Date:- 13/8/25 TASK-2

Implement conditional, control and looping statements

Aim:- To implement conditional, control and looping statement using python.

2.1 You are developing a simple grade management system for a school. The system needs to determine the grade of a student based on their score in a test. The grading system follows these rules:

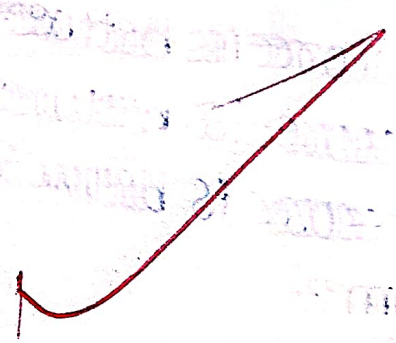
1) If the score is 90 or above, the grade is "A".
2) If the score is between 80 to 89 the grade is
3) If the score is between 70 and 79, the grade is "C"
4) If the score is between 60 and 69, the grade is "D"
5) If the score is below 60, the grade is "F".

Algorithm:-

1. Start
2. Get the input mark from the user.
3. with the use of an If-elif-else statement d
   * If the marks >=90 point grade "A".
   * If the mark is between 80 and 89 point grad "B".
   * If the mark is between 70 and 79 point grade "C".
   * If the mark is between 60 and 69 point grade "D".
   * If the mark is below 60, point grade "F".
4. Stop

Output:-

Enter the score: 60
The Grade is D



Program :-

```
score = int(input("Enter the score:")) if
score >= 90:
 Print("The Grade is A") elif
(score <= 89 and score >=80):
 print("The Grade is B") elif(score <=79
                and score >=70):
 print("The Grade is C").elif(score <=69 and
                score >=60):
 print("The Grade is D") else:
 print("The Grade is F")
```

Result: Thus, the Python program implem conditional, control looping executed successfully.

The electronics maintenance team at a data center needs a tool to assess the health status of UPS backup batteries based on their current charge percentage. You are asked to develop a python program that accepts the battery charge percentage as input and categorize the battery health using the following conditions

* If the percentage is greater than or equal to 90, display:
  ⇒ "Excellent Battery Health"
* If the percentage is between 70 and 89 display:
  ⇒ "Good Battery Health"
* If the percentage is between 40 and 69, display:
  ⇒ "Average Battery Health"
* If the percentage is below 40, display:
  ⇒ "Poor Battery Health."

Aim:-

write a python program that: uses laddered if-elif-else statements.

Algorithm:-

1. Accept battery percentage from the user
2. use laddered if-elif-else to determine the health category:
   * If percentage ≥ 90 → "Excellent Battery Health".

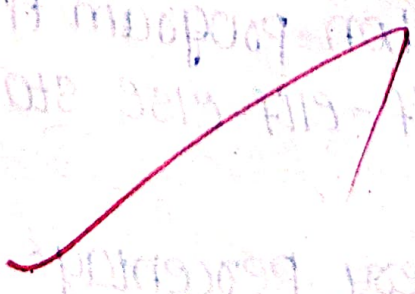
Input :-

Battery charge percentage (integer)

Sample output:-

Enter battery percentage : 85

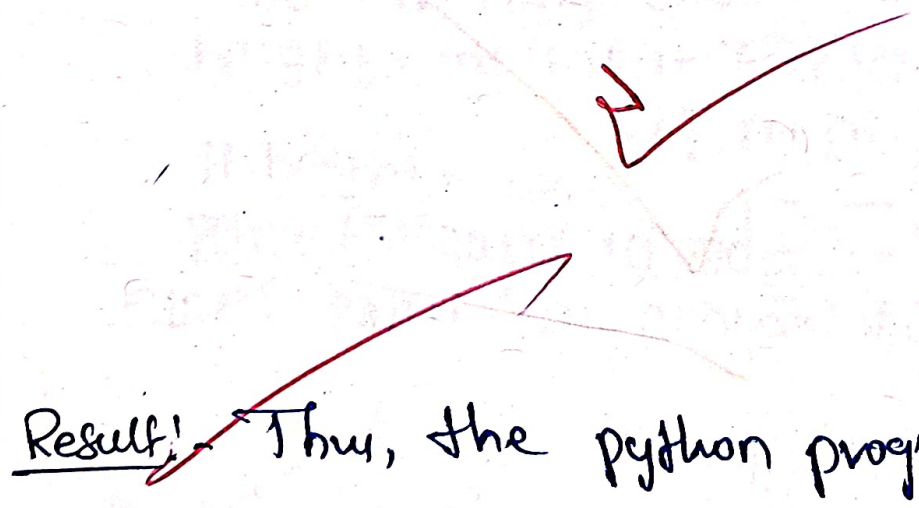
Good battery Health.



if percentage < 90 → "Good Battery Health"
if 40 ≤ percentage < 70 → "Average Battery health"
* If percentage < 40 → "poor Battery Health".

Program:-

```
# Battery Health checker
percentage = int(input("Enter battery percentage:"))
if percentage >=90:
    print("Excellent Battery Health") elif
percentage >= 70:
 print("Good Battery Health") elief
 percentage >= 40:
 print("Average Battery Health") else:
  print("poor Battery Health")
```



Result:- Thus, the python program if-elif-else statement executed successfully

sample Input

Enter height of visitor 1 in cm : 130
Enter height of visitor 2 in cm : 110
Enter height of visitor 3 in cm : 150
Enter height of visitor 4 in cm : 90
Enter height of visitor 5 in cm : 125

sample output

Allowed
Not Allowed
Allowed
Not Allowed
Allowed

Q.3

Aim:- You're coding a system at an amusement park that checks the height of each visitor.

* If the height is 120cm or more, print "Allowed"
* otherwise, print "Not allowed".

Repeat this for 5 visitors.

Algorithm:-

1. Start the program
2. Set the total no. of visitors to 5.
3. Loop from visitor 1 to visitor 5:
   * Accept the height of the visitor as input (in cm).
   * If the height is greater than or equal to 120, print "Allowed."
   * Else, print "Not Allowed."
4. End the loop after 5 visitors have been checked.
5. Stop the program.

Program:-

```
for i in range(1,6):
    height= int(input("Enter height of visitor {i} in cm:"))
    if height>=120:
        print("Allowed to ride")
    else: print("Not allowed to ride")
```

VEL TECH	
EX NO.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	

Result:- Thus, the python program was successfully implemented using conditional statements (if-else), control flow, and looping statements.