PYTHON PROGRAMMING

QUESTIONS

By

Anjali Sunil

S1 B.Tech AI and DS

Roll No.12

GitHub username: anjalisunilnrb

- **Program No.1**

#Write a python program to print Hello.

```
print("Hello")
```

Output:

```
Hello
```

- **Program No.2**

#Write a python program to print student address.

```
print("Anjali Sunil")
print("37")
print("Chengannur")
print("Alappuzha")
```

Output:

```
Anjali Sunil
37
Chengannur
Alappuzha
```

- **Program No.3**

#Write a python program to print college address in multiple lines by using single output statement.

```
print("Gregorian Institute of Technology \n
Kanjirappara PO \n Kangazha \n Kottayam \n 686555")
```

Output:

```
Gregorian Institute of Technology
 Kanjirappara PO
 Kangazha
```

```
Kottayam
686555
```

- **Program No.4**

#Write a python program to print bussiness address in a single line by using multiple print statements.

```
print("Kausthubham Residency",end=" ")
print("Thiruvanvandoor",end=" ")
print("Chengannur",end=" ")
print("Alappuzha",end=" ")
print("689109")
```

Output:

```
Kausthubham Residency Thiruvanvandoor Chengannur
Alappuzha 689109
```

- **Program No.5**

#Write a python program to print your name within double codes.

```
print("\"Anjali Sunil\"")
```

Output:

```
"Anjali Sunil"
```

- **Program No.6**

#Write a python program to print address in multiple line using only one output statement and within double codes.

```
print("\"Narayana Bhavanam\" \n \"Mazhukkeer\" \n
\"Kallisery PO\" \n \"Chengannur\" \n \"Alappuzha\"
\n \"689124\"")
```

Output:

```
"Narayana Bhavanam"
 "Mazhukkeer"
```

```
 "Kallisery PO"
 "Chengannur"
 "Alappuzha"
 "689124"
```

- **Program No.7**

#Write a python program to print addition of two numbers.

```
a=20
b=50
c=a+b
print("Addition of two numbers= ",c)
```

Output:

```
Addition of two numbers= 70
```

- **Program No.8**

#Write a python program to print subtraction of two numbers.

```
a=100
b=50
c=a-b
print("Subtraction of two numbers= ",c)
```

Output:

```
Subtraction of two numbers=  50
```

- **Program No.9**

#Write a python program to print multiplication of two numbers.

```
a=50
b=2
c=a*b
print("multiplication of two numbers= ",c)
```

Output:

```
multiplication of two numbers=  100
```

- **Program No.10**

#Write a python program to print Division of two numbers.

```
a=100
b=25
c=a/b
print("Division of two numbers= ",c)
```

Output:

```
Division of two numbers= 4.0
```

- **Program No.11**

#Write a python program to print modulo division of two numbers.

```
a=25
b=3
c=a%b
print("Module division of two numbers= ",c)
```

Output:

```
Module division of two numbers= 1
```

- **Program No.12**

#Write a python program to find area of square.

```
a=10
b=a*a
print("Area of square= ",b)
```

Output:

```
Area of square= 100
```

- **Program No.13**

#Write a python program to print area of rectangle.

```
a=10
b=2
c=a*b
print("Area of rectangle= ",c)
```

Output:

```
Area of rectangle= 20
```

- **Program No.14**

#Write a python program to print area of circle.

```
r=5
a=3.14*r*r
print("Area of circle= ",a)
```

Output:

```
Area of circle=  78.5
```

- **Program No.15**

#Write a python program to print area of triangle.

```
a=5
b=10
c=0.5*a*b
print("Area of triangle= ",c)
```

Output:

```
Area of triangle= 25.0
```

- **Program No.16**

#Write a python program to print addition of user given two numbers.

```
a=int(input("Enter first number: "))
```

```
b=int(input("Enter second number: "))
c=a+b
print("The addition of user given two numbers= ",c)
```

Output:

```
Enter first number: 10
Enter second number: 20
The addition of user given two numbers= 30
```

- **Program No.17**

#Write a python program to print subtraction of user given two numbers.

