



AMC ENGINEERING COLLEGE

NAAC A+ ACCREDITED | NBA ACCREDITED

Bannerghatta road, Bengaluru Karnataka 560083

ASSIGNMENT I

INTRODUCTION TO PYTHON PROGRAMMING

SUBMITTED TO:

**Prof. Rashmi
Paruthi**

SUBMITTED BY:

**SUPRIYA THAKUR
CSE 'D' SECTION
1st SEMESTER
ROLL NO. 3**

1. Develop a program to determine whether the number is even or odd.

```
In [19]: a = int(input("Enter a number: "))
if (a % 2) == 0:
    print("a is Even")
else:
    print("a is Odd")
```

Enter a number: 4
a is Even

2. Develop a program to determine whether the number is positive or negative.

```
In [21]: a = int(input("Enter a number: "))
if (a > 0):
    print("a is positive")
elif (a == 0):
    print("a is neither negative nor positive")
else:
    print("a is negative")
```

Enter a number: -6
a is negative



3. Develop a program to find whether the given number is prime number or not.

```
In [27]: num = int(input("Enter a number: "))

if num == 1:
    print(num, "is not a prime number")
elif num > 1:
    for i in range(2,num):
        if (num % i) == 0:
            print(num,"is not a prime number")
            print(i,"times",num//i,"is",num)
            break
        else:
            print(num,"is a prime number")
    else:
        print(num,"is not a prime number")
```

```
Enter a number: 66
66 is not a prime number
2 times 33 is 66
```

4. Develop a program to check if a string is Palindrome or Not Pallindrome

```
In [33]: def isPalindrome(s):
        return s == s[::-1]

s = "malayalam"
ans = isPalindrome(s)

if ans:
    print("Yes")
else:
    print("No")
```

```
Yes
```

5. Develop a program for summing of 2 numbers

```
In [61]: a= input("Enter the value of a: ")
b= input("Enter the value of b: ")
sum = int(a) + int(b)
print("The sum of a and b is", sum)
```

```
Enter the value of a: 5
Enter the value of b: 6
The sum of a and b is 11
```

6. Develop a program for summing of 2 numbers using funtion

```
In [60]: def add_two_num(a,b):
sum=a+b;
return sum;
num1=int(input("Input the first number : "))
num2=int(input("Input the second number :"))
print("The sum of given two numbers is",add_two_num(num1,num2))
```

```
Input the first number : 50
Input the second number :88
The sum of given two numbers is 138
```

7. Develop a program to find maximum of 2 numbers

```
In [63]: a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))

if(a > b):
    print(a, "is greater")
elif(num1 < num2):
    print(b, "is greater")
else:
    print("Both are equal")
```

Enter the first number: 55
Enter the second number: 67
67 is greater

8. Develop a program to find minimum of 2 numbers

```
In [65]: a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))

if(b > a):
    print(a, "is smaller")
elif(b < a):
    print(b, "is smaller")
else:
    print("Both are equal")
```

Enter the first number: 66
Enter the second number: 55
55 is smaller



9. Develop a program to generate Fibonacci sequence of length (N). Read N from the console.

```
In [66]: num = int(input("Enter the Fibonacci sequence length : "))

firstTerm = 0
secondTerm = 1
print("The Fibonacci series with", num, "terms is :")
print(firstTerm, secondTerm, end=" ")
for i in range(2, num):
    curTerm = firstTerm + secondTerm
    print(curTerm, end=" ")
    firstTerm = secondTerm
    secondTerm = curTerm
```

```
Enter the Fibonacci sequence length : 15
The Fibonacci series with 15 terms is :
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377
```

10. Write a function to calculate factorial of a number. Develop a program to compute binomial coefficient.

```
In [74]: def fact(num):
        if num == 0 :
            return 1
        else:
            return num * fact(num-1)

n = int(input("Enter the value of N : "))
r = int(input("Enter the value of R (R cannot be negative or greater than N): "))
print("Factorial of ", n, "is : ", fact(n))
nCr = fact(n)/(fact(r)*fact(n-r))

print(n, 'C', r, " = ", nCr)
```

```
Enter the value of N : 7
Enter the value of R (R cannot be negative or greater than N): 6
Factorial of 7 is : 5040
7 C 6 = 7.0
```



11.Greatest common divisor

```
In [70]: import math

a = int(input("Enter the first number: "))
b = int(input("Enter the second number: "))
print("The gcd of a and b is : ", end="")
print(math.gcd(a, b))
```

```
Enter the first number: 99
Enter the second number: 33
The gcd of a and b is : 33
```

12.Develop a program for swapping of 2 numbers

```
In [75]: a = input('Enter First Number: ')
b = input('Enter Second Number: ')

print("Value of a before swapping: ", a)
print("Value of b before swapping: ", b)

temp = a
a = b
b = temp

print("Value of a after swapping: ", a)
print("Value of b after swapping: ", b)
```

```
Enter First Number: 3
Enter Second Number: 6
Value of a before swapping: 3
Value of b before swapping: 6
Value of a after swapping: 6
Value of b after swapping: 3
```



13. Develop a program to reverse number in string

```
In [78]: n=int(input("Enter number: "))
rev=0
while(n>0):
    dig=n%10
    rev=rev*10+dig
    n=n//10
print("Reverse of the number:",rev)
```

Enter number: 4566
Reverse of the number: 6654

14. Develop a program to guess number using random

```
In [81]: import random
n = random.randrange(1,10)
guess = int(input("Enter any number: "))
while n!= guess:
    if guess < n:
        print("Too low")
        guess = int(input("Enter number again: "))
    elif guess > n:
        print("Too high!")
        guess = int(input("Enter number again: "))
    else:
        break
print("you guessed it right!!")
```

Enter any number: 1
Too low
Enter number again: 9
Too high!
Enter number again: 7
Too high!
Enter number again: 6
you guessed it right!!