**EX.No. : 1 RegNo:**

**Date : Name :**

**Write a Python code to display system information using pywhois.**

**AIM:**

To Write a Python code to display system information using pywhois

**PROGRAM:**

import platform

my\_system =platform.uname()

print(f"System: {my\_system.system}")

print(f"Node Name: {my\_system.node}")

print(f"Release: {my\_system.release}")

print(f"Version: {my\_system.version}")

print(f"Machine: {my\_system.machine}")

print(f"Processor: {my\_system.processor}")

**OUTPUT:**

System: Windows

Node Name: DESKTOP-7ILF0RN

Release: 10

Version: 10.0.19041

Machine: AMD64

Processor: Intel64 Family 6 Model 165 Stepping 5, GenuineIntel

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 2 RegNo:**

**Date : Name :**

**The Magic 8 Ball is a toy used for fortune-telling or seeking advice.**

**AIM:**

To a python program to generate the Magic 8 Ball is for fortune-telling or seeking advice.

**PROGRAM:**

import random

import time

eight\_ball = [ "It is certain", "It is decidedly so", "Without a doubt", "Yes, definitely",

"You may rely on it", "As I see it, yes", "Most Likely", "Outlook Good",

"Yes", "Signs point to yes", "Reply hazy, try again", "Ask again later",

"Better not tell you now", "Cannot predict now", "Concentrate and ask again",

"Don't count on it", "My reply is no", "My sources say no", "Outlook not so good", "Very

Doubtful"]

def question():

question = input("You may ask your yes or no question of the Magic 8 Ball!\n")

print("Thinking...")

time.sleep(random.randrange(0,5))

print(random.choice(eight\_ball))

while True:

question()

repeat = input("Would you like to ask another question? (Y or N)")

if not (repeat == "y" or repeat == "Y"):

print ("Come back if you have more questions!")

break

**OUTPUT:**

You may ask your yes or no question of the Magic 8 Ball!

WILL I GOTO SHOPPIG TODAY

Thinking...

My sources say no

Would you like to ask another question? (Y or N)Y

You may ask your yes or no question of the Magic 8 Ball!

WILL I GOTO COLLEGE TOMORROW

Thinking...

Signs point to yes

Would you like to ask another question? (Y or N)

Come back if you have more questions!

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 3 RegNo:**

**Date : Name :**

**Check whether a number is prime or not**

**AIM:**

To write a program to check whether a number is prime or notin python.

**PROGRAM:**

# Program to check if a number is prime or not

num = 29

# To take input from the user

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

# define a flag variable

flag = False

# prime numbers are greater than 1

if num > 1:

# check for factors

for i in range(2, num):

if (num % i) == 0:

# if factor is found, set flag to True

flag = True

# break out of loop

break

# check if flag is True

if flag:

print(num, "is not a prime number")

else:

print(num, "is a prime number")**OUTPUT:**

Enter a number: 5

5 is a prime number

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 4 RegNo:**

**Date : Name :**

**Make a Simple Calculator**

**AIM:**

Python Program to Make a Simple Calculator.

**PROGRAM:**

def add(x, y):

return x + y

def subtract(x, y):

return x - y

def multiply(x, y):

return x \* y

def divide(x, y):

return x / y

print("Select operation.")

print("1.Add")

print("2.Subtract")

print("3.Multiply")

print("4.Divide")

while True:

choice = input("Enter choice(1/2/3/4): ")

if choice in ('1', '2', '3', '4'):

num1 = float(input("Enter first number: "))

num2 = float(input("Enter second number: "))

if choice == '1':

print(num1, "+", num2, "=", add(num1, num2))

elif choice == '2':

print(num1, "-", num2, "=", subtract(num1, num2))

elif choice == '3':

print(num1, "\*", num2, "=", multiply(num1, num2))

elif choice == '4':

print(num1, "/", num2, "=", divide(num1, num2))

break

else:

print("Invalid Input")

**OUTPUT:**

Select operation.

1.Add

2.Subtract

3.Multiply

4.Divide

Enter choice(1/2/3/4): 1

Enter first number: 23

Enter second number: 45

23.0 + 45.0 = 68.0

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 5 RegNo:**

**Date : Name :**

**Find the Factorial of a Number**

**AIM:**

To write a python program for Finding the Factorial of a Number.

**PROGRAM:**

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)

**OUTPUT:**

Enter a number: 5

The factorial of 5 is 120

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 6 RegNo:**

**Date : Name :**

**Python Program to Generate a Random Number**

**AIM:**

To write a python Program for generating a Random Number

**PROGRAM:**

import random

a=[]

n=int(input("Enter number of elements:"))

for j in range(n):

a.append(random.randint(1,20))

print('Randomised list is: ',a)

**OUTPUT:**

Enter number of elements:3

Randomised list is: [8, 15, 18]

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 7 RegNo:**

**Date : Name :**

**Python Program to Display the multiplication Table**

**AIM:**

TO write a Python Program for Displaying the multiplication Table.

