**PROBLEM SOLVING AND PYTHON PROGRAMMING**

3(a): BIGGEST AMONG THREE NUMBERS

CODING

a=int(input("Enter value of A:"))

b=int(input("Enter value of B:"))

c=int(input("Enter value of C:"))

if(a>b and a>c):

print("BIGGEST=A")

elif(b>a and b>c):

print("BIGGEST=B")

else:

print("BIGGEST=c")

OUTPUT

Enter value of A:2

Enter value of B:5

Enter value of C:4

BIGGEST=B

3(b):ODD OR EVEN

CODING

N=int(input("Enter value of N:"))

if(N%2==0):

print("The given number is EVEN")

else:

print("The given number is ODD")

OUTPUT

Enter value of N:3

The given number is ODD

Enter value of N:2

The given number is EVEN

3(c):STUDENT GRADE ANALYSIS

CODING

m1=float(input("Enter Mark from subject 1:"))

m2=float(input("Enter Mark from subject 2:"))

m3=float(input("Enter Mark from subject 3:"))

m4=float(input("Enter Mark from subject 4:"))

m5=float(input("Enter Mark from subject 5:"))

T=m1+m2+m3+m4+m5

Avg=T/5

print("TOTAL=",T," AND AVERAGE :", Avg )

if(Avg>=90):

print("GRADE=O")

elif(Avg>=80):

print("GRADE=A+")

elif(Avg>=70):

print("GRADE=A")

elif(Avg>=60):

print("GRADE=B+")

elif(Avg>=50):

print("GRADE=B")

else:

print("GRADE=U")

OUTPUT

Enter Mark from subject 1:90.5

Enter Mark from subject 2:98

Enter Mark from subject 3:93.5

Enter Mark from subject 4:99

Enter Mark from subject 5:100

TOTAL= 481.0 AND AVERAGE : 96.2

GRADE=O

3(d):VOTING ELIGIBILITY

CODING

N=int(input("Enter age:"))

if(N>=18):

print("Eligible for voting")

else:

print("Not Eligible for voting")

OUTPUT

Enter age:4

Not Eligible for voting

Enter age:35

Eligible for voting

3(E): Read a character. Check whether it is upper or lower

CODING

ch=input("Enter a character:")

if(ch>='A' and ch<='Z'):

print("The given character is uppercased")

else:

print("The given character is lowercased")

OUTPUT

Enter a character:e

The given character is lowercased

Enter a character:E

The given character is uppercased

3(F):CALCULATING ROOTS OF THE QUADRACTIC EQUATION

CODING

a = float(input('Enter a: '))

b = float(input('Enter b: '))

c = float(input('Enter c: '))

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

rd=d\*\*0.5

if(d>0):

print("REAL ROOTS")

root1=(-b+rd)/2\*a

root2=(-b-rd)/2\*a

print("ROOTS ARE",root1,"AND",root2)

elif(d<0):

print("COMPLEX ROOTS")

realpart=-b/(2\*a)

imagpart =-rd/(2\*a);

print("root1=(",realpart,")+",imagpart,"i")

print("root2=(",realpart,")+",-imagpart,"i")

else:

print("ONLY ONE REAL ROOT")

root=-b/(2\*a)

print("ROOT is",root)

OUTPUT

Enter a: 1

Enter b: -1

Enter c: -6

REAL ROOTS

ROOTS ARE 3.0 AND -2.0

Enter a: 2

Enter b: 3

Enter c: 4

COMPLEX ROOTS

root1=( -0.75 )+ (-7.34149965534362e-17-1.1989578808281798j) i

root2=( -0.75 )+ (7.34149965534362e-17+1.1989578808281798j) i