# PYTHON FOR ANALYTICS ASSIGNMENT

# [DS7A-707]

## WEEK-1

## MASTER OF TECHNOLOGY

In

## DATA SCIENCE

*Submitted by*

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*Submitted To*

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## DEVI AHILYA VISHWAVIDYALAYA

## Indore (M.P.)

# 1. Program to check whether the given number is even or not.

*Code#*

```python
"""
Created on Sat Sep 10 16:31:57 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''Program to check Whether the number is Even or Odd'''

n = input("Enter a number : ")
x = int(n)%2
if x == 0:
    print(" Even ")
else:
    print(" odd ")
```

*Output:*

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\Even or Odd.py"
Enter a number : 3
 odd

Process finished with exit code 0
```

## 2. Program to convert the temperature in degree centigrade to Fahrenheit.

*Code#*

```
"""
Created on Sat Sep 10 16:34:41 2022

@author: Rahul Sharma M.Tech (Data Science)
"""

'''program to convert the temperature in degree centigrade to
Fahrenheit'''

c = input(" Enter temperature in Centigrade: ")
f = (9*(int(c))/5)+32
print(" Temperature in Fahrenheit is: ", f)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\Centigrade to Fahrenheit.py"
 Enter temperature in Centigrade: 37
 Temperature in Fahrenheit is:  98.6


Process finished with exit code 0
```

## 3. Program to find the area of a triangle whose sides are given.

*Code#*

```
"""
Created on Sat Sep 10 16:36:14 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''Program to find Area of Triangle'''


import math
a = float(input("Enter the length of side a: "))
b = float(input("Enter the length of side b: "))
c = float(input("Enter the length of side c: "))
s = (a+b+c)/2
area = math.sqrt(s*(s-a)*(s-b)*(s-c))
print(" Area of the triangle is: ", area)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\area of a triangle.py"
Enter the length of side a: 3
Enter the length of side b: 4
Enter the length of side c: 5
 Area of the triangle is:  6.0

Process finished with exit code 0
```

# 4. Program to find out the average of a set of integers.

*Code#*

```
"""
Created on Sat Sep 10 16:37:48 2022

@author: Rahul Sharma M.Tech (Data Science)
"""

'''program to find out the average of a set of integers'''

count = int(input("Enter the count of numbers: "))
i = 0
sum = 0
for i in range(count):
    x = int(input("Enter an integer: "))
    sum = sum + x
avg = sum/count
print(" The average is: ", avg)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\average of a set of integers.py"
Enter the count of numbers: 5
Enter an integer: 7
Enter an integer: 6
Enter an integer: 4
Enter an integer: 2
Enter an integer: 9
 The average is:  5.6

Process finished with exit code 0
```

## 5. Program to find the product of a set of real numbers.

*Code#*

```
"""
Created on Sat Sep 10 16:39:46 2022

@author: Rahul Sharma M.Tech (Data Science)
"""

'''program to find the product of a set of real numbers'''

i = 0
product = 1
count = int(input("Enter the number of real numbers: "))
for i in range(count):
    x = float(input("Enter a real number: "))
    product = product * x
print("The product of the numbers is: ", product)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\product of a set of real numbers.py"
Enter the number of real numbers: 5
Enter a real number: 6
Enter a real number: 4
Enter a real number: 5
Enter a real number: 1
Enter a real number: 2
The product of the numbers is:  240.0

Process finished with exit code 0
```

## 6. Program to find the circumference and area of a circle with a given radius.

*Code#*

```
"""
Created on Sat Sep 10 16:43:40 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''program to find the circumference and
area of a circle with a given radius'''

import math
r = float(input("Input the radius of the circle: "))
c = 2 * math.pi * r
area = math.pi * r * r
print("The circumference of the circle is: ", c)
print("The area of the circle is: ", area)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\circumference and area of a circle.py"
Input the radius of the circle: 6
The circumference of the circle is:  37.69911184307752
The area of the circle is:  113.09733552923255

Process finished with exit code 0
```

## 7. Program to check whether the given integer is a multiple of 5.

*Code#*

```python
"""
Created on Sat Sep 10 16:44:02 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''program to check whether the given integer is a multiple of 5'''
number = int(input("Enter an integer: "))
if(number%5==0):
    print(number, "is a multile of 5")
else:
    print(number, "is not a multiple of 5")
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\multiple of 5.py"
Enter an integer: 7
7 is not a multiple of 5

Process finished with exit code 0
```

## 8. Program to check whether the given integer is a multiple of both 5 and 7.

*Code#*

```
"""
Created on Sat Sep 10 16:44:19 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''program to check whether the given integer is a multiple of both 5 and
7'''

number = int(input("Enter an integer: "))
if((number%5==0)and(number%7==0)):
    print(number, "is a multiple of both 5 and 7")
else:
    print(number, "is not a multiple of both 5 and 7")
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\multiple of both 5 and 7.py"
Enter an integer: 35
35 is a multiple of both 5 and 7

Process finished with exit code 0
```

## 9. Program to find the average of 10 numbers using while loop.

*Code#*

```python
"""
Created on Sat Sep 10 16:44:52 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''program to find the average of 10 numbers using while loop'''
count = 0
sum = 0.0
while(count<10):
    number = float(input("Enter a real number: "))
    count=count+1
    sum = sum+number
avg = sum/10;
print("Average is :",avg)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\average of 10 numbers using while
loop.py"
Enter a real number: 5
Enter a real number: 6
Enter a real number: 4
Enter a real number: 1
Enter a real number: 2
Enter a real number: 5
Enter a real number: 9
Enter a real number: 8
Enter a real number: 3
Enter a real number: 2
Average is : 4.5

Process finished with exit code 0
```

## 10. Program to display the given integer in reverse manner.

*Code#*

```
"""
Created on Sat Sep 10 16:44:56 2022

@author: Rahul Sharma M.Tech (Data Science)
"""
'''program to display the given integer in reverse manner'''

number = int(input("Enter a positive integer: "))
rev = 0
while(number!=0):
    digit = number%10
    rev = (rev*10)+digit
    number = number//10
print(rev)
```

*Output*:

```
C:\Users\rjrah\AppData\Local\Programs\Python\Python310\python.exe
"C:\Users\rjrah\PycharmProjects\PFA Week-1 Assign\integer in reverse manner.py"
Enter a positive integer: 786
687

Process finished with exit code 0
```