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
c=a-b
print("The subtraction of user given two numbers= ",c)
```

Output:

```
Enter first number: 50
Enter second number: 30
The subtraction of user given two numbers= 20
```

- **Program No.18**

#Write a python program to print multiplication of user given two numbers.

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
c=a*b
print("The multiplication of user given two numbers= ",c)
```

Output:

```
Enter first number: 25
Enter second number: 4
The multiplication of user given two numbers= 100
```

- **Program No.19**

#Write a python program to print division of user given two numbers.

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
c=a/b
print("The divison of user given two numbers= ",c)
```

Output:

```
Enter first number: 200
Enter second number: 4
The divison of user given two numbers= 50.0
```

- **Program No.20**

#Write a python program to print modulo division of user given two numbers.

```
a=int(input("Enter first number: "))
b=int(input("Enter second number: "))
c=a%b
print("Modulo division of user given two numbers= ",c)
```

Output:

```
Enter first number: 25
Enter second number: 3
Modulo division of user given two numbers= 1
```

- **Program No.21**

#Write a python program to find area of square of user given sides.

```
s=int(input("Enter the side of square: "))
a=s*s
print("The area of square of user given sides: ",a)
```

Output:

```
Enter the side of square: 10
The area of square of user given sides: 100
```

- **Program No.22**

#Write a python program to find area of rectangle of user given sides.

```
a=int(input("Enter first side: "))
b=int(input("Enter second side: "))
c=a*b
print("The area of rectangle of user given sides= ",c)
```

Output:

```
Enter first side: 6
Enter second side: 5
The area of rectangle of user given sides= 30
```

- **Program No.23**

#Write a python program to find area of circle of user given radius.

```
r=int(input("Enter the radius: "))
a=3.14*r*r
print("The area of circle of user given radius= ",a)
```

Output:

```
Enter the radius: 4
The area of circle of user given radius= 50.24
```

- **Program No.24**

#Write a python program to find area of traingle of user given two sides.

```
a=int(input("Enter the first side: "))
b=int(input("Enter the second side: "))
c=0.5*a*b
print("The area of triangle of user given two sides= ",c)
```

Output:

```
Enter the first side: 15
Enter the second side: 2
The area of triangle of user given two sides= 15.0
```

- **Program No.25**

#Write a python program to read and print an electricity bill.

```
cid=int(input("Enter customer id: "))
cname=input("Enter customer name: ")
cadd=input("Enter customer address: ")
P=int(input("Enter previous reading: "))
C=int(input("Enter current reading: "))
X=C-P
cost=X*3
stax=(cost/100)*5
ctax=(cost/100)*10
tcost=cost+stax+ctax
print("Enter customer id: ",cid)
```

```
print("Enter customer name: ",cname)
print("Enter customer address: ",cadd)
print("Previous reading: ",P)
print("Current reading: ",C)
print("No of units consumed: ",X)
print("Cost= ",cost)
print("State tax= ",stax)
print("Central tax= ",ctax)
print("Total cost= ",tcost)
```

Output:

```
Enter customer id: 1234
Enter customer name: Anjali Sunil
Enter customer address: ABCD
Enter previous reading: 1200
Enter current reading: 1500
Enter customer id: 1234
Enter customer name:  Anjali Sunil
Enter customer address: ABCD
Previous reading: 1200
Current reading: 1500
No of units consumed: 300
Cost= 900
State tax= 45.0
Central tax= 90.0
Total cost= 1035.0
```

- **Program No.26**

#A bus is travelling from stage 1 to stage 10 . The cost of adult passenger is 10Rs per stage and cost of child passenger is 5Rs per stage.Then a state tax 15% and a central tax 12% is also applicable on the ticket.Print the bus ticket of the given data.

