

30/07/25

Task 2:- Implement conditional, control and looping statements.

(a) Temperature alert system (if - elif)

Aim:-

To write a Python program that classifies temperature as "Too cold", "Comfortable", or "Too Hot" using conditional (if - elif - else) statements.

Algorithm:-

1. Start
2. Accept temperature input from the user
3. If temperature < 18, Print "Too cold"
4. Else if temperature is between 18 and 25 (inclusive), Print "Comfortable"
5. Else, Print "Too Hot"
6. End.

Program:-

```
# Temperature Alert System
temperature = float(input("Enter the room temperature:"))
if temperature < 18:
    print("Too cold")
elif 18 <= temperature <= 25:
    print("Comfortable")
else:
    print("Too Hot")
```

Result:-

The program correctly identifies the room temperature range and prints an appropriate alert.

Output :-

Enter the room Temperature: 20

SL. NO.	PERFORMANCE (2)	RESULT AND ANALYSIS (2)	AVIA. NOTE (2)	RECORD (2)	Q.TAL (50)
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Output :- (The following will be shown)

Enter Password: test

Incorrect Password TRY Again.

Enter Password: admin

Incorrect Password TRY Again.

Enter Password: admin123

Access Granted

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(b) password Retry system (while loop)

Aim:-

To implement a password retry system using a while loop that allows a maximum of 3 attempts.

Algorithm:-

1. Start
2. Set correct Password as "admin123"
3. set attempt counter to 0
4. while attempts < 3:
 - Ask the user for password input
 - If correct, Print "Access Granted" and Exit loop.
 - Else, increment attempts and print "TRY Again"
5. If attempts == 3, print "Access Denied"
6. End

Program:-

```
# Password Retry system
correct_Password = "admin123"
attempts = 0
while attempts < 3:
    entered_Password = input("Enter Password: ")
    if entered_Password == correct_Password:
        print("Access Granted")
        break
    else:
        print("Incorrect Password. Try Again.")
        attempts += 1
if attempts == 3:
    print("Access Denied")
```

Result:-

The program allows up to 3 attempts and grants or denies access correctly.

Output:-

Enter a number: 5

Factorial of 5 is 120

30/7/25 (c) Factorial Finder (for loop)

Aim:-

To write a python program that calculates the Factorial of a number using a for loop.

Algorithm:-

1. Start
2. Input a number from the user
3. Initialize result as 1
4. Loop from 1 to number (inclusive),
multiply result by each value
5. Print the result.
6. End.

Program:-

```
# Factorial Finder
number = int(input("Enter a number:"))
factorial = 1
for i in range(1, number + 1):
    factorial *= i
print("Factorial of", number, "is", factorial)
```

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X NO.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	1
TOTAL (20)	15
SIGN WITH DATE	13/7/25

Result:-

The program correctly calculates the factorial of the entered number using a for loop.