**PROGRAM:**

x=int(input("Enter a number to generate a table"))

for i in range(1,11):

  print("{0} \* {1} = {2}".format(i,x,i\*x))

**OUTPUT:**

Enter a number to generate a table 5

1 \* 5 = 5

2 \* 5 = 10

3 \* 5 = 15

4 \* 5 = 20

5 \* 5 = 25

6 \* 5 = 30

7 \* 5 = 35

8 \* 5 = 40

9 \* 5 = 45

10 \* 5 = 50

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 8 RegNo:**

**Date : Name :**

**Python Program to Convert Decimal to Binary, Octal and Hexadecimal**

**AIM:**

To Write a Python Program for Converting Decimal to Binary, Octal and Hexadecimal

**PROGRAM:**

dec = int(input("Enter Decimal number"))

print("The decimal value Entered ", dec, "is:")

print(bin(dec), "in binary.")

print(oct(dec), "in octal.")

print(hex(dec), "in hexadecimal.")

**OUTPUT:**

Enter Decimal number23

The decimal value Entered 23 is:

0b10111 in binary.

0o27 in octal.

0x17 in hexadecimal.

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 9 RegNo:**

**Date : Name :**

**Python Program to Transpose a Matrix**

**AIM:**

TO WRITE A Python Program for Transposing a Matrix

**PROGRAM:**

X = [[12,7],

    [4 ,5],

    [3 ,8]]

result = [[0,0,0],

         [0,0,0]]

# iterate through rows

for i in range(len(X)):

   # iterate through columns

   for j in range(len(X[0])):

       result[j][i] = X[i][j]

for r in result:

   print(r)

**OUTPUT:**

[12, 4, 3]

[7, 5, 8]

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 10 RegNo:**

**Date : Name :**

**Python Program to Multiply Two Matrices**

**AIM:**

To write a Python Program for Multiplying Two Matrices.

**PROGRAM:**

X = [[12,7,3],

    [4 ,5,6],

    [7 ,8,9]]

# 3x4 matrix

Y = [[5,8,1,2],

    [6,7,3,0],

    [4,5,9,1]]

# result is 3x4

result = [[0,0,0,0],

         [0,0,0,0],

         [0,0,0,0]]

for i in range(len(X)):

   for j in range(len(Y[0])):

       for k in range(len(Y)):

           result[i][j] += X[i][k] \* Y[k][j]

for r in result:

   print(r)

**OUTPUT:**

[114, 160, 60, 27]

[74, 97, 73, 14]

[119, 157, 112, 23]

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 11 RegNo:**

**Date : Name :**

**Python Program to Check Whether a String is Palindrome or Not**

**AIM:**

To write a Python Program for Checking Whether a String is Palindrome or Not

**PROGRAM:**

x = "malayalam"

w = ""

for i in x:

    w= i + w  #mal

if (x == w):

    print("Yes it is palindrome")

else:

    print("No,  it is NOT palindrome")

**OUTPUT:**

Yes it is palindrome

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 12 RegNo:**

**Date : Name :**

**Python Program to Sort Words in Alphabetic Order**

**AIM:**

To write a Python Program for Sorting Words in Alphabetic Order

**PROGRAM:**

my\_str = input("Enter a string: ")

words = [word.lower() for word in my\_str.split()]

words.sort()

print("The sorted words are:")

for word in words:

   print(word)

**OUTPUT:**

Enter a string: I love Python an easy language to code

The sorted words are:

an

code

easy

i

language

love

python

to

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 13 RegNo:**

**Date : Name :**

**Python Program for Inheritance.**

**AIM:**

To write a program for implementing inheritance Python

**PROGRAM:**

class addition:

 def \_\_init\_\_(self,x,y):

   self.x=x

   self.y=y

 def addi(self,x,y):

   return (x+y)

#object creation process

a=int (input("Enter a first Number: "))

b=int (input("Enter a second Number: "))

obj =addition(a,b)

print("Addition of two numbers : ",obj.addi(a,b))

**OUTPUT:**

Enter a first Number: 5

Enter a second Number: 7

Addition of two numbers : 12

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 14 RegNo:**

**Date : Name :**

**Python Program for Operator overloading.**

**AIM:**

Python program To implement Operator overloading.

**PROGRAM**:

class A:

    def \_\_init\_\_(self, a):

        self.a = a

    # adding two objects

    def \_\_add\_\_(self, o):

        return self.a + o.a

ob1 = A(1)

ob2 = A(2)

ob3 = A("Python")

ob4 = A("overloading")

print(ob1 + ob2)

print(ob3 + ob4)

**OUTPUT:**

3

Pythonoverloading

**RESULT:**

Thus the program has been verified and completed successfully.

**EX.No. : 15 RegNo:**

**Date : Name :**

**Python Program for Exception Handling.**

**AIM:**

To write a Python Program for implementing Exception Handling.

**PROGRAM:**

a=int (input("Enter a first Number: "))

b=int (input("Enter a second Number: "))

try:

  k = a//b

  print(k)

except ZeroDivisionError:

  print("Can't divide by zero")

else :

   print(k)

finally:

    print('Program closed')

**OUTPUT:**

Enter a first Number: 5

Enter a second Number: 0

Can't divide by zero

Program closed

**RESULT:**

Thus the program has been verified and completed successfully.