AMC ENGINEERING COLLEGE
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ASSIGNMENT I

INTRODUCTION TO PYTHON PROGRAMMING

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CSE 'D' SECTION
Ist 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!!
```