

Task-2

Implement conditional control and looping statement.

Aim: To implement conditional control and looping statement using Python.

To

If 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:

If the score is 90 or above the grade is 'A'

If the score is between 80 and 89 the grade is "B"

If the score is between 70 and 79 the grade is "C"

If the score is between 60 and 69 the grade is 'D'

If the score is below 60 the grade is "F"

Algorithm

1. Start

2. Get the input mark from the user

3. with the user of an if - else statement do

* If the marks ≥ 90 Print grade 'A'

* If the mark is between 80 and 89 Print grade 'B'

* If the mark is between 70 and 79 Print grade 'C'

* If the mark is below 60 and 69 Print grade 'D'

* If the mark is below 60 Print grade 'F'

* Stop

output

Enter the score : 60

The Grade is D

TEST - C25	
X NO.	
PERFORMANCE (2)	
RESULT AND ANALYSIS (3)	
AIA ACCC (3)	
RECORD (4)	
TOTAL (12)	
SIGN WITH DATE	

Mr. Andhra Singh Ji was the best teacher
of Economics. He had a very good teaching
methodology.

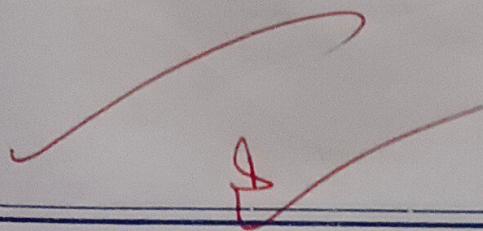
Program:

```
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")
```

VELTECH	
EX No.	
PERFORMANCE (5)	
RESULT AND ANALYSIS (3)	
VIVA VOCE (3)	
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	

Result: Thus the Python Program implemented conditional control looping executed successfully.



22. The electronic maintenance team at a data center needs a tool to assess the health status of UPS backed batteries based on their current charge percentage. You are asked to develop a Python program that accept the battery charge percentage as input and categorizes the battery health using the following conditions.

- If the Percentage is greater than equal to 90 display
→ "Excellent Battery Health."
- If the Percentage is between 70 and 89 display
→ "Good Battery Health."
- If the Percentage is below 40 and 69 display
→ "Average Battery Health"
- If the Percentage is below 40 display;
→ "Poor Battery Health"

Aim:
To write a Python Program that uses ladderized if else statements.

Algorithm:

1. Accept battery Percentage from the user
2. use ladderized ≥ 90 elif else determine battery health.
 - If $70 \leq \text{Percentage} \geq 90 \rightarrow \text{"Excellent Battery Health"}$
 - If $70 < \text{Percentage} < 90 \rightarrow \text{Good Battery Health}$

Input

Battery charge Percentage (integer).

sample output:

Enter battery Percentage : 85

Good Battery Health

BATTERY	
CHARGE	85%
HEALTH	GOOD
STATE	CHARGING
TIME	10:15:00
STATION	HOME

Sample response match with entry of 85
Battery status good below description



• If Percentage $< 40 \rightarrow$ poor Battery Health:

A 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").
```

Result:- Thus the Python Program if else statement
executed successfully

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

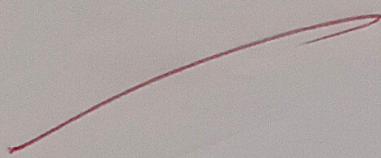
- If the height is 120 cm or more Print "Allowed"
- otherwise Print "Not allowed"

Repeat this for 5 visitors.

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

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.



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.

Program

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

VELTECH	
EX No.	2
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	15
SIGN WITH DATE	

Result: The Python Program was successfully implemented using conditional statement else) control flow and looping statements ✓