Date: 30/7/25

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

a) Temperature Alert system

Aim:- To write a python program that takes room temperature as input and prints.

- "too cold" if temperature < 18
- "comfortable" if 18 ≤ temperature ≤ 0.5
- "too hot" if temperature > 25

Algorithm:-

1) Start the program
2) Accept room temperature from the user
3) use if-elif-else condition to check the temperature range.
- if temperature < 18, display "too cold"
- else if temperature is between 18 and 25
- (inclusive) - display "comfortable"
- else - display "too hot".

End of program.

output

Enter your temperature: 22
comfortable.

Program:

```
temp = float (input("enter room temperature"))
if temp <15;
    print("too cold")
elif 18 <= temp <=25;
    print("comfortable")
else;
    print("too hot")
```

Result: The program successfully checked the temperature and printed the appropriate alert based on the given condition.

Date: 30/9/25

6) Password Retry system (while loop)

Aim:- To develop a python program that allows the user up to 3 attempts to enter the correct password using a while loop. The correct password is "admin123".

Algorithm:-

1. Start the Program
2. Initialize the attempt count to 0
3. Repeat the following steps while attempts are less than 3.
- Ask the user to enter a password
- If the password is correct, display a
- otherwise, increase the attempt count.
4.) If 3 incorrect attempts are made, display an access denied message
5.) End the program.

Program:-

```
correct_password = "admin123"
attempts = 3
while attempts < 3:
```

output:

enter password : pass incorrect password

enter password : admin incorrect password

enter password : admin 123 Access granted

```
user_input = input("enter password:")
if user_input == correct_password:
    print("Access granted")
    break
else:
    print("Incorrect Password")
    attempts += 1
if attempts == 3:
    print("Access denied. too many attempts")
```

Result :-

The program correctly validate the passed with a maximum of 3 attempts using a while loop.

output:-

Enter a number :5

factorial :-120

a) factorial number (for loop)

Aim: To write a python program that accepts a number and calculates its factorial using a for loop.

Algorithm:

1) Start the program
2) Accept a number from the user
3) Initialize a variable fact to 1
4) use a for loop from 1 to the given number (inclusive) multiply fact by each number.
5) Display the result.
6) End the program.

Program:

```
num = int(input("enter a number:"))
fact = 1
for i in range (1) num+1):
    fact *= i
print("factorial :", fact)
```

VEL TECH - CSE	
EX NO.	7
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	—
TOTAL (20)	15
SIGN WITH DATE	

Result: The program accurately calculated the factorial the input number using a for loop.