**Week 3:**

1. Python program to find whether the given number is Even or Odd
2. Write a Python program to get the difference between a given number and 17, if the number is greater than 17 return double the absolute difference
3. Write a Python program to test whether a number is within 100 of 1000 or 2000.
4. Write a Python program to calculate the sum of three given numbers, if the values are equal then return three times of their sum
5. Python Program to Find the Factorial of a Number
6. Python Program to print maximum of 3 numbers
7. Write a python program to find whether a given year is leap or not.
8. **Python program to find whether the given number is Even or Odd**

num = int(input("Enter a number: "))

if (num % 2) == 0:

print("The number is even”)

else:

print("The number is odd”)

1. **Write a Python program to get the difference between a given number and 17, if the number is greater than 17 return double the absolute difference**

def difference(n):

if n <= 17:

return 17 - n

else:

return (n - 17) \* 2

print(difference(22))

print(difference(14)

**3.Write a Python program to test whether a number is within 100 of 1000 or 2000.**

n=int(input(“enter n vale”))

def near\_thousand(n):

return ((abs(1000 - n) <= 100) or (abs(2000 - n) <= 100))

print(near\_thousand(n))

print(near\_thousand(1000))

print(near\_thousand(900))

print(near\_thousand(800))

print(near\_thousand(2200))

**4.Write a Python program to calculate the sum of three given numbers, if the values are equal then return three times of their sum**

def sum\_thrice(x, y, z):

sum = x + y + z

if x == y == z:

sum = sum \* 3

return sum

a=int(input("enter 1 no"))

b=int(input("enter 2 no"))

c=int(input("enter 3 no"))

print("if three values are same then result will be sum\*3")

print("sum is: %d" %sum\_thrice(a, b, c))

5.[**Python Program to Find the Factorial of a Number**](https://www.programiz.com/python-programming/examples/factorial)

**EX-1**

def factorial(n):

if n < 0:

return 0

elif n == 0 or n == 1:

return 1

else:

fact = 1

while(n > 1):

fact \*= n

n -= 1

return fact

# Driver Code

num = 5;

print("Factorial of",num,"is",

factorial(num))

**EX-2**

# Python program to find the factorial of a number provided by the user.

# change the value for a different result

num = 7

# To take input from the user

#num = int(input("Enter a number: "))

factorial = 1

# check if the number is negative, positive or zero

if num < 0:

print("Sorry, factorial does not exist for negative numbers")

elif num == 0:

print("The factorial of 0 is 1")

else:

for i in range(1,num + 1):

factorial = factorial\*i

print("The factorial of",num,"is",factorial)

**EX-3**

def factorial(n):

# single line to find factorial

if (n==1 or n==0):

return 1

else:

return n\* factorial(n - 1)

# Driver Code

num = 5;

print("Factorial of",num,"is",

factorial(num))

**6.Python Program to print maximum of 3 numbers**

**EX-1**

a = int(input('Enter first number : '))

b = int(input('Enter second number : '))

c = int(input('Enter third number : '))

largest = 0

if a > b and a > c:

largest = a

elif b > a and b > c:

largest = b

else:

largest = c

print(largest, "is the largest of three numbers.")

**EX-2**

def maximum(a, b, c):

    list = [a, b, c]

    return max(list)

# Driven code

a = 10

b = 14

c = 12

print(maximum(a, b, c))

1. **Write a python program to find whether a given year is leap or not.**

year = int(input('Enter year : '))

if (year%4 == 0 and year%100 != 0) or (year%400 == 0) :

    print(year, "is a leap year.")

else :

    print(year, "is not a leap year.")