

Unit Testing for Crossword Creation

Performed using pytest

Few Test Case:

```
12 def test1():
13     title = "Test"
14     description = "Test"
15     creator = "Test"
16     width = 5
17     height = 5
18     grid = [
19         ["N", "A", "I", "L", "_"],
20         ["_", "_", "R", "_", "_"],
21         ["_", "_", "O", "_", "_"],
22         ["_", "_", "N", "_", "_"],
23         ["_", "_", "_", "_", "_"]
24     ]
25     wordsUp = ["IRON"]
26     wordsDown = ["NAIL"]
27     AnswersHor = ["NAIL"]
28     AnswersVer = ["IRON"]
29     AnswersHorStart = [(0, 0)]
30     AnswersVerStart = [(0, 2)]
31     cluesHor = ["a body part"]
32     cluesVer = ["an element "]
33
34     c1 = Crossword(creator, title, description, width, height, cluesVer,
35                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
36
37     assert c1.check() == True
```

```

def test4():
    title = "Test"
    description = "Test"
    creator = "Test"
    width = 15
    height = 5
    grid = [
        ["N", "A", "I", "L", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
        [ " ", " ", "R", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
        [ " ", " ", "O", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
        [ " ", " ", "N", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
        [ " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "]]
    wordsUp = ["IRON"]
    wordsDown = ["NAIL"]
    AnswersHor = ["NAIL"]
    AnswersVer = ["IRON"]
    AnswersHorStart = [(0, 0)]
    AnswersVerStart = [(0, 2)]
    cluesHor = ["a body part"]
    cluesVer = ["an element "]

    c1 = Crossword(creator, title, description, width, height, cluesVer,
                    cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)

    assert c1.check() == True

```

```

497 def test18():
498     title = "Test"
499     description = "Test"
500     creator = "Test"
501     width = 5
502     height = 5
503     grid = [
504         ["N", "A", "I", "L", " "],
505         [ " ", " ", "R", " ", " "],
506         [ " ", " ", "O", " ", " "],
507         [ " ", " ", "N", " ", " "],
508         [ " ", " ", " ", " ", " "]]
509     wordsUp = ["IRON"]
510     wordsDown = ["NAIL"]
511     AnswersHor = ["NAIL"]
512     AnswersVer = ["IRON"]
513     AnswersHorStart = [(0, 0)]
514     AnswersVerStart = [(0, 2)]
515     cluesHor = []
516     cluesVer = ["an element"]
517
518     c1 = Crossword(creator, title, description, width, height, cluesVer,
519                    cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
520
521     assert c1.check() == False

```

```

581 def test21():
582     title = "Test"
583     description = "Test"
584     creator = "Test"
585     width = 5
586     height = 5
587     grid = [
588         ["N", "A", "I", "L", " "],
589         [" ", " ", "R", " ", " "],
590         [" ", " ", "O", " ", " "],
591         [" ", " ", "N", " ", " "],
592         [" ", " ", " ", " ", " "]
593     ]
594     wordsUp = ["IRON"]
595     wordsDown = ["NAIL"]
596     AnswersHor = ["NAIL"]
597     AnswersVer = ["IRON"]
598     AnswersHorStart = [(0, 0)]
599     AnswersVerStart = [(0, 2)]
600     cluesHor = ["a body part"]
601     cluesVer = ["an element "]
602
603     c1 = Crossword(creator, title, description, width, height, cluesVer,
604                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
605
606     assert c1.check() == False

```

```

666 def test24():
667     title = ""
668     description = "Test"
669     creator = "Test"
670     width = 5
671     height = 5
672     grid = [
673         ["N", "A", "I", "L", " "],
674         [" ", " ", "R", " ", " "],
675         [" ", " ", "O", " ", " "],
676         [" ", " ", "N", " ", " "],
677         [" ", " ", " ", " ", " "]
678     ]
679     wordsUp = ["IRON"]
680     wordsDown = ["NAIL"]
681     AnswersHor = ["NAIL"]
682     AnswersVer = ["IRON"]
683     AnswersHorStart = [(0, 0)]
684     AnswersVerStart = [(0, 2)]
685     cluesHor = ["a body part"]
686     cluesVer = ["an element "]
687
688     c1 = Crossword(creator, title, description, width, height, cluesVer,
689                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
690
691     assert c1.check() == False

