

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

```
In [6]: num = int(input("Enter any number to test whether it is odd or even: "))

if (num % 2) == 0:
    print ("The number is even")
else:
    print ("The number is odd")
```

Enter any number to test whether it is odd or even: 28
The number is even

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

```
In [8]: a=int(input("Enter a number: "))

if a>0:
    print ("The number entered is a positive number")
else:
    print ("The number entered is a negative number")
```

Enter a number: 28
The number entered is a positive number

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

```
In [12]: num = 23
if num > 1:
    for i in range(2, int(num/2)+1):
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
else:
    print(num, "is not a prime number")
```

23 is a prime number

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

```
In [22]: my_str= 'aibohphobia'
my_str=my_str.casefold
rev_str= reversed(my_str)
if list(my_str)== list(rev_str):
    print("The string is a palindrome.")
else:
    print("The string is not a palindrome.")
```

The string is a palindrome.

5. SUM OF TWO NUMBERS

```
In [23]: num1 = 100
num2 = 400
sum = num1 + num2
print( "Sum of" , num1, "and", num2, "is", sum )
```

Sum of 100 and 400 is 500

6. Develop a program to find sum of two numbers using functions

```
In [28]: def sum(x,y):
    return x+y
a=int(input("Enter the num1 :"))
b=int(input("Enter the num2 : "))
c=sum(a,b)
print("sum of",a,"and",b,"is",c)
```

Enter the num1 :10
Enter the num2 : 20
sum of 10 and 20 is 30

7. Develop a program to find maximum of two numbers

```
In [32]: def max(a,b):
    if a>=b:
        return a
    else:
        return b
a=200
b=400
print(max(a,b))
```

400

8. Develop a program to find minimum of two numbers

```
In [33]: def min(a,b):
          if a<=b:
              return a
          else:
              return b
          a=500
          b=900
          print(min(a,b))

          500
```

9. Develop a program to find fibonnaci sequence

```
In [34]: aterms = int(input("How many terms? "))

          a1, a2 = 0, 1
          count = 0

          if aterms <= 0:
              print("Please enter a positive integer")

          elif aterms == 1:
              print("Fibonacci sequence upto",aterms,":")
              print(a1)
          else:
              print("Fibonacci sequence:")
              while count < aterms:
                  print(a1)
                  ath = a1 + a2

                  a1 = a2
                  a2 = ath
                  count += 1

          How many terms? 8
          Fibonacci sequence:
          0
          1
          1
          2
          3
          5
          8
          13
```

10. Develop a program to find factorial of a number

```
In [39]: def factorial(n):
          return 1 if (n==1 or n==0) else n * factorial(n - 1)
          num = 5
          print("Factorial of",num,"is",factorial(num))

          Factorial of 5 is 120
```

11. Develop a program to find GCD of two numbers

```
In [45]: num1 = 50
          num2 = 100
          gcd = 1

          for i in range(1, min(num1, num2)):
              if num1 % i == 0 and num2 % i == 0:
                  gcd = i
          print("GCD of", num1, "and", num2, "is", gcd)

          GCD of 50 and 100 is 25
```

12. Develop a program to sawp two numbers

```
In [46]: x = 5
          y = 7

          print ("Before swapping: ")
          print("Value of x : ", x, " and y : ", y)

          x, y = y, x

          print ("After swapping: ")
          print("Value of x : ", x, " and y : ", y)

          Before swapping:
          Value of x : 5 and y : 7
          After swapping:
          Value of x : 7 and y : 5
```

13. Develop a program to reverse number in string

```
In [49]: num = 987654321
          reversed_num = 0

          while num != 0:
              digit = num % 10
              reversed_num = reversed_num * 10 + digit
              num //= 10

          print("Reversed Number: " + str(reversed_num))

          Reversed Number: 123456789
```

14. Develop a program to guess number using random

```
1]: 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: 7
Too Low!
Enter number again: 8
you guessed it right!!!
```