Assignment - 6 Decision Control

1. Write a python script to check whether a given number is positive or non-positive.

```
x=int(input("Enter a number:"))
if x>0:
   print("Number is positive.")
else:
   print("Number is non-positive.")
```

Output:-

```
Enter a number:5
Number is positive.
```

2. Write a python script to check whether a given number is divisible by 5 or not.

```
x=int(input("Enter a number:"))
if x%5==0:
   print("Number is divisible by 5.")
else:
   print("Number is not divisible by 5.")
```

Output:-

```
Enter a number:125
Number is divisible by 5.
```

3. Write a python script to check whether a given number is even or odd.

```
x=int(input("Enter a number:"))
if x%2==0:
   print("Number is even.")
else:
   print("Number is odd.")
```

Output:-

Enter a number:24

Number is even.

4. Write a python script to print greater between two numbers. Print number only once even if the numbers are the same.

```
x=int(input("Enter first number:"))
y=int(input("Enter second number:"))
if x>=y:
   print("%d is greater."%x)
else:
   print("%d is greater."%y)
```

Output:-

Enter first number:5

Enter second number:4

5 is greater.

5. Write a python script to print two given words in dictionary order.

```
x="Mangoes"
y="Orange"
if x<=y:
   print(x,y)
else:
   print(y,x)
```

Output:-

Mangoes Orange

6. Write a python script to check whether a given number is a three digit number or not.

```
x=int(input("Enter a number:"))
if (x>99 and x<1000):
   print("Number is three digit number.")
else:
   print("Number is not a three digit number.")
```

Output:-

```
Enter a number:456
Number is three digit number.
```

7. Write a python script to check whether a given number is positive, negative or zero.

```
x=int(input("Enter a number:"))
if x>0:
   print("Number is positive.")
elif x==0:
   print("Number is zero.")
else:
   print("Number is negative.")
```

Output:-

```
Enter a number:5
Number is positive.
```

8. Write a python script to check whether a given quadratic equation has two real & distinct roots, real & equal roots or imaginary roots.

```
#a,b,and c are the cofficients of a given quadratic equation.
a=int(input("Enter value of a:"))
b=int(input("Enter value of b:"))
```

```
c=int(input("Enter value of c:"))
d=b*b-4*a*c #d refers to the descriminant
if d>0:
   print("Roots are real.")
elif d==0:
   print("Roots are real and equal.")
else:
   print("Roots are imaginary.")
```

Output:-

```
Enter value of a:1
Enter value of b:-7
Enter value of c:12
Roots are real.
```

9. Write a python script to check whether a given year is a leap year or not.

```
year=int(input("Enter a year:"))
if (year%100==0 and year%400==0):
   print("Year is a leap year.")
elif year%4==0:
   print("Year is a leap year.")
else:
   print("Year is not a leap year.")
```

Output:-

```
Enter a year:2020
Year is a leap year.
```

10. Write a python script to print greater among three numbers. Print number only once even if the numbers are the same.

```
a=int(input("Enter first number:"))
b=int(input("Enter second number:"))
c=int(input("Enter third number:"))
if a>=b and a>=c:
   largest=a
elif b>=a and b>=c:
   largest=b
else:
   largest=c
print("Greater number is:",largest)
```

Output:-

```
Enter first number:5
Enter second number:4
Enter third number:9
Greater number is: 9
```

11. Write a python script to take the month value in numeric format and display the number of days in it.

```
n=int(input("Enter a month in the form of serial number:"))
if n==2:
   print("Number of days are 28 or 29.")
elif (n==1 or n==3 or n==5 or n==7 or n==8 or n==10 or n==12):
   print("Number of days are 31.")
else:
   ("Number of days are 30.")
```

Output:-

Enter a month in the form of serial number:5

Number of days are 31.

12. Write a python script to accept one complex number from the user and display the greater number between real part and imaginary part.

```
n=complex(input("Enter a complex number:"))
real_part=n.real
img_part=n.imag
if real_part>=img_part:
   print("Real part is greater.")
else:
   print("Complex part is greater.")
```

Output:-

Enter a complex number:5+6j

Complex part is greater.