```
sname=input("Enter service name= ")
fro=int(input("Enter source num= "))
to=int(input("Enter destination num= "))
adults=int(input("Enter no of adults= "))
child=int(input("Enter no of children= "))
stages=to-fro
acost=10*adults*stages
ccost=5*child*stages
cost=acost+ccost
stax=(cost/100)*15
ctax=(cost/100)*12
tcost=cost+stax+ctax
print("Service name= ",sname)
print("From= ",fro)
print("To= ",to)
print("no of adults= ",adults)
print("no of children= ",child)
print("Adult cost= ",acost)
print("Child cost= ",ccost)
print("Cost= ",cost)
print("State tax= ",stax)
print("Central tax= ",ctax)
print("Total cost= ",tcost)
```

Output:

```
Enter service name= KSRTC
Enter source num= 2
Enter destination num= 8
Enter no of adults= 2
Enter no of children= 3
Service name= KSRTC
From= 2
To= 8
no of adults= 2
no of children= 3
Adult cost= 120
Child cost= 90
Cost= 210
State tax= 31.5
Central tax= 25.200000000000003
Total cost= 266.7
```

- **Program No.27**

#Write a python program to find the value of given expression for the given x&y values

$$z = x^4 + logy/\sqrt{x+y}$$

```
import math as m
x=int(input("Enter value of x: "))
y=int(input("Enter value of y: "))
z=(m.pow(x,4)+m.log(y))/m.sqrt(x+y)
```

```
print(z)
```

Output:

```
Enter value of x: 2
Enter value of y: 4
7.097924950428697
```

- **Program No.28**

#Write a python program to find the value of given expression for the given x&y values

$$z = \sqrt{x} + y^3/e^x + log_2(y)$$

```
import math as m
x=int(input("Enter value of x: "))
y=int(input("Enter value of y: "))
z=(m.sqrt(x)+m.sqrt(m.pow(y,3)))/(m.exp(x)+m.log(y,2)
)
print(z)
```

Output:

```
Enter value of x: 2
Enter value of y: 4
1.002679445428525
```

- **Program No.29**

#write a program to find the values of given expression for the given x&y values

$$z = sin(e^x) + cos(x^y)/tan(x) + log_2(x^y)$$

```
import math as m
x=int(input("Enter value of x: "))
```

```
y=int(input("Enter value of y: "))
z=(m.sin(m.exp(x))+m.cos(m.pow(x,y)))/(m.tan(x)+m.log
2(m.pow(x,y))
print(z)
```

Output:

```
Enter value of x: 4
Enter value of y: 8
-0.09620118195626849
```

- **Program No.30**

#Write a python program to find the value of given expression for the given x&y values

$$z = \sqrt{e^x + log(x^y)} + log_{10}(y^x)$$

```
import math as m
x=int(input("Enter value of x: "))
y=int(input("Enter value of y: "))
z=(m.sqrt(m.exp(x)+m.log(m.pow(x,y))+m.log10(pow(x,y)
))
print(z)
```

Output:

```
Enter value of x: 4
Enter value of y: 2
8.778467397145441
```

- **Program No.31**

#Write a python program to find the values of given expression for the given x&y values

$$z = \sqrt{(log_{10}(e^x) + log_2(x^y)}/sin(x^y) + tan(y^x)$$

```
import math as m
x=int(input("Enter value of x: "))
y=int(input("Enter value of y: "))
z=m.sqrt((m.log10(m.exp(x)))+m.log2(pow(x,y))/(m.sin(
m.pow(x,y)+m.tan(m.pow(y,x))))
print(z)
```

Output:

```
Enter value of x: 6
Enter value pf y: 3
3.495988812223207
```

- **Program No.32**

#Write a python program to find and display roots of a quadratic equation for the given a,b,c when

$$x = -b \pm \sqrt{b^2 - 4ac}/2a$$

```
import cmath as m
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
root1=(-b+m.sqrt(d))/(2*a)
root2=(-b-m.sqrt(d))/(2*a)
print("The two real roots of a quadratic equation
are")
print("Root 1: ",root1)
print("Root 2: ",root2)
```

Output:

```
Enter value of a: 1
Enter value of b: 2
Enter value of c: 3
The two real roots of a quadratic equation are
Root 1: (-1+1.4142135623730951j)
Root 2: (-1-1.4142135623730951j)
```

- **Program No.33**

#Write a python program to find a<b or not.

