

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 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  $\geq 90$  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:

Statement

Entered the Score: 60  
The grade is D

Urging Buttom

: million A  
taste.

A grade will be D if the score is less than or equal to 59.  
If the score is between 60 and 69 the grade is C.  
If the score is between 70 and 79 the grade is B.  
If the score is between 80 and 89 the grade is A.  
If the score is above 90 the grade is F.

got it

Result

Score = int(input("Enter the score:"))

```
if (Score <= 69 and Score >= 60):
```

```
    Print("the grade is D")
```

```
else:
```

```
    Print("the grade is F")
```

Result: implemented conditional, control and looping statements  
using python executed successfully

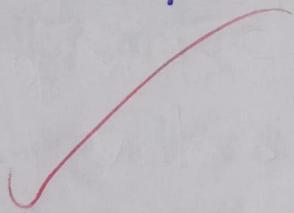
Input:

Battery charge Percentage

Sample output:

Enter battery Percentage: 85

Good battery Health



2.2 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.

Aim: Write a Python Program that uses ladderized if-else statement.

Algorithm:

1. Accept battery Percentage from the user.
2. Use ladderized if-elif-else to determine the health.
  - if Percentage  $\geq 90 \rightarrow$  "excellent Battery Health"
  - if  $70 \leq \text{Percentage} < 90 \rightarrow$  "good battery health"
  - if  $40 \leq \text{Percentage} < 70 \rightarrow$  Average battery health"
  - if Percentage  $< 40 \rightarrow$  Poor battery health

Program:

# Battery Health check

Percentage = int(input("Enter battery Percentage :"))

If Percentage  $\geq 90$ :

    Print("excellent Battery health")

elif Percentage  $\geq 70$ :

    Print("Good battery healthy")

elif Percentage  $\geq 40$ :

    Print("Average battery Health")

else:

    Print("Poor Battery Health")

Result: Uses ladderized if-else statement executed successfully

### Sample input

Entered height of visitor 1 in cm: 130

Entered height of visitor 2 in cm: 140

Entered height of visitor 3 in cm: 150

Entered height of visitor 4 in cm: 90

Entered height of visitor 5 in cm: 125

Entered 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 visitors
  - 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("Enter height of visitor {} 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