# MTA Revision Problem Solving

#### **Problem Statement**

Write a Python program that performs the following tasks:

- 1. **Prompt the user** to enter the number of items sold.
- 2. For each item, prompt for the item's name and its price (a positive float).
- 3. Calculate the total sales by summing up the prices of all items.
- 4. Print the total sales amount.
- 5. **Determine** if the total sales amount is more than \$100. Print "Sales target met" if it is, otherwise print "Sales target not met".

#### Instructions

Laptop

1	١. ا	lnp	ut	Det	ails:

o Number of items sold: Integer

o Item name: String

o Item price: Positive float

#### 2. Output Details:

- o Total sales amount
- o Message indicating if the sales target of \$100 is me

Examples :		
Inputs :		
3		

800.50

Mouse

25.75

Keyboard

45.20

#### out put:

```
Total sales amount: 871.45
Sales target met
```

#### **Tips**

- Use a loop to process each item's name and price.
- Keep a running total of the sales amount.
- Use conditional statements to check if the total sales exceed \$100.

This problem is straightforward and doesn't require using lists, focusing instead on basic loops and conditionals.

#### **Problem Statement**

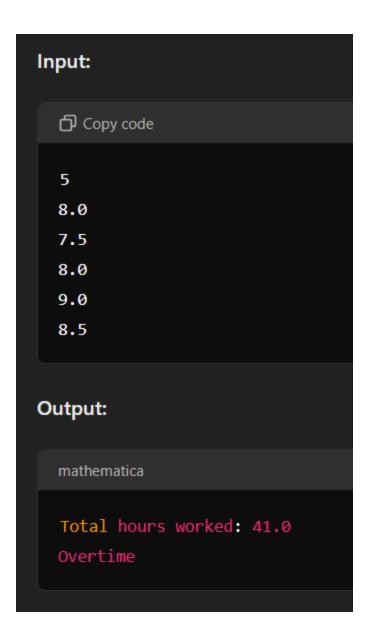
Write a Python program that performs the following tasks:

- 1. **Prompt the user** to enter a number representing the number of days worked in a week.
- 2. For each day worked, **prompt for the number of hours worked** (a positive float).
- 3. Calculate the total hours worked in the week.
- 4. **Determine** if the total hours worked exceed 40 hours. Print "Overtime" if it does, otherwise print "Regular hours".

#### Instructions

- 1. Input Details:
  - o Number of days worked: Integer
  - o Hours worked each day: Positive float
- 2. Output Details:
  - o Total hours worked
  - o Message indicating if overtime is applicable

#### Example



#### **Tips**

- Use a loop to collect hours worked each day.
- Maintain a running total of hours worked.
- Use a conditional statement to check if the total hours exceed 40.

This problem is straightforward and focuses on basic arithmetic operations and conditional statements without requiring lists.

### Last One:

#### Question 1: [5 marks]

Write an algorithm that prompts the user to enter the value of x, and then calculates and prints y(x) using the equation below using the proper control instruction:

$$y(x) = \begin{cases} -2x - \frac{1}{2} & x \ge 0 \\ 2x - \frac{1}{2} & x < 0 \end{cases}$$

## Just Try:

#### Question 2: [10 marks]

Write a python program that does the following:

- Prompt the user to enter the number of students in a class
- For each student, the name, the MTA grade /30, and the TMA grade /20 should be entered to the list **Record**.
- For each student, the Continuous Assessment (CA), which is the sum of both assessments, should be calculated and added to the list as well.
- Print the count of students who got less than 15 in CA.
- List the names of the students who got less than 15 in CA one after another, separated by commas.

**NB**: Do not worry about validating the entry. We consider that all entered values are valid.