PYTHON PROGRAMMING USING SIMPLE STATEMENT AND EXPRESSION

EX : 2A PROGRAM FOR USING INTEGERS

DATE: 7.12.22

PROGRAM:

```
a = int(input("enter the number a"))
b = int(input("enter the number b"))
c =("the addition of a and b", a+b)
d= ("the subtraction of a and b ", a-b)
e = ("the multiplication of  a and b", a*b)
f = ("the division of a and b ", a/b)
print("result of addition",c)
print("result of subtraction",d)
print("result of multiplication",e)
print("result of division",f)
```

OUTPUT:

```
enter the number a5
enter the number b7
result of addition ('the addition of a and b', 12)
result of subtraction ('the subtraction of a and b ', -2)
result of multiplication ('the multiplication of  a and b', 35)
result of division ('the division of a and b ', 0.7142857142857143)
>>>
```

EX: 2B

DATE: 7.12.22 **DISPLAY THE COST OF APPLE**

PROGRAM:

```
cost=int(input("enter the apple cost 2kg"))
weight=int(input("enter the apple weight in kg"))
total=cost*weight
print(total)
```

OUTPUT:

```
enter the apple cost 2kg800
enter the apple weight in kg2
1600
>>>
```

EX: 2C **DISPLAY THE COST OF BOOKS**

DATE: 7.12.22

PROGRAM:

```
number=int(input("enter the number"))
price=int(input("enter the price of the books"))
total=price*number
print(total)
```

OUTPUT:

```
enter the number5
enter the price of the books150
750
>>>
```

EX: 2D **FAHRENHEIT TO CELISIUS**

DATE: 7.12.22

PROGRAM:

```
f=int(input("enter the number"))
c=(f-32)*5/9
print(c)
```

OUTPUT:

```
enter the number7
-13.888888888888889
>>>
```

EX: 2E **CALCULATE THE SIMPLE INTEREST**

DATE: 7.12.22

PROGRAM:

```
p=int(input("enter the number"))
r=int(input("enter the number"))
t=int(input("enter the number"))
SI=p*r*t/100
print(SI)
```

OUTPUT:

```
enter the number2
enter the number4
enter the number6
0.48
```

EX: 2F **SWAPPING THE VALUE (METHOD 1)**

DATE: 7.12.22

PROGRAM:

```
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 value after swapping are",P,Q)
```

OUTPUT:

```
enter the first value:1
enter the second value:7
the values before swapping are 1 7
the value after swapping are 7 1
>>>
```

EX: 2F **SWAPPING OF THE VALUE (USING COMMA OPERATORS)**

DATE: 7.12.22

PROGRAM:

```
S=int(input("enter the first value"))
T=int(input("enter the second value"))
print("the value before swapping:",S,T)
S,T=S,T
print("the value after swapping:",S,T)
```

OUTPUT:

```
enter the first value1
enter the second value7
the value before swapping: 1 7
the value after swapping: 1 7
>>>
```

EX: 2F SWAPPING OF THE VALUES (USING ARITHEMATIC OPERATORS

DATE: 7.12.22

PROGRAM:

```
X=int(input("enter the first value"))
Y=int(input("enter the second value"))
print("the value before swapping are",X,Y)
X=X+Y
Y=X-Y
X=X-Y
print("the values after swapping are",X,Y)
```

OUTPUT:

```
enter the first value1
enter the second value7
the value before swapping are 1 7
the values after swapping are 7 1
>>>
```

EX: 2F **SWAPPING OF THE VALUES USING XOR GATE OPERATORS**

DATE: 7.12.22

PROGRAM:

```
j=int(input("enter the first value"))
k=int(input("enter the second value"))
print("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:

```
enter the first value1
enter the second value7
the values before swapping are 1 7
the values after swapping are 7 1
>>>
```

EX: 2G **CIRCULATES N VARIABLES (METHOD-1)**

DATE: 7.12.22

PROGRAM:

```
s=int(input("enter a value 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 value 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]
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]
>>>
```

EX: 2G **CIRCULATE N VARIABLE (METHOD-2)**

DATE: 7.12.22

PROGRAM:

```
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:8
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]
circulate = [842, 956, 106, 178, 289, 324, 448, 570, 698, 188]
circulate = [956, 106, 178, 289, 324, 448, 570, 698, 188, 842]
>>>
```

EX: 2H **DISTANCE BETWEEN TWO POINTS**

DATE: 7.12.22

PROGRAM:

```
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 :3
enter the value of y1 :3
enter the value of y2 :4
distance between (2, 3) and (3, 4) is :  1.4142135623730951
>>>
```

EX: 2I **FACTORIAL VALUE**

DATE: 7.12.22

PROGRAM:

```
n=int(input("enter the value of n"))
i=1
f=1
for i in range(1,n+1):
 f=f*i
 i=i+1
print("the factorial of a number",n,"is",f)
```

OUTPUT:

```
enter the value of n7
the factorial of a number 7 is 5040
>>>
```

EX: 2J **EVEN NUMBER (OR) ODD NUMBER**

DATE: 7.12.22

PROGRAM:

```
e=int(input("enter the number to be checked:"))
if(e%2==0):
 print("the given number is EVEN")
else:
 print("the given number is ODD")
```

OUTPUT:

```
enter the number to be checked:768
the given number is EVEN
>>>
```

EX: 2K **PRIME NUMBER OR NOT PRIME NUMBER**

DATE: 7.12.22

PROGRAM:

```
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
>>>
```

EX: 2L **LEAP YEAR (OR) NOT LEAP YEAR**

DATE: 7.12.22

PROGRAM:

```
year=int(input("enter a 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 a year20000
the given year is leap year
>>>
```