

# Static Keyword and Friend Function

---

## 1. Student Counter System

Create a `Student` class with attributes like `name` and `roll_number`. Use a **static data member** to count the number of students created. Implement functions to:

- Add new students and increment the counter.
  - Display the total number of students using a **static member function**.
- 

## 2. Bank Account Balance Comparison

Define a `BankAccount` class with attributes `account_holder` and `balance`.

- Use a **friend function** to compare the balances of two accounts and display the account with the higher balance.
  - Use a **static data member** to keep track of the total number of accounts created.
- 

## 3. Rectangle Area Comparison

Create a `Rectangle` class with attributes `length` and `width`.

- Use a **static function** to count the total number of rectangles created.
  - Implement a **friend function** to compare the areas of two rectangles and display the larger one.
- 

## 4. Employee Salary Increment

Design an `Employee` class with attributes `name`, `salary`, and a **static data member** `increment_percent`.

- Use a **friend function** to increase an employee's salary based on `increment_percent`.
  - Allow updating the increment percentage using a **static function**.
- 

## 5. Cricket Player Average Score

Create a `CricketPlayer` class with attributes `player_name`, `runs`, and a **static data member** to track the total number of players.

- Use a **friend function** to compare the runs of two players.
  - Display the total number of players using a **static function**.
-

## 6. Shopping Cart Total Price

Define a **Product** class with attributes **name**, **price**, and **quantity**.

- Use a **friend function** to calculate the total price of two products combined.
  - Use a **static variable** to keep track of the number of products added.
- 

## 7. Temperature Converter

Create a **Temperature** class with an attribute **celsius**.

- Use a **friend function** to convert Celsius to Fahrenheit.
  - Use a **static function** to display a message about temperature conversion rules.
- 

## 8. Car Showroom Inventory

Define a **Car** class with attributes **model**, **price**, and a **static data member** to count the total number of cars available.

- Use a **friend function** to compare the prices of two cars and display the more expensive one.
  - Display the total number of cars using a **static function**.
- 

## 9. Library Book Count

Create a **Book** class with attributes **title** and **author**.

- Use a **static variable** to count the total number of books in the library.
  - Implement a **friend function** to check if two books have the same author.
- 

## 10. Movie Ticket Booking

Design a **MovieTicket** class with attributes **movie\_name**, **ticket\_price**, and a **static data member** to count the total tickets booked.

- Use a **friend function** to compare the ticket prices of two movies and display the cheaper one.
  - Use a **static function** to display the total number of tickets booked.
-