```

```

694 def test25():
695     title = "dd%uvJsMq=@kgxwWHM%HEF2s)M VL290!f#rLbryppHnps3yZb"
696     description = "Test"
697     creator = "Test"
698     width = 5
699     height = 5
700     grid = [
701         ["N", "A", "I", "L", "_"],
702         ["_", "_", "R", "_", "_"],
703         ["_", "_", "O", "_", "_"],
704         ["_", "_", "N", "_", "_"],
705         ["_", "_", "_", "_", "_"]
706     ]
707     wordsUp = ["IRON"]
708     wordsDown = ["NAIL"]
709     AnswersHor = ["NAIL"]
710     AnswersVer = ["IRON"]
711     AnswersHorStart = [(0, 0)]
712     AnswersVerStart = [(0, 2)]
713     cluesHor = ["a body part"]
714     cluesVer = ["an element "]
715
716     c1 = Crossword(creator, title, description, width, height, cluesVer,
717                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
718
719     assert c1.check() == True

```

```

777 def test28():
778     title = "Test"
779     description = "rovG9k/#Hv9wml2tr+u#lisX(!toTQMotbQDj21^_lH#Nd@a_8prZE9^hqgbuk+f(yBxN=7y@p@UoJ=VULKXU&C%Zqw@f0C05yowSg1Vnsb9Nz3R^jPZ)"
780     creator = "Test"
781     width = 5
782     height = 5
783     grid = [
784         ["N", "A", "I", "L", "_"],
785         ["_", "_", "R", "_", "_"],
786         ["_", "_", "O", "_", "_"],
787         ["_", "_", "N", "_", "_"],
788         ["_", "_", "_", "_", "_"]
789     ]
790     wordsUp = ["IRON"]
791     wordsDown = ["NAIL"]
792     AnswersHor = ["NAIL"]
793     AnswersVer = ["IRON"]
794     AnswersHorStart = [(0, 0)]
795     AnswersVerStart = [(0, 2)]
796     cluesHor = ["a body part"]
797     cluesVer = ["an element "]
798
799     c1 = Crossword(creator, title, description, width, height, cluesVer,
800                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
801
802     assert c1.check() == True

```

```

946 def test34():
947     title = "Test"
948     description = "Test"
949     creator = "Test"
950     width = 5
951     height = 5
952     grid = [
953         ["N", "A", "I", "L", "_"],
954         ["_", "_", "R", "_", "_"],
955         ["_", "_", "O", "_", "_"],
956         ["_", "_", "N", "_", "_"],
957         ["_", "_", "_", "_", "_"]
958     ]
959     wordsUp = ["IRON"]
960     wordsDown = ["NAIL"]
961     AnswersHor = ["NAIL"]
962     AnswersVer = ["FROG"]
963     AnswersHorStart = [(0, 0)]
964     AnswersVerStart = [(0, 2)]
965     cluesHor = ["a body part"]
966     cluesVer = ["an element "]
967
968     c1 = Crossword(creator, title, description, width, height, cluesVer,
969                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
970
971     assert c1.check() == False

```

```

1058 def test38():
1059     title = "Test"
1060     description = "Test"
1061     creator = "Test"
1062     width = 5
1063     height = 5
1064     grid = [
1065         ["N", "A", "I", "L", "_"],
1066         ["_", "_", "R", "_", "_"],
1067         ["_", "_", "O", "_", "_"],
1068         ["_", "_", "N", "_", "_"],
1069         ["_", "_", "_", "_", "_"]
1070     ]
1071     wordsUp = ["IRON"]
1072     wordsDown = ["NAIL"]
1073     AnswersHor = ["NAQL"]
1074     AnswersVer = ["IRON"]
1075     AnswersHorStart = [(0, 0)]
1076     AnswersVerStart = [(0, 2)]
1077     cluesHor = ["a body part"]
1078     cluesVer = ["an element "]
1079
1080     c1 = Crossword(creator, title, description, width, height, cluesVer,
1081                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
1082
1083     assert c1.check() == False

```

```

1114 def test40():
1115     title = "Test"
1116     description = "Test"
1117     creator = "Test"
1118     width = 5
1119     height = 5
1120     grid = [
1121         ["&", "A", "I", "L", "_"],
1122         ["_", "_", "R", "_", "_"],
1123         ["_", "_", "O", "_", "_"],
1124         ["_", "_", "N", "_", "_"],
1125         ["_", "_", "_", "_", "_"]
1126     ]
1127     wordsUp = ["IRON"]
1128     wordsDown = ["NAIL"]
1129     AnswersHor = ["NAIL"]
1130     AnswersVer = ["IRON"]
1131     AnswersHorStart = [(0, 0)]
1132     AnswersVerStart = [(0, 2)]
1133     cluesHor = ["a body part"]
1134     cluesVer = ["an element "]
1135
1136     c1 = Crossword(creator, title, description, width, height, cluesVer,
1137                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
1138
1139     assert c1.check() == False

