Problem 1: Class Design

Design and implement the following classes:

1. **Person** class with attributes:
   * Name
   * Age
   * Address
   * Phone number
   * Email
   * Gender
   * Occupation
   * Date of Birth
   * Nationality
   * Blood Type
2. **Student** class that inherits from **Person** with additional attributes:
   * Student ID
   * GPA
   * Major
   * Year of Enrollment
   * Graduation Date
   * Student Status (e.g., active, graduated)
3. **Teacher** class that inherits from **Person** with additional attributes:
   * Employee ID
   * Subject
   * Years of Experience
   * Certification
   * Office Location
   * Teaching Load
   * Research Interests
4. **Book** class with attributes:
   * Title
   * Author
   * ISBN
   * Genre
   * Publication Year
   * Publisher
   * Number of Pages
   * Language
   * Availability (e.g., available, checked out)
   * Shelf Location
5. **Car** class with attributes:
   * Model
   * Year
   * Color
   * Manufacturer
   * Mileage
   * Engine Type
   * Registration Number
   * Insurance Status
   * Fuel Type
   * Transmission Type
6. **Dog** class with attributes:
   * Breed
   * Age
   * Color
   * Weight
   * Height
   * Health Status
   * Microchip ID
   * Training Level
   * Diet Plan
   * Owner Information
7. **Rectangle** class with attributes:
   * Length
   * Width
   * Area
   * Perimeter
   * Color
   * Border Style
   * Corner Radius
   * Border Color
   * Fill Pattern
   * Transparency Level
8. **Computer** class with attributes:
   * Brand
   * RAM
   * Processor
   * Storage Capacity
   * Operating System
   * Screen Size
   * Battery Life
   * Weight
   * Graphics Card
   * Warranty Period
9. **Employee** class with attributes:
   * Name
   * Employee ID
   * Department
   * Position
   * Salary
   * Hire Date
   * Employee Type
   * Employee Status
   * Supervisor
   * Office Location