Emergency Response Simulation - Short Report

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Overview
This project simulates a city's emergency response system using a C# console application.
It models Police, Firefighters, and Ambulances responding to random incidents across different locations, demonstrating key OOP concepts.

Object-Oriented Programming (OOP) Concepts Used

- **Abstraction:**
  - The `Emergency Unit` abstract class defines the common structure for all emergency units.

- **Inheritance:**
  - `Police`, `Firefighter`, and `Ambulance` inherit from `Emergency-unit`, reusing and customizing the behavior.

- **Polymorphism:**
  - Each emergency unit overrides the `Can-handle` and `Respond ToIncident` methods to perform specific actions based on the incident type.

- **Encapsulation:**
  - The properties `Name` and `Speed` are managed through constructors and class methods, hiding internal details.

Class Diagram (Text-based Structure)

```plaintext
EmergencyUnit (abstract)
 ├── Police
 ├── Firefighter
 └── Ambulance

Incident

Program (Main)
```