

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 ≥ 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  $\geq$  90:
```

```
    print("the grade is A")
```

```
elif (score  $\leq$  89 and score  $\geq$  80):
```

```
    print("the grade is B")
```

```
elif (score  $\leq$  79 and score  $\geq$  70):
```

```
    print("the grade is C")
```

Task 2: Implement Conditional Control and Looping

Output:

Statement

Enter the score: 60

The grade is D

21 For one developing a simple grade management system for a school, the following 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 70, the grade is F

Algorithm:
1. Start

2. Get the input marks 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 70, print Grade F

4. Stop

Pseudocode

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

elif (score <= 69 and score >= 60):

Print("the grade is D")

else:

Print("the grade is F")

Print

Battery charge percentage

sample output:

Enter battery percentage: 82

Good battery Health

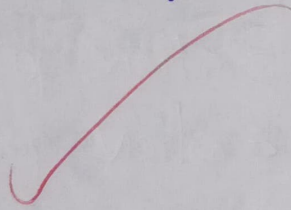
Result: implement conditional, control and looping statement
Using Python executed successfully

Input:

Battery charge percentage

Sample output:

Enter battery percentage: 85
Good battery Health



2.2 The electronics 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 checker
```

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

```
If Percentage  $\geq 90$ :
```

```
Print("excellent Battery health")
```

```
elif Percentage  $\geq 70$ :
```

```
Print("Good battery Health")
```

```
elif Percentage  $\geq 40$ :
```

```
Print("Average battery Health")
```

```
else:
```

```
Print("Poor Battery Health")
```

Result: Uses ladderized if-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

Enter height of visitor 6 in cm: 100

Sample output

Allowed

Not Allowed

Allowed

Not Allowed

Allowed

```
# 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 > 50:  
    print("Average Battery health")  
else:  
    print("Poor Battery health")
```


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("Enter height of visitor {i} in cm:"))

if height >= 120

Print("Allowed to ride")

else

Print("Not allowed to ride")

VEL TECH	
EX NO.	22
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