```

```

1143 def test41():
1144     title = "Test"
1145     description = "Test"
1146     creator = "Test"
1147     width = 5
1148     height = 5
1149     grid = [
1150         ["N", "5", "I", "L", "_"],
1151         ["_", "_", "R", "_", "_"],
1152         ["_", "_", "O", "_", "_"],
1153         ["_", "_", "N", "_", "_"],
1154         ["_", "_", "_", "_", "_"]
1155     ]
1156     wordsUp = ["IRON"]
1157     wordsDown = ["NAIL"]
1158     AnswersHor = ["NAIL"]
1159     AnswersVer = ["IRON"]
1160     AnswersHorStart = [(0, 0)]
1161     AnswersVerStart = [(0, 2)]
1162     cluesHor = ["a body part"]
1163     cluesVer = ["an element "]
1164
1165     c1 = Crossword(creator, title, description, width, height, cluesVer,
1166                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
1167
1168     assert c1.check() == False

```

```

1172 def test42():
1173     title = "Test"
1174     description = "Test"
1175     creator = "Test"
1176     width = 5
1177     height = 5
1178     grid = [
1179         ["n", "A", "I", "L", "-"],
1180         ["-", "-", "R", "-", "-"],
1181         ["-", "-", "O", "-", "-"],
1182         ["-", "-", "N", "-", "-"],
1183         ["-", "-", "-", "-", "-"]
1184     ]
1185     wordsUp = ["IRON"]
1186     wordsDown = ["NAIL"]
1187     AnswersHor = ["NAIL"]
1188     AnswersVer = ["IRON"]
1189     AnswersHorStart = [(0, 0)]
1190     AnswersVerStart = [(0, 2)]
1191     cluesHor = ["a body part"]
1192     cluesVer = ["an element "]
1193
1194     c1 = Crossword(creator, title, description, width, height, cluesVer,
1195                     cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
1196
1197     assert c1.check() == False

```

```

1229 def test44():
1230     title = "Test"
1231     description = "Test"
1232     creator = "Test"
1233     width = 4
1234     height = 5
1235     grid = [
1236         ["-", "-", "-", "T"],
1237         ["-", "C", "-", "R"],
1238         ["C", "A", "K", "E"],
1239         ["-", "R", "-", "E"],
1240         ["-", "-", "-", "-"]
1241     ]
1242     AnswersHor = ["CAKE"]
1243     AnswersVer = ["CAR", "TREE"]
1244     AnswersHorStart = [(2, 0)]
1245     AnswersVerStart = [(1, 1), (0, 3)]
1246     cluesHor = ["A dessert"]
1247     cluesVer = ["vehicle", "a big plant"]
1248
1249     c1 = Crossword(creator, title, description, width, height, cluesVer, cluesHor, AnswersHor, AnswersVer, grid,
1250                     AnswersHorStart, AnswersVerStart)
1251
1252     assert c1.check() == True

```

```

1281 def test46():
1282     title = "Test"
1283     description = "Test"
1284     creator = "Test"
1285     width = 5
1286     height = 5
1287     grid = [
1288         ["C", "L", "O", "C", "K"],
1289         ["H", " ", "V", " ", " "],
1290         ["A", " ", "E", " ", " "],
1291         ["I", " ", "N", " ", " "],
1292         ["R", " ", " ", " ", " "]
1293     ]
1294     AnswersHor = ["WATCH"]
1295     AnswersVer = ["CHAIR", "TOOL"]
1296     AnswersHorStart = [(0, 0)]
1297     AnswersVerStart = [(0, 0), (0, 1)]
1298     cluesHor = ["tells the time"]
1299     cluesVer = ["sitting", "baking"]
1300
1301     c1 = Crossword(creator, title, description, width, height, cluesVer, cluesHor, AnswersHor, AnswersVer, grid,
1302                    AnswersHorStart, AnswersVerStart)
1303
1304     assert c1.check() == False

```

```

1387 def test50():
1388     title = "Test"
1389     description = "Test"
1390     creator = "Test"
1391
1392     width = 5
1393     height = 5
1394     grid = [
1395         [" ", "M", "I", "L", "K"],
1396         [" ", "E", " ", " ", " "],
1397         [" ", "T", " ", " ", " "],
1398         [" ", "A", " ", " ", " "],
1399         [" ", "L", " ", " ", " "]
1400     ]
1401     AnswersHor = ["MILK"]
1402     AnswersVer = []
1403     AnswersHorStart = [(0, 1)]
1404     AnswersVerStart = []
1405     cluesHor = ["cereal and "]
1406     cluesVer = ["iron, copper, brass"]
1407
1408     c1 = Crossword(creator, title, description, width, height, cluesVer, cluesHor, AnswersHor, AnswersVer, grid,
1409                    AnswersHorStart, AnswersVerStart)
1410
1411     assert c1.check() == False