```
a=int(input("Enter a value: "))
b=int(input("Enter b value: "))
print(a<b)
```

Output:

```
Enter a value: 10
Enter b value: 20
True
```

- **Program No.34**

#Write a python program ,You will be given three values a,b,c and print true if a is smallest value.

```
a=int(input("Enter a value: "))
b=int(input("Enter b value: "))
c=int(input("Enter c value: "))
print(a<b and a<c)
```

Output:

```
Enter a value: 40
Enter b value: 80
```

```
Enter c value: 120
True
```

- **Program No.35**

#Write a python program,You will be given a positive integer amd print true if it is a power of 2 else print false.

```
a=int(input("Enter a value: "))
print(a & (a-1)==0)
```

Output:

```
Enter a value: 64
True
```

- **Program No.36**

#Write a python program to check given number is positive or not.

```
n=int(input("Enter any number: "))
if n>0:
    print("It is a positive number")
    print("The given number= ",n)
print("End of the program")
```

Output 1:

```
Enter any number: 25
It is a positive number
The given number=  25
End of the program
```

Output 2:

```
Enter any number: -25
End of the program
```

- **Program No.37**

#Write a python program to check given number is positive or negative.

```
n=int(input("Enter any number: "))
if n>0:
    print("It is a positive number")
    print("The given number= ",n)
else:
    print("It is a negative number")
    print("The given number= ",n)
print("End of the program")
```

Output 1:

```
Enter any number: 25
It is a positive number
The given number=  25
End of the program
```

Output 2:

```
Enter any number: -25
It is a negative number
The given number=  -25
End of the program
```

- **Program No.38**

#Write a python program to check given number is even or not.

```
n=int(input("Enter any number: "))
if n%2==0:
    print("It is an even number")
    print("The given number= ",n)
```

```
print("End of the program")
```

Output 1:

```
Enter any number: 10
It is an even number
The given number= 10
End of the program
```

Output 2:

```
Enter any number: 13
End of the program
```

- **Program No.39**

#Write a python program to check given number is even or odd.

```
n=int(input("Enter any number: "))
if n%2==0:
    print("It is an even number")
    print("The given number= ",n)
else:
    print("It is an odd number")
    print("The given number= ",n)
print("End of the program")
```

Output 1:

```
Enter any number: 10
It is an even number
The given number= 10
End of the program
```

Output 2:

```
Enter any number: 13
```

```
It is an odd number
The given number= 13
End of the program
```

- **Program No.40**

#Write a program to find minimum of given two numbers.

```
a=int(input("Enter any number: "))
b=int(input("Enter any number: "))
if a<b:
    print("a is minimum")
    print("Value of a= ",a)
else:
    print("b is minimum")
    print("Value of b= ",b)
print("End of the program")
```

Output 1:

```
Enter any number: 10
Enter any number: 20
a is minimum
Value of a= 10
End of the program
```

Output 2:

```
Enter any number: 30
Enter any number: 15
b is minimum
Value of b= 15
End of the program
```

- **Program No.41**

#Write a program to find maximum of given two numbers.

```
a=int(input("Enter any number: "))
b=int(input("Enter any number: "))
if a>b:
    print("a is maximum")
    print("Value of a= ",a)
else:
    print("b is maximum")
    print("Value of b= ",b)
print("End of the program")
```

Output 1:

```
Enter any number: 20
Enter any number: 10
a is maximum
Value of a= 20
End of the program
```

Output 2:

```
Enter any number: 15
Enter any number: 25
b is maximum
Value of b=  25
End of the program
```

- **Program No.42**

#Write a program to check given number is positive even or not.

```
n=int(input("Enter any number:"))
```

```
if n>0 and n%2==0:
    print("It is a postive even number")
    print("The given number= ",n)
print("End of the program")
```

Output 1:

```
Enter any number:20
It is a postive even number
The given number=  20
End of the program
```

Output 2:

```
Enter any number:7
End of the program
```

- **Program No.43**

#Write a python program to check given character is a vowel or not.

