03-04-2025

1) A school needs to check if a student passes or failed. if marks greater than 50 then he passes

A)
```
s = 95
if s>=50:
    print("The student passed in exam")
else:
    print("The student failed in exam")
```

2) write a python program to swap the value of two variable in two methods

A)
```
a = 2
b = 3
a,b = b,a
print(a,b)
```

```
a = 2
b = 3
a = a+b
b = a-b
a = a-b
print(a,b)
```

```
a = 2
b = 3
t = b
b = a
a = t
print(a,b)
```

3) write a python program to create a simple Calculator by using functions.

4)

```
def add(a,b):
    return a+b
def sub(a,b):
    return a-b
def mul(a,b):
    return a*b
def div(a,b)
    return a/b
a = 2
b = 3
choice = +
if choice == '+':
    c = add(a,b)
    print(c)
elif choice == '-':
    c = sub(a,b)
    print(c)
elif choice == '*':
    c = mul(a,b)
    print(c)
elif choice == '/':
    c = div(a,b)
    print(c)
else:
    print("Invalid operator")
```

5) write a python program using expressions (exchange variables, circulate the values of n variable and distance b/w two points).

1) a
```
a = 2
b = 3
a,b = b,a
print (a,b)
```

*
```
a,b,c = 1,2,3
a,b,c = c,a,b
print (a,b,c)
```

*
```
x1, y1 = 0,0
x2, y2 = 3,4
q = (x2-x1) ** 2
b = (y2-y1) ** 2
c = (q+b) ** 0.5
print (c)
```

5) write a program to perform n fibonacci series

A)
```
f=0
s=1
n=10
for i in range (n):
    print (f, end = ' ')
    n = f+s
    f = s
    s = n
```

6) Implementing programs using functions for factorial

A)
```
def fact (n):
    f = 1
    for i in range (1, n+1):
        f* = i
    return f
a = fact (n)
print (a)
```

7) Solve the Scientific problems using conditionals and iterative loops.

A)
```
Def patt(n):
    for i in range (1,n+1):
        for j in range (1,i+1):
            print ('*', end=' ')
        print ()
```

~~a = patt(5)~~
~~print~~
patt(5)

8) Find the lcm and gcd of a given number

A)

L.C.M
```
a = 12
b = 18
lcm = max (12,18)
while True:
    if lcm%a==0 and lcm%b==0:
        break
    lcm+=1
print (lcm)
```

G.C.D
```
a = 12
b = 18
while b!=0
    a,b = b, a%b
print (a)
```

10) Implementing program using strings.

A)
```
S = "MADAM"
print (S[::-1])
```

```
s = "MADAM"
a = s.count ('A')
print (a)
```