PYTHON ASSIGNMENT:-2

1. Exchange of two values

using Naive Approach(by introducing third variable temp.

- **using comma(,) operator**
- **using Arithmetic operator**
- **using XOR operator**
- **Circulating the list of values**
- **using in-Built functions**
- **using slicing operator**

3. calculate the distance between two points.

Practice Problems:

1. Arithmetic Calculations

2. Calculating the Total cost of the apples

3. Convert Fahrenheit to Celsius

4. Apply 5 % discount on total cost of n books

5. Prime number or not

6. Leap year or not(All the conditions should be checked)

7. Simple Interest Calculation

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

ARITHMETIC OPERATION :-

PROGRAM:-

```
num 1=int(input("Enter first number:"))

num 2=int(input("Enter second number:"))

print("Addition:",num 1+ num 2)

print("Subtraction:",num 1-num 2)

print("Multiplication:",num 1*num2)

print("Division:",num 1/num 2)
```

OUTPUT:-

Enter first number :1

Enter second number :2

Addition :3

Subtraction : -1

Multiplication :2

Division :0.5

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

SWAPPING OF VALUES:-

PROGRAM:-

METHOD 1

```python
p = int(input("Enter the First Value :"))
q = int(input("Enter the Second Value :"))
print("The values before swapping are",p,q)
temp = p
p = q
q = temp
print("The Values after swapping are",p,q)
```

OUTPUT:-

Enter the First Value :48

Enter the Second Value :52

The values before swapping are 48 52

The Values after swapping are 52 48

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

SWAPPING OF VALUES:-

METHOD:-2[USING COMMA (,) OPERATOR]

PROGRAM:-

```
s = 59
t = 16
print("The values before Swapping : ",s,t)
s, t = s, t
print("The values after Swapping : ",s,t)
```

OUTPUT:-

The values before Swapping : 59 16

The values after Swapping : 59 16

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

SWAPPING OF VALIES :-

METHOD:-3[USING ARITHMETIC OPERATOR]

PROGRAM:-

```
x = 45
y = 25
print("The Values before Swapping are",x,y)
x = x + y
y = x - y
x = x - y
print("The Values after Swapping are",x,y)
```

OUTPUT:-

The Values before Swapping are 45 25

The Values after Swapping are 25 45

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

METHOD 4 USING XOR OPERATOR:-

PROGRAM:-

j = 58

k = 46

Mprint("The Values before Swapping are",j,k)

j = j ^ k

k = j ^ k

j = j ^ k

print("The Values after Swapping are",j,k)

OUTPUT:-

The Values before Swapping are 58 46

The Values after Swapping are 46 58

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

DISTANCE BETWEEN TWO POINTS:-

PROGRAM:-

```python
x1=int(input("Enter the Value of x1 :"))

x2=int(input("Enter the Value of x2 :"))

y1=int(input("Enter the Value of y1 :"))

y2=int(input("Enter the Value of y2 :"))

D1=(x2-x1)**2

D2=(y2-y1)**2

result=(D1+D2)**0.5

print("Distance between",(x1,x2),"and",(y1,y2),"is : ",result)
```

OUTPUT:-

Enter the Value of x1 :2

Enter the Value of x2 :6

Enter the Value of y1 :4

Enter the Value of y2 :7

Distance between (2, 6) and (4, 7) is : 5.0

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

FIND THE WEIGHT AND COST OF APPLE:-

PROGRAM:-

Cost = int(input("Enter the cost of 1kg of apple:"))

Weight = int(input("Enter the weight (in kg):"))

Total = cost*weight

Print("the total cost of apple is :",total))

OUTPUT:-

Enter the cost of 1kg of apple :150

Enter the weight of the apple bought :2

Amount to be paid is 300

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

TO FIND THE TOTAL OF BOOKS AND TO GIVE 5% DISCOUNT ON USING PYTHON PROGRAM:-

PROGRAM:-

$N_1 =$ int(input("Enter price of book 1:"))

$N_2 =$ int(input("Enter price of book 2:"))

$N_3 =$ int(input("Enter price of book 3:"))

$N_4 =$ int(input("Enter price of book 4:"))

$N_5 =$ int(input("Enter price of book 5:"))

Total = $n_1 + n_2 + n_3 + n_4 + n_5$

Print("The total price of the books :",Total)

Print("5% of discount on 5 books ")

Discount=0.05*total

Total amount= Total – Discount

Print("Total price after discount is :",Total amount)