```
c=input("Enter a character: ")
if c=='a' or c=='e' or c=='i' or c=='o' or c=='u'or
c=='A' or c=='E' or c=='I' or c=='O' or c=='U':
    print("It is a vowel")
else:
    print("It is not a vowel")
print("End of the program")
```

Output 1:

```
Enter a character: a
It is a vowel
End of the program
```

Output 2:

```
Enter a character: A
It is a vowel
End of the program
```

Output 3:

```
Enter a character: v
It is not a vowel
End of the program
```

Output 4:

```
Enter a character: B
It is not a vowel
End of the program
```

- **Program No.44**

#Write a python program to demonstrate ATM operation by using Nested if else statement.

```
pin =1234
bal=5000
cash=4000
p=int(input("Enter your PIN number: "))
if p==pin:
    a=int(input("Enter amount: "))
    if a%100==0:
            if a<=bal:
                if a<=cash:
                    print("Withdrawal is success")
                    bal=bal-a
                    print("Updated balance= ",bal)
```

```
                else:
                    print("Cash is not available")
            else:
                print("Insufficient balance")
    else:
        print("Invalid amount")
else:
    print("Invalid PIN number")
```

Output 1:

```
Enter your PIN number: 1234
Enter amount: 3000
Withdrawal is success
Updated balance=  2000
```

Output 2:

```
Enter your PIN number: 1234
Enter amount: 5000
Cash is not available
```

Output 3:

```
Enter your PIN number: 1234
Enter amount: 6000
Insufficient balance
```

Output 4:

```
Enter your PIN number: 1234
Enter amount: 3555
Invalid amount
```

Output 5:

```
Enter your PIN number: 2345
Invalid PIN number
```

- **Program No.45**

#Write a python program to display grade of a student.

```
avg=float(input("Enter Average: "))
if avg>90:
    print("Grade=A+")
elif avg>80:
    print("Grade=A")
elif avg>70:
    print("Grade=B+")
elif avg>60:
    print("Grade=B")
elif avg>50:
    print("Grade=C+")
elif avg>40:
    print("Grade=C")
elif avg>35:
    print("Grade=D+")
else:
    print("Grade=D")
```

Output :

```
Enter Average: 76
Grade=B+
```

- **Program No.46**

#Write a python program to print day as per user given input.

```
n=int(input("Enter any number: "))
match n:
    case 1:
        print("MONDAY")
    case 2:
        print("TUESDAY")
    case 3:
        print("WEDNESDAY")
    case 4:
        print("THURSDAY")
    case 5:
        print("FRIDAY")
    case 6:
        print("SATURDAY")
    case 7:
        print("SUNDAY")
    case _:
        print("INVALID DAY")
```

Output 1:

```
Enter any number: 2
TUESDAY
```

Output 2:

```
Enter any number: 8
INVALID DAY
```

- **Program No.47**

#Write a python program to perform arithmetic operation based on user selection.

```
print("Choose any one of the following: ")
print("1.Addition \n2.Subtraction \n3.Multiplication \n4.Division")
opt=int(input("Enter your option: "))
match opt:
    case 1:
        a=int(input("Enter first number: "))
        b=int(input("Enter second number: "))
        c=a+b
        print("The addition of two numbers= ",c)
    case 2:
        a=int(input("Enter first number: "))
        b=int(input("Enter second number: "))
        c=a-b
        print("The subtraction of two numbers= ",c)
    case 3:
        a=int(input("Enter first number: "))
        b=int(input("Enter second number: "))
        c=a*b
        print("The multiplication of two numbers= ",c)
    case 4:
        a=int(input("Enter first number: "))
        b=int(input("Enter second number: "))
        c=a/b
```

```
        print("The division of two numbers= ",c)
    case _:
        print("Invalid option")
```

Output 1:

