

Task(2):-  
11/8/25

Implement conditional, control and looping statements

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

Q1:- You are developing a simple grade management system for a school. The system needs to determine the grade of student based on score in a test.

If score is 90 or above, the grade is "A".

If score is below 80 & 89, the grade is "B".

If score is below 70 & 79, the grade is "C".

If score is below 60 & 69, the grade is "D".

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

Algorithm:-

1. Start
2. Get input mark from the user
3. with use of If-elif-else statement do.
  - If  $mark \geq 90$  print grade "A".
  - If mark is below 80 & 89 print grade "B".
  - If mark is below 70 & 79 print grade "C".
  - If mark is below 60 & 69 print grade "D".
  - If mark 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")
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.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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program 2

# 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")

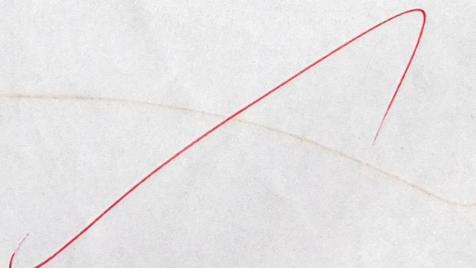
Input:

Battery charge percentage (integer)

Sample outputs

Enter battery Percentage: 85

good battery health



Q.2 :- The electronics maintenance team at data centre needs to assess health status of UPS backup batteries based on current percentage. You are asked to develop a python program that accepts the percentage health using following conditions.

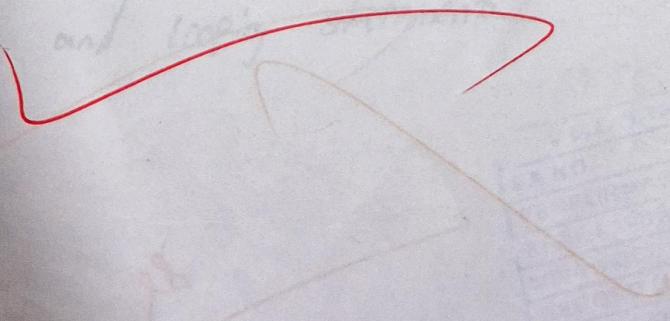
- If the percentage is greater than or equal to 90, display:  
→ "Excellent Battery health".
- If the percentage is b/w 70 & 89, display:  
→ "Good Battery health".
- If percentage is b/w 40 & 69, display:  
→ "Average Battery health".
- If percentage is b/w 0 & 39, display:  
→ "Poor Battery health".

Task:-

Write a python program that uses ladderized if-else - else statements.

Algorithm:

1. Accept battery Percentage from user.
2. Use ladderized if-else - else to determine the health category:
  - 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:-

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 visitor 4 in cm: 90

Enter height of visitor 5 in cm: 125

Sample output:-

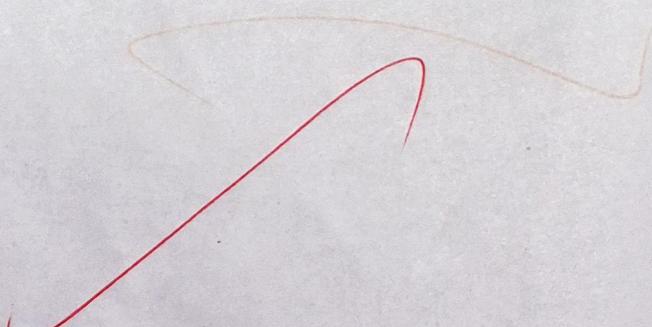
Allowed

NOT Allowed

Allowed

NOT Allowed

Allowed.



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

Result:- Thus, the python program was successfully implemented using conditional statements (if-else), control flows and looping statements.

VEL TECH - GSE	
EX NO.	251
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA-VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
SIGN WITH DATE.	12/12/2023