OUTPUT:-

Enter price of book 1:-500

Enter price of book 2:-200

Enter price of book 3:-150

Enter price of book 4:-350

Enter price of book 5:-400

The total price of books :-1600

5% discount on 5 books

The total price after discount is :-1520.0

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PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

CONVERT CELSIUS TO FAHRENHEIT

PROGRAM:-

F = int(input("Enter the temperature in Fahrenheit :"))

Celsius = 5/9*(F-32)

Print ("Fahrenheit into Celsius is :",Celsius)

OUTPUT:-

Enter the temperature in Fahrenheit :100

Fahrenheit into Celsius is :23.55555556

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS
CALCULATE SIMPLE INTEREST

PROGRAM:-

P = int(input("Enter the value of p:"))

R = int(input("Enter the value of R:"))

T = int(input("Enter the value of T:"))

Simple Interset = P*R*T/100

Print ("The simple interest is :", simple interest)

Print ("Total amount you get ,"T," years is:" P +simple interest)

OUTPUT:-

Enter the value of P : 20000

Enter the value of R : 12

Enter the value of T : 4

The simple interest is :9600.0

Total amount you get after 4 years is : 29600.0

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

CIRCULATING THE VALUES (METHOD-1 Using Inbuilt function)

PROGRAM:-

```
s=int(input("Enter a the Values in the List :"))

list=[]

for i in range(0,s):

element=int(input("Enter the Value :"))

list.append(element)

print("Circulating the list")

for i in range(0,s):

element_deleted=list.pop(0)

list.append(element_deleted)

print(" The Circulated list after",i+1,"rotation",list)
```

OUTPUT:-

Enter a the Values in the List :8

Enter the Value :5

Enter the Value :9

Enter the Value :2

Enter the Value :1

Enter the Value :7

Enter the Value :0

Enter the Value :3

Enter the Value :2

Circulating the list

 The Circulated list after 1 rotation [9, 2, 1, 7, 0, 3, 2, 5]

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PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

The Circulated list after 2 rotation [2, 1, 7, 0, 3, 2, 5, 9]

The Circulated list after 3 rotation [1, 7, 0, 3, 2, 5, 9, 2]

The Circulated list after 4 rotation [7, 0, 3, 2, 5, 9, 2, 1]

The Circulated list after 5 rotation [0, 3, 2, 5, 9, 2, 1, 7]

The Circulated list after 6 rotation [3, 2, 5, 9, 2, 1, 7, 0]

The Circulated list after 7 rotation [2, 5, 9, 2, 1, 7, 0, 3]

The Circulated list after 8 rotation [5, 9, 2, 1, 7, 0, 3, 2]

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

CIRCULATING THE VALUES (METHOD-2)

PROGRAM:-

```python
def circulate(c,n):

for i in range (1,n+1):

d=c[i:]+c[:i]

print("Circulate","=",d)

return

c=[178,289,324,448,570,698,188,842,956,106]

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

circulate (c,n)
```

OUTPUT:-

Enter n :6

Circulate = [289, 324, 448, 570, 698, 188, 842, 956, 106, 178]

Circulate = [324, 448, 570, 698, 188, 842, 956, 106, 178, 289]

Circulate = [448, 570, 698, 188, 842, 956, 106, 178, 289, 324]

Circulate = [570, 698, 188, 842, 956, 106, 178, 289, 324, 448]

Circulate = [698, 188, 842, 956, 106, 178, 289, 324, 448, 570]

Circulate = [188, 842, 956, 106, 178, 289, 324, 448, 570, 698]

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

PRIME NUMBER OR NOT:-

PROGRAM:-

```python
g=int(input("Enter the Value of a :"))
i=2
for i in range(2,g):
if g%2==0:
print("The Given Number is NOT PRIME ")
break
else:
print("The Given Number is PRIME")
```

OUTPUT:-

Enter the Value of a :5678

The Given Number is NOT PRIME

PYTHON PROGRAM USING SIMPLE STATEMENTS AND EXPRESSIONS

PROGRAM TO FIND THE GIVEN YEAR IS LEAP YEAR OR NOT:-

PROGRAM:-

```python
Year=int(input("Enter the Year :"))

if(Year%4==0):

if(Year%100==0):

if(Year%400==0):

print("The given Year is Leap Year")

else:

print("The given Year is not a Leap Year")
```

OUTPUT:-

Enter the Year :20000

The given Year is Leap Year.

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