```
Choose any one of the following:
1.Addition
2.Subtraction
3.Multiplication
4.Division
Enter your option: 1
Enter first number: 10
Enter second number: 20
The addition of two numbers= 30
```

Output 2:

```
Choose any one of the following:
1.Addition
2.Subtraction
3.Multiplication
4.Division
Enter your option: 2
Enter first number: 50
Enter second number: 45
The subtraction of two numbers= 5
```

Output 3:

```
Choose any one of the following:
1.Addition
```

```
2.Subtraction
3.Multiplication
4.Division
Enter your option: 3
Enter first number: 12
Enter second number: 3
The multiplication of two numbers= 36
```

Output 4:

```
Choose any one of the following:
1.Addition
2.Subtraction
3.Multiplication
4.Division
Enter your option: 4
Enter first number: 45
Enter second number: 5
The division of two numbers= 9.0
```

Output 5:

```
Choose any one of the following:
1.Addition
2.Subtraction
3.Multiplication
4.Division
Enter your option: 5
Invalid option
```

- **Program No.48**

#Write a python program to perform find area of Square,Rectangle ,Circle and Triangle as per user selection.

```
print("Choose any one of the following: ")
print("1.Square \n2.Rectangle \n3.Circle \n4.Triangle")
opt=int(input("Enter your option: "))
match opt:
    case 1:
        s=int(input("Enter the side: "))
        a=s*s
        print("The area of Square= ",a)
    case 2:
        l=int(input("Enter the value of length: "))
        b=int(input("Enter the value of breadth: "))
        a=l*b
        print("The area of Rectangle= ",a)
    case 3:
        r=int(input("Enter the radius: "))
        a=3.14*r*r
        print("The area of Circle= ",a)
    case 4:
        b=int(input("Enter the value of base: "))
        h=int(input("Enter the value of height: "))
        a=0.5*b*h
        print("The area of Triangle= ",a)
    case _:
        print("Invalid option")
```

Output 1:

```
Choose any one of the following:
1.Square
2.Rectangle
3.Circle
4.Triangle
Enter your option: 1
Enter the side: 5
The area of Square= 25
```

Output 2:

```
Choose any one of the following:
1.Square
2.Rectangle
3.Circle
4.Triangle
Enter your option: 2
Enter the value of length: 6
Enter the value of breadth: 4
The area of Rectangle= 24
```

Output 3:

```
Choose any one of the following:
1.Square
2.Rectangle
3.Circle
4.Triangle
Enter your option: 3
```

```
Enter the radius: 4
The area of Circle= 50.24
```

Output 4:

```
Choose any one of the following:
1.Square
2.Rectangle
3.Circle
4.Triangle
Enter your option: 4
Enter the value of base: 4
Enter the value of height: 6
The area of Triangle= 12.0
```

Output 5:

```
Choose any one of the following:
1.Square
2.Rectangle
3.Circle
4.Triangle
Enter your option: 5
Invalid option
```

- **Program No.49**

#Write a python program to perform banking operation based on user selection.

```
Pin=1234
cash=4000
balance=10000
```

```
print("Choose any one of the following: ")
print("1.Deposit \n2.Withdrawal \n3.Balance enquiry
\n4.PIN change")
opt=int(input("Enter your option: "))
match opt:
    case 1:
        P=int(input("Enter PIN: "))
        if P==Pin:
            a=int(input("Enter amount: "))
            if a%100==0:
                balance=balance+a
                print("Updated balance= ",bal)
            else:
                print("Invalid amount")
        else:
            print("PIN is incorrect")
    case 2:
        P=int(input("Enter PIN: "))
        if P==Pin:
            a=int(input("Enter amount: "))
            if a%100==0:
                if a<=balance:
                    if a<=cash:
                        balance=balance-a
                        print("Updated balance=
",bal)
                    else:
```

