

Python: Code2Xplore – 60 Days Challenge

Daily Submission Template

Challenge Title: Smart Transport Load Balancing System

Course Code: CSE205

Concerned Teacher: Dr. Yasir Afaq

Student Details

Student Name: Vishnu Mattakoyya

Register Number: AP24110011648

Section: __J__

Date of Submission: 17/02/2026

GitHub Repository Link (Mandatory): https://github.com/Vishnu164321/code_2xploer_day_5

1. Problem Understanding

I understand that the problem is about the list which contains the integer values that is weights, Our goal is to make the separate lists for the different weights and count the number of valid weights.

Logic / Approach Used

In the beginning I consider the list named as weights and also some empty lists for the weights after separation, I shift the weights into the another lists based upon the information given in the question by using the “append”.

2. Personalization Applied (Mandatory)

I applied the Rule B as the personalization, it is correct match for my name and I removed the very_light list from the final plan by using the remove the elements from the list and count the affected elements by using `aff_count`.

Example:

- Name = Vishnu Mattakoyya
- Hence, I removed the elements from the very_light list.

3. Test Case Verification

Test Case	Expected Output	Your Output
Test Case 1	Final plan is : Very light: [] Normal load: [] Heavy load: [30, 55] Overload: [80, 70] invalid: [-2] Valid Weights: 6 Affected items due to PLI: 2	Final plan is : Very light: [] Normal load: [] Heavy load: [30, 55] Overload: [80, 70] invalid: [-2] Valid Weights: 6 Affected items due to PLI: 2

4. Python Program

Paste your complete Python code below:

```
weights=[4,80,70,-2,30,55,0]
very_light=[]
normal_load=[]
heavy_load=[]
overload=[]
invalid=[]
valid=0
aff_count=0
for weight in weights:
    if weight<0:
        invalid.append(weight)
    elif weight>=0 and weight<=5:
        very_light.append(weight)
        valid+=1
    elif weight>=6 and weight<=25:
        normal_load.append(weight)
        valid+=1
    elif weight>=26 and weight<=60:
        heavy_load.append(weight)
        valid+=1
    else:
        overload.append(weight)
        valid+=1
```

```

name="Vishnu Mattakoyya"
L=len(name.replace(" ", ""))
PLI=L%3
if PLI==0:
    for item in overload:
        invalid.append(item)
        aff_count+=1
    overload=[]
elif PLI==1:
    aff_count=len(very_light)
    very_light=[]
elif PLI==2:
    aff_count=len(very_light)+len(overload)
    very_light=[]
    overload=[]

print("Final plan is :")
print("Very light:",very_light)
print("Normal load:",normal_load)
print("Heavy load:",heavy_load)
print("Overload:",overload)
print("invalid:",invalid)

print("Valid Weights:",valid)
print("Affected items due to PLI:",aff_count)

```

5. Learning Outcome

What did you learn from this challenge?

I learned how to separate the list and also how to change the elements into one list to another list, and also learn how to use conditions inside the for loop.

Student Declaration

- I hereby declare that this submission is **my own original work**.
- I have **not used AI tools**, copied code from the internet, or shared code with others.
- I understand that **plagiarism will result in ZERO marks**.

Signed: Vishnu

Date: 17/02/2026

Faculty In charge:
--dryasir