

Documentation of Problem-1

This problem has been solved by using Python. To run these files, Python should be installed in local machine and the solve file along with the unit test file is needed to be stored in same the directory.

Two python files have been attached regarding this problem.

- I. Problem1.py : This file contains the Python solve of the problem.
- II. test_Problem1.py : This file is for unit testing of the Python solve of Problem-1.

How to use “test_Problem1.py” for testing:

Test cases of this example –

```
test_Problem1.py > ...
1 import unittest
2 import Problem1
3
4
5 class TestProblem1(unittest.TestCase):
6
7     def test_numberToWords(self):
8         self.assertEqual(Problem1.numberToWords(542), "Five Hundred Forty Two")
9         self.assertEqual(Problem1.numberToWords(1334567891), "One Billion Three Hundred Thirty Four Million Five Hundred Sixty Seven Thousand Eight
10
11         #self.assertEqual(Problem1.numberToWords(100), "Forty Two")
12
```

After running “test_Problem1.py”, we’ll have to input a number in the terminal -

```
PROBLEMS OUTPUT DEBUG CONSOLE
✓ TERMINAL
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\Sept 21\Haajee Automobiles assesment solve> & 'C:\Users\farha\AppData\Local\Programs\Python\Python39-2021.11.1422169775\pythonFiles\lib\python\debugpy\launcher' '54397' '--' 'd:
Enter the number:█
```

After Entering a number and if the input is appropriate, then the test case will run appropriately

-

Try the new cross-platform PowerShell <https://aka.ms/powershell>

```
PS D:\Sept 21\Haajee Automobiles assesment solve> & 'C:\Users\haajee\OneDrive\Documents\pythonFiles\lib\python\debug\python.exe' -u -s -i
```

```
Enter the number:512
Five Hundred Twelve
```

```
.....
Ran 1 test in 0.000s
```

```
OK
PS D:\Sept 21\Haajee Automobiles assesment solve> █
```

Now, lets check the unit testing for an inappropriate test case. For that we'll uncommented the inappropriate test case and use it while executing the code -

```
class TestProblem1(unittest.TestCase):

    def test_numberToWords(self):
        self.assertEqual(Problem1.numberToWords(542), "Five Hundred Forty Two")
        self.assertEqual(Problem1.numberToWords( 1334567891), "One Billion Three Hu

        self.assertEqual(Problem1.numberToWords(100), "Forty Two")
```

After executing the code -

```
✓ TERMINAL

Enter the number:777
Seven Hundred Seventy Seven
F
=====
FAIL: test_numberToWords (__main__.TestProblem1)
-----
Traceback (most recent call last):
  File "d:\Sept 21\Haajee Automobiles assesment solve\test_Problem1.py", line 11, in test_numberToWords
    self.assertEqual(Problem1.numberToWords(100), "Forty Two")
AssertionError: 'One Hundred' != 'Forty Two'
- One Hundred
+ Forty Two

-----
Ran 1 test in 0.001s

FAILED (failures=1)
```

As the 3rd test case was inappropriate (100 != "Forty Two"), that's why the result of the testing is failed.