**#8. Code Testing using Python**

**Roll Number: CB.EN.P2EBS22006**

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**Aim:**

Automate unit testing for finding factorial of numbers from 1 to 10 using assert function in python

**Tools Required:**

PyCharm and python compiler

**Experiment:**

Code

main.py:

def factorial(n):  
 value = 1  
 # i=1  
 print(n)  
 for i in range(1,n+1):  
 value = value \* i  
 #print(value)  
 return value

test.py:

import unittest  
  
from main import factorial  
  
class TestFact(unittest.TestCase):  
 def test\_list\_int(self):  
 factValue = 1  
  
 for i in range(1, 11):  
 factValue = factValue \* i  
 result=factorial(i)  
 self.assertEqual(result,factValue)  
  
 def test\_list\_int\_cond(self):  
 factValue = 1  
 for i in range(1, 11):  
 factValue = factValue \* i  
 result = factorial(i+1)  
 self.assertEqual(result, factValue)  
  
  
if \_\_name\_\_ == '\_\_main\_\_':  
 test\_list\_int()  
 test\_list\_int\_cond()  
 unittest.main()

**Inference and Result:**

Utilizing *unittest* and *assertion* methods, the python code for computing the factorial of a value between 1 and 10 is automated.

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