# Assignment 1

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## Question 1:

You are a librarian and you have a list of books in your library. Each book is represented as a string. Your task is to write a Python program to find out how many books in the library have a title longer than 25 characters.

In [1]:
```
# Taking books as input and appending them to list
n = int(input("Enter no. of books: "))
books = []
for i in range(0, n):
    book_name = str(input(f"Enter name of book {i+1}: "))
    books.append(book_name)

# Incrementing count by 1 upon finding length of book > 25 characters
count = 0
for book in books:
    if (len(book) > 25):
        count += 1

print("\nCount of books having length>25 are:", count)
```

```
Count of books having length>25 are: 3
```

## Question 2:

You are a sports coach and you have the heights of your players in centimeters. The heights are stored in a list. Your task is to write a Python program to calculate the average height and find out how many players are taller than the average.

In [13]:
```
heights = [165.7, 155, 143.6, 177.8, 135, 167, 180.4]

# Finding the total height
total = 0
for height in heights:
    total += height

# Finding the average height
avg_height = total / len(heights)

# Counting the number of students having height > average height
count = 0
for height in heights:
    if (height > avg_height):
        count += 1

print(f"Average height is: {avg_height:.2f}")
print("No. of players having height greater than the average height:", count)
```

```
Average height is: 160.64
No. of players having height greater than the average height: 4
```

## Question 3:

You are a teacher and you have the scores of your students on a test. The scores are stored in a list. Your task is to write a Python program to find the median score. If the number of scores is even, the median is the average of the two middle scores.

In [16]:
```python
# List of marks of students
marks = [83, 94, 62, 69, 74, 99, 97, 89, 91, 65, 90, 58, 88, 79, 56, 88, 78, 71]
marks.sort() # because to find median, we need a sorted list

# Finding the median
count = len(marks)

# Case when count of marks are odd
if (count % 2 != 0):
    median = marks[(count//2)]
# Case when count of marks are even
else:
    median = (marks[(count//2)-1] + marks[(count//2)]) / 2

# Displaying the output
print("Median marks is:", median)
```

```
Median marks is: 81.0
```