```



```

1412 def test4():
1413
1414     title = "Test"
1415     description = "Test"
1416     creator = "Test"
1417     width = 15
1418     height = 5
1419     grid = [
1420         ["N", "A", "I", "L", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
1421         [" ", " ", " ", "R", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
1422         [" ", " ", " ", "O", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
1423         [" ", " ", " ", "N", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
1424         [" ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "],
1425     ]
1426
1427     wordsUp = ["IRON"]
1428     wordsDown = ["NAIL"]
1429     AnswersHor = ["NAIL"]
1430     AnswersVer = ["IRON"]
1431     AnswersHorStart = [(0, 0)]
1432     AnswersVerStart = [(0, 2)]
1433     cluesHor = ["a body part"]
1434     cluesVer = ["an element"]
1435     c1 = Crossword(creator, title, description, width, height, cluesVer,
1436                   cluesHor, AnswersHor, AnswersVer, grid, AnswersHorStart, AnswersVerStart)
1437     assert c1.check() == True

```

- We have integrated Test Case with GitHub actions.
- Every push of Test Cases is run on it automatically.

The screenshot shows a GitHub Actions workflow run for a project. The workflow is named "build (3.9)" and it failed 11 minutes ago. The failure is due to a test case that did not pass. The test case is located in the file "code/IT314_Project_20/test.py" and it is named "test52". The test case is failing because the assertion "assert True == False" is not true. The error message is "Error: Process completed with exit code 1.".

The workflow run details are as follows:

- Summary:** build (3.9) failed 11 minutes ago in 31s
- Jobs:** build (3.9)
- Run details:**
 - Usage
 - Workflow file
- Run Tests:**
 - 446 FAILED code/IT314_Project_20/test.py::test52 - assert True == False
 - 447 + where True = <bound method Crossword.check of <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90>>()
 - 448 + where <bound method Crossword.check of <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90> = <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90>.check
 - 449 FAILED code/IT314_Project_20/test.py::test53 - assert True == False
 - 450 + where True = <bound method Crossword.check of <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90>>()
 - 451 + where <bound method Crossword.check of <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90> = <crosswordApp.Classes.Crossword.Crossword object at 0x7fe8d8e80a90>.check
 - 452 ===== 6 failed, 47 passed in 1.49s =====
 - 453 Error: Process completed with exit code 1.
- Post Run actions:**
 - Post Set up Python 3.9 (0s)
 - Post Run actions/checkout@v3 (0s)
 - Complete job (0s)

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gui testing doc added · Rudra3012 · (74) The Vampire event is cool BU

github.com/Rudra3012/IT314_Project_20/actions/runs/4831396735/jobs/8608797811

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Rudra3012 / IT314_Project_20 Public

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Django CI

gui testing doc added #41

Re-run jobs

Summary

Jobs

build (3.9)

Run details

Usage

Workflow file

build (3.9)
failed 11 minutes ago in 31s

Search logs

- Set up job 2s
- Run actions/checkout@v3 5s
- Set up Python 3.9 0s
- Install Dependencies 19s
- Run Tests 3s

35°C Smoke

Search

19:41 28-04-2023

venv

- checkConnection.py
- CrosswordGenerator.py
- db.sqlite3
- manage.py
- requirements.txt
- test.py

Documentation

IT314_Project_20

OUTLINE

TIMELINE

main*

0 0 Live Share

Grid contains only characters or underscores
Grid contains only uppercase characters

short test summary info

```
FAILED code/IT314_Project_20/test_.py::test7 - TypeError: '>' not supported between instances of 'str' and 'int'
FAILED code/IT314_Project_20/test_.py::test13 - TypeError: '>' not supported between instances of 'str' and 'int'
FAILED code/IT314_Project_20/test_.py::test28 - assert False == True
FAILED code/IT314_Project_20/test_.py::test51 - assert True == False
FAILED code/IT314_Project_20/test_.py::test52 - assert True == False
FAILED code/IT314_Project_20/test_.py::test53 - assert True == False
6 failed, 47 passed in 1.88s
```

(venv) C:\Users\pc\Desktop\Clone\IT314_Project_20

Ln 1494, Col 38 Spaces: 4 UTF-8 CRLF Python 3.10.7 64-bit Go Live

32°C Smoke

Search

22:29 28-04-2023