13-8-25

Task2: 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 grading system follows these rules:
If the score is 90 or above the grade is A
If the score is 80 and 89 the grade is B
If the score is between 70 and 79 the grade is C
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-else statement do
   - If the marks >=90 Print grade A
   - If the marks is between 80 and 89 Print grade B
   - If the marks is between 70 and 79 Print grade C
   - If the marks is below 60, Print grade F
4. stop

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")
```

output:

```
Enter the score: 60
The grade is D
```

```
elif (Score <=69 and Score >=60):
    Print("the grade is D")
else:
    Print("the grade is F")
```

Result: Implement conditional, control and looping statement using Python executed successfully

Input:

Battery charge Percentage

Sample output:

Enter battery Percentage: 85

Good battery Health

2.2 the electronics maintanance team at a data center needs a tool to assess the health status of UPS backup batteries based on their current charge Percentage.

Aim: write a Python Program that: Uses laddesized if-else statement.

Algorithm:

1. Accept battery Percentage from the user.
2. use laddesized if-elif-else to determine the health.
   - if Percentage ≥ 90 → "excellent Battery Health"
     if 70 ≤ 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 Heathy")
elif Percentage >= 40:
    Print("Average battery Health")
else:
    Print("Poor Battery Health")
```

Result: Uses laddesized if-else statement executed sucessfully

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
Enter height of visitor 6 in cm : 100

Sample output

Allowed
Not Allowed
Allowed
Not Allowed
Allowed

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

- If the height is 120 cm or more, Print "Allowed".
- otherwise Print "Not Allowed".

Repeat this for 5 visitors.

Algorithm :

1. start the Program
2. set the total number of visitors to 5
3. loop from visitor 1 to visitor 5
   - Accept the height of the visitor as input
   - if 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(f"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)	
SIGN WITH DATE	5

Result: thus the Python was successfully implemented using Conditional statements, Control flow and looping statement