**EX.3 PYTHON PROGRAMS**

**DATE: 30.12.2022**

**1.CALCULATION OF ROOTS OF QUADRATIC EQUATIONS**

str1=("The quadratic function will be in the form of ax^2+bx+c=0")

a=int(input("Enter the coefficient a:"))

b=int(input("Enter the coefficient b:"))

c=int(input("Enter the coefficient c:"))

d=(b\*\*2)-(4\*a\*c)

d1=d\*\*0.5

if(d>0):

sol1=(-b+d1)/2\*a

sol2=(-b-d1)/2\*a

print("The solutions are =",sol1,sol2)

elif(d<0):

print("It has two imaginary roots")

else:

print("It has no real roots")

**OUTPUT**

Enter the coefficient a:1

Enter the coefficient b:5

Enter the coefficient c:6

The solutions are = -2.0 -3.0

**2.VOTING ELIGIBILITY**

n=int(input("Enter the age:"))

if(n>18):

print("Elligible for voting")

else:

print("Not elligible for voting")

**OUTPUT**

Enter the age:27

Elligible for voting

Enter the age:7

Not elligible for voting

**3.READ A CHARACTER AND CHECK WHETHER IT IS UPPER OR LOWER CASE**

a=input("Enter a character to be checked for UPPER or LOWER case: ")

x=ord(a)

if(x>=65 and x<=90):

print("The character is UPPER CASE")

elif(x>=97 and x<=122):

print("The character is LOWER CASE")

else:

print("ENTER A CHARACTER!!")

**OUTPUT1:**

Enter a character to be checked for UPPER or LOWER case: A

The character is UPPER CASE

**OUTPUT2:**

Enter a character to be checked for UPPER or LOWER case: a

The character is LOWER CASE

**OUTPUT3:**

Enter a character to be checked for UPPER or LOWER case:

ENTER A CHARACTER!!

**4. POSITIVE/NEGATIVE/ZERO**

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

if(n>0):

print("The given number is POSITIVE")

elif(n<0):

print("The given number is NEGATIVE")

else:

print("The given number is ZERO")

**OUTPUT 1:**

Enter a number: 2

The given number is POSITIVE

**OUTPUT2:**

Enter a number: -3

The given number is NEGATIVE

**OUTPUT 3:**

Enter a number: 0

The given number is ZERO

**5. CHANGE THE GIVEN CHARACTER TO UPPER OR LOWER**

a=input("Enter a character: ")

x=ord(a)

if(x>=65 and x<=90):

print("The lower case of the character is: ",a.lower())

elif(x>=97 and x<122):

print("The upper case of the character is: ",a.upper())

else:

print("ENTER A CHARACTER")

**OUTPUT1:**

Enter a character: a

The upper case of the character is: A

**OUTPUT2:**

Enter a character: A

The lower case of the character is: a

**OUTPUT3:**

Enter a character:

ENTER A CHARACTER

**6. SALARY AND BONUS:**

n=int(input("Enter the salary amount ="))

if(n>10000):

bonus1=n\*10/100

total\_amount1=n+bonus1

print("The salary =",n)

print("The bonus amount =",bonus1)

print("The total amount =",total\_amount1)

elif(n<10000):

bonus2=n\*12/100

total\_amount2=n+bonus2

print("The salary =",n)

print("The bonus amount =",bonus2)

print("The total amount =",total\_amount2)

else:

print("NO BONUS")

**OUTPUT1:**

Enter the salary amount =12500

The salary = 12500

The bonus amount = 1250.0

The total amount = 13750.0

**OUTPUT 2:**

Enter the salary amount =9000

The salary = 9000

The bonus amount = 1080.0

**OUTPUT 3:**

The total amount = 10080.0

Enter the salary amount =10000

NO BONUS