```
                        print("Cash is not
available")
                else:
                    print("Insufficient Balance")
            else:
                print("Invalid amount")
        else:
            print("PIN is incorrect")
    case 3:
        P=int(input("Enter PIN: "))
        if P==Pin:
            print("Balance amount= ",bal)
        else:
            print("Incorrect PIN")
    case 4:
        P=int(input("Enter PIN: "))
        if P==Pin:
            P1=int(input("Enter your new pin: "))
            P2=int(input("Confirm your new pin: "))
            if P1==P2:
                Pin=P1
                print("Your PIN changed
successfully")
            else:
                print("PIN does not match")
        else:
            print("Invalid PIN")
```

```
    case _:
        print("Invalid option")
```

Output 1:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 1
Enter PIN: 1234
Enter amount: 2000
Updated balance= 12000
```

Output 2:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 1
Enter PIN: 1234
Enter amount: 2550
Invalid amount
```

Output 3:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
```

```
3.Balance enquiry
4.PIN change
Enter your option: 1
Enter PIN: 2345
PIN is incorrect
```

Output 4:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 2
Enter PIN: 1234
Enter amount: 3000
Updated balance= 7000
```

Output 5:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 2
Enter PIN: 1234
Enter amount: 5000
Cash is not available
```

Output 6:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 2
Enter PIN: 1234
Enter amount: 12000
Insufficient Balance
```

Output 7:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 2
Enter PIN: 1234
Enter amount: 1250
Invalid amount
```

Output 8:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 2
```

```
Enter PIN: 2234
PIN is incorrect
```

Output 9:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 3
Enter PIN: 1234
Balance amount= 10000
```

Output 10:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 3
Enter PIN: 3456
Incorrect PIN
```

Output 11:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
```

```
Enter your option: 4
Enter PIN: 1234
Enter your new pin: 5678
Confirm your new pin: 5678
Your PIN changed successfully
```

Output 12:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 4
Enter PIN: 1234
Enter your new pin: 5678
Confirm your new pin: 4567
PIN does not match
```

Output 13:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 4
Enter PIN: 2345
Invalid PIN
```

Output 14:

```
Choose any one of the following:
1.Deposit
2.Withdrawal
3.Balance enquiry
4.PIN change
Enter your option: 6
Invalid option
```

- **Program No.50**

#Write a python program to print numbers from 1 to n by using while loop.

```
n=int(input("Enter any number: "))
i=1
while i<=n:
    print(i)
    i=i+1
```

Output:

```
Enter any number: 5
1
2
3
4
5
```

- **Program No.51**

#Write a python program to print numbers from 1 to n by using for loop.

```
n=int(input("Enter any number: "))
for i in range (1,n+1):
```

```
    print(i)
```

Output:

```
Enter any number: 5
1
2
3
4
5
```

- **Program No.52**

#Write a python program to print your name for n number of times by using while loop and for loop.

Using while loop

```
n=int(input("Enter any number: "))
i=1
while i<=n:
    print("Anjali Sunil")
    i=i+1
```

Output:

```
Enter any number: 2
Anjali Sunil
Anjali Sunil
```

Using for loop

```
n=int(input("Enter any number: "))
for i in range (1,n+1):
    print("Anjali Sunil")
```

Output:

```
Enter any number: 3
Anjali Sunil
Anjali Sunil
Anjali Sunil
```

- **Program No.53**

#Write a python program to print numbers in user given range.

```
s=int(input("Enter starting value of the range: "))
e=int(input("Enter ending value of the range: "))
for i in range (s,e+1):
    print(i)
```

Output:

```
Enter starting value of the range: 1
Enter ending value of the range: 10
1
2
3
4
5
6
7
8
9
10
```

- **Program No.54**

#Write a python program to print even numbers in user given range.

```
s=int(input("Enter starting value of the range: "))
e=int(input("Enter ending value of the range: "))
for i in range (s,e+1):
    if i%2==0:
         print(i)
```

Output:

```
Enter starting value of the range: 2
Enter ending value of the range: 8
2
4
6
8
```

- **Program No.55**

#Write a python program to find sum of numbers in user given range.

