**Problem 1 – Static & Readonly (Car Factory Counter)**

Create a class Car that has:

* A **static field** TotalCars that counts how many cars are created.
* A **readonly field** ChassisNumber that is assigned only in the constructor.
* Properties: Model and Price.

In Main, create 3 cars and display their details along with the total number of cars.

**Problem 2 – Single Inheritance (Animal → Dog)**

Create a base class Animal with:

* A field Name.
* A method Eat().

Create a derived class Dog that:

* Inherits from Animal.
* Adds a method Bark().

In Main, create a Dog and call both Eat() and Bark().

**Problem 3 – Multilevel Inheritance (Person → Employee → Manager)**

Create a class Person with a field Name.  
Create a class Employee that inherits from Person and adds a field Salary.  
Create a class Manager that inherits from Employee and adds a method ManageTeam().

In Main, create a Manager and use fields/methods from all levels.

**Problem 4 – Hierarchical Inheritance with Interfaces (Shape)**

Create a base class Shape with a method Draw().

Create two derived classes:

* Circle (inherits from Shape)
* Rectangle (inherits from Shape)

Create two interfaces:

* IMovable with method Move()
* IResizable with method Resize()

Make both Circle and Rectangle implement the two interfaces.

In Main, create objects of Circle and Rectangle and demonstrate inheritance + multiple interfaces.

**Problem 5 – Combined Example (Smart Device System)**

Create:

* A **base class** Device with a readonly SerialNumber and method TurnOn().
* A **derived class** Phone (single inheritance).
* A **derived class** SmartPhone from Phone (multilevel inheritance).
* Another derived class Tablet from Device (hierarchical inheritance).
* Two interfaces:
  + ICall with method MakeCall().
  + ICamera with method TakePhoto().
* Make SmartPhone implement both interfaces.

In Main, create:

* One Phone
* One SmartPhoneOne Tablet