

EX: 3

Python Programming Using Conditional Statements and Structures

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1.GREATEST OF THREE NUMBERS

Program

```
a=int(input("Enter number 1 : "))
b=int(input("Enter number 2 : "))
c=int(input("Enter number 3 : "))
if(a>b and a>c):
    greater=a
elif(b>a and b>c):
    greater=b
else:
    greater=c
print("The greatest value is : ",greater)
```

Output

Enter number 1 : 12

Enter number 2 : 16

Enter number 3 : 17

The greatest value is : 17

2.TO FIND ODD OR EVEN NUMBER

Program:

```
a=int(input("Enter a number to be checked for odd or even : "))
```

```
if (a%2==0):
```

```
    print("The number is even...")
```

```
else:
```

```
    print("The number is odd...")
```

Output:

Enter a number to be checked for odd or even : 5

The number is odd...

Enter a number to be checked for odd or even : 8

The number is even...

3.STUDENT GRADE ANALYSIS

Program:

```
m1=int(input("Enter Mark 1 M1 :"))
m2=int(input("Enter Mark 2 M2 :"))
m3=int(input("Enter Mark 3 M3 :"))
m4=int(input("Enter Mark 4 M4 :"))
m5=int(input("Enter Mark 5 M5 :"))
total=m1+m2+m3+m4+m5
avg=total/5
print("Your total is "+ str(total) + " Average is " + str(avg))
if(avg>=90):
    print("Your grade is O !")
elif(avg>=80 and avg<90):
    print("Your grade is A+ !")
elif(avg>=70 and avg<80):
    print("Your grade is A !")
elif(avg>=60 and avg<70):
    print("Your grade is B+!")
elif(avg>=50 and avg<60):
    print("Your grade is B !")
else:
    print("Your grade is U !")
```

Output:

```
Enter Mark 1 M1 :98
Enter Mark 2 M2 :95
Enter Mark 3 M3 :99
Enter Mark 4 M4 :100
Enter Mark 5 M5 :90
Your total is 482 Average is 96.4
Your grade is O !
```

4.CALCULATE THE ROOTS OF QUADRATIC EQUATIONS

Program:

```
a=int(input("Enter the coefficient of a : "))
b=float(input("Enter the coefficient of b : "))
c=int(input("Enter the coefficient of c : "))
det=(pow(b,2))-(4*a*c)
d1=pow(det,2)
d2=pow(det,2)
if(det>0):                # Example equation x^2 + 3x + 2 = 0 answers is -1 and -2
    root1=(-b+pow(d1,0.5))/(2*a)
    root2=(-b-pow(d1,0.5))/(2*a)
    print(int(root1)," ",int(root2))
elif(det<0):              # Example equation x^2 + 4x + 5 = 0 answers is -2 +- i
    w=-b/(2*a)
    x=(-b+pow(d1,0.5))/(2*a)
    y=-b/(2*a)
    z=(-b+pow(d1,0.5))/(2*a)
    print(str(w) + " + i" + str(int(x)))
    print(str(y) + " - i" + str(int(z)))
else:
    root=-b/(2*a)
    print(root)
```

Output:

```
Enter the coefficient of a : 1
Enter the coefficient of b : 3
Enter the coefficient of c : 2
-1 -2
```

```
Enter the coefficient of a : 1
Enter the coefficient of b : 4
Enter the coefficient of c : 5
-2 + i0 -2 - i0
```

5.TO CHECK VOTING ELIGIBILITY

Program:

```
n=int(input("Enter the Age : "))  
if(n>=18):  
    print("You are eligible for Voting")  
else:  
    print("You are not eligible for voting")
```

Output:

```
Enter the Age : 17  
You are not eligible for voting  
Enter the Age : 20  
You are eligible for Voting
```

6.CHECK WHEATHER THE GIVEN CHARACTER IS UPPER OR LOWER CASE

Program:

```
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 UPPERCASED !")
```

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

```
    print("The given character is LOWERCASED")
```

```
else:
```

```
    print("Enter a Character !!!")
```

Output:

Enter a character to be checked for Upper or Lower case : a

The given character is LOWERCASED

Enter a character to be checked for Upper or Lower case : A

The character is UPPERCASED !

Enter a character to be checked for Upper or Lower case : 2

Enter a Character !!!