- **Using while loop**

```
s=int(input("Enter starting value of the range: "))
e=int(input("Enter ending value of the range: "))
sum=0
while s<=e:
    sum=sum+s
    s=s+1
print("Sum of numbers= ",sum)
```

Output:

```
Enter starting value of the range: 1
Enter ending value of the range: 3
```

```
Sum of numbers= 6
```

- **Using for loop**

```
s=int(input("Enter starting value of the range: "))
e=int(input("Enter ending value of the range: "))
sum=0
for i in range (s,e+1):
    sum=sum+i
print("Sum of numbers= ",sum)
```

Output:

```
Enter starting value of the range: 2
Enter ending value of the range: 4
Sum of numbers= 9
```

- **Program No.56**

#Write a python program to find sum of even numbers in user given range.

```
s=int(input("Enter starting value of the range: "))
e=int(input("Enter ending value of the range: "))
sum=0
for i in range (s,e+1):
    if i%2==0:
        sum=sum+i
print("Sum of numbers= ",sum)
```

Output:

```
Enter starting value of the range: 2
Enter ending value of the range: 6
Sum of numbers=  12
```

- **Program No.57**

#Write a python program to count number of digits in the given number.

```
n=int(input("Enter any number: "))
d=0
while n>0:
    d=d+1
    n=n//10
print("Number of digits= ",d)
```

Output:

```
Enter any number: 225
Number of digits=  3
```

- **Program No.58**

#Write a python program to find sum of digits of a given number.

```
n=int(input("Enter any number: "))
sum=0
while n>0:
    rem=n%10
    sum=sum+rem
    n=n//10
print("Sum of digits= ",sum)
```

Output:

```
Enter any number: 255
Sum of digits=  12
```

- **Program No.59**

#Write a python program to find reverse of a given number.

```
n=int(input("Enter any number: "))
rev=0
while n>0:
    rem=n%10
    rev=rev*10+rem
    n=n//10
print("Reverse of a given number= ",rev)
```

Output:

```
Enter any number: 345
Reverse of a given number=  543
```

- **Program No.60**

#Write a python program to check given number is palindrome number or not.

```
n=int(input("Enter any number: "))
a=n
rev=0
while n>0:
    rem=n%10
    rev=rev*10+rem
    n=n//10
print("Reverse of a given number= ",rev)
if rev==a:
    print("Given number is a Palindrome number")
else:
    print("Given number is not a Palindrome number")
```

Output 1:

```
Enter any number: 1221
Reverse of a given number= 1221
Given number is a Palindrome number
```

Output 2:

```
Enter any number: 123
Reverse of a given number= 321
Given number is not a Palindrome number
```

- **Program No.61**

#Write a python program to check the given number is prime or not.

- **Logic No.1- By using n divisions.**

```
n=int(input("Enter any number:" ))
c=0
for i in range (1,n+1):
    if n%i==0:
        c=c+1
if c==2:
    print("Given number is a prime number")
else:
    print("Given number is not a prime number")
```

Output 1:

```
Enter any number:2
Given number is a prime number
```

Output 2:

```
Enter any number:6
Given number is not a prime number
```

➢ Program No.62

#Write a python program to check the given number is prime or not.

- **Logic No.2- By using n/2 divisions.**

```
n=int(input("Enter any number:" ))
c=0
for i in range (2,n//2+1):
    if n%i==0:
        c=c+1
if c==0:
    print("Given number is a prime number")
else:
    print("Given number is not a prime number")
```

Output 1:

```
Enter any number:3
Given number is a prime number
```

Output 2:

```
Enter any number:8
Given number is not a prime number
```

➢ Program No.63

#Write a python program to check the given number is prime or not.

- **Logic No.3- By using square root of n.**

```
import math
n=int(input("Enter any number:" ))
c=0
```

```
x=int(math.sqrt(n))
for i in range (2,n//2+1):
    if n%i==0:
        c=c+1
if c==0:
    print("Given number is a prime number")
  else:
    print("Given number is not a prime number")
```

Output 1:

```
Enter any number:7
Given number is a prime number
```

Output 2:

```
Enter any number:10
Given number is not a prime number
```