou a été ajouté à l'équipe
Notification envoyée à Modou par email: Christian a été ajouté à l'équipe
Notification envoyée à Christian par email: Christian a été ajouté à l'équipe
Notification envoyée à Christian par email: Nouvelle tâche ajoutée: Analyse des besoins
Notification envoyée à Modou par email: Nouvelle tâche ajoutée: Développement
Notification envoyée à Christian par email: Nouvelle tâche ajoutée: Développement
Notification envoyée à Modou par email: Le budget du projet a été défini à 50000 Unité Monétaire
Notification envoyée à Christian par email: Le budget du projet a été défini à 50000 Unité Monétaire
Notification envoyée à Modou par email: Nouveau risque ajouté: Retard de livraison
Notification envoyée à Christian par email: Nouveau risque ajouté: Retard de livraison
Notification envoyée à Modou par email: Nouveau jalon ajouté: Phase 1 terminée
Notification envoyée à Christian par email: Nouveau jalon ajouté: Phase 1 terminée
Notification envoyée à Modou par email: Changement enregistré: Changement de la portée du projet (version 2)
Notification envoyée à Christian par email: Changement enregistré: Changement de la portée du projet (version 2)
.
-----
Ran 7 tests in 0.029s

```

Ran 7 tests in 0.029s

OK

```

PS C:\Users\bmd tech\Desktop\projetpython> coverage report

```

Name	Stmts	Miss	Cover
app.py	122	18	85%
TOTAL	122	18	85%

- **vulture: Detecter les variables inutilisees dans votre code.**

```

PS C:\Users\bmd tech\Desktop\projetpython> vulture app.py

```

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PS C:\Users\bmd tech\Desktop\projetpython> █

```

- **Black: Reformater automatiquement votre code Python selon les conventions PEP 8.**

```

PS C:\Users\bmd tech\Desktop\projetpython> black app.py
reformatted app.py

```

All done! 🎉🏠👤

1 file reformatted.

```

PS C:\Users\bmd tech\Desktop\projetpython> █

```

- **radon: Evaluer la complexite cyclomatique et la structuration globale du code.**

```
PS C:\Users\bmd tech\Desktop\projetpython> radon cc app.py -a
app.py
```

```
M 130:4 Projet.generer_rapport_performance - B
C 68:0 NotificationContext - A
C 4:0 Membre - A
C 10:0 Tache - A
C 28:0 Equipe - A
C 39:0 Jalon - A
C 45:0 Risque - A
C 52:0 Changement - A
C 58:0 NotificationStrategy - A
C 63:0 EmailNotificationStrategy - A
M 72:4 NotificationContext.notifier - A
C 77:0 Projet - A
M 126:4 Projet.notifier - A
M 5:4 Membre.__init__ - A
M 11:4 Tache.__init__ - A
M 29:4 Equipe.__init__ - A
M 32:4 Equipe.ajouter_membre - A
M 35:4 Equipe.obtenir_membres - A
M 40:4 Jalon.__init__ - A
M 46:4 Risque.__init__ - A
M 53:4 Changement.__init__ - A
```

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```
.. 55:4 Changement.__init__ ..
M 59:4 NotificationStrategy.envoyer - A
M 64:4 EmailNotificationStrategy.envoyer - A
M 69:4 NotificationContext.__init__ - A
M 78:4 Projet.__init__ - A
M 98:4 Projet.set_notification_strategy - A
M 101:4 Projet.ajouter_membre_equipe - A
M 105:4 Projet.definir_budget - A
M 109:4 Projet.ajouter_tache - A
M 113:4 Projet.ajouter_risque - A
M 117:4 Projet.ajouter_jalon - A
M 121:4 Projet.enregistrer_changement - A
```

32 blocks (classes, functions, methods) analyzed.

Average complexity: A (1.5625)

```
PS C:\Users\bmd tech\Desktop\projetpython> █
```

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**pyflakes: Verifier le code source Python pour les erreurs de syntaxe et les problemes de style**

```
PS C:\Users\bmd tech\Desktop\projetpython> pyflakes app.py
app.py:131:19: f-string is missing placeholders
PS C:\Users\bmd tech\Desktop\projetpython> █
```

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