Date:- 13/8/25

Implement conditional, control and looping statements

Task 2: Implement Conditional, control and looping Statements

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 rule:

If the score is 90 or above, the grade is "A"
if the scrore is between 80 and 89, the grade is "B"
if the scrore is between 70 to 79 the grade is "C"
if the scrore is between 60 and 69 the grade is "D"
if the scrore is below 60, the grade is "F"

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

Algorithm:-

1. Start
2. Get the input mark from the user.
3. with the use of an if-elif-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 between 60 and 69 print grade "D"
   - if the marks is below 60, print grade "F"

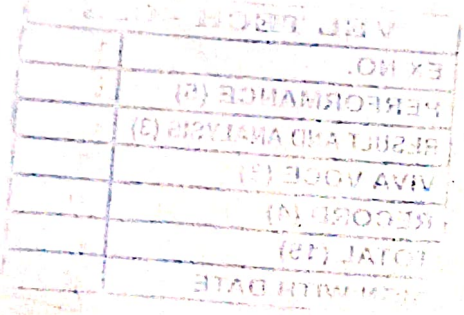
Stop

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")
elif(Score<=69 and Score >=60):
  print("The Grade is D")
else
  print("The Grade is F")
```

output:

```
Enter the Score :60
The Grade is D
```



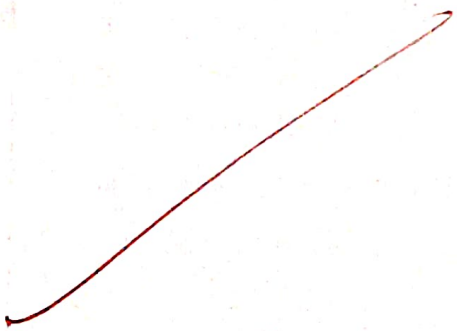
Task:

2.2 The electronics maintenance team at a data Center needs a tool to access 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 an input and Categorizes the battery health using the following conditions

Aim:- To write python program that by using ladderized if-elif-else Statements

Algorithm

1. Accept battery percentage from the user
2. use ladderized if-elif-else to determine the health Category:
   - 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"



Python program :-

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

Input :

Battery charge percentage (integer)

Sample output :

Enter battery percentage : 85

Good Battery health.

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:")
```

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 visitors 4 in cm : 90
Enter height of visitors 5 in cm: 125

output:-

Allowed
Not allowed
Allowed
Not allowed
Allowed

Task 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 visitors 1 to visitor 5.
   - Accept the highest of the visitors as input (in cm)
   - 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.

VEL TECH	
EX NO.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	
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Result :- Thus, the python program was successfully implemented using Conditional Statements (if-else), Control flow and looping statements.