

Emergency Response Simulation — Text Structure

1. Main Program (`Program` class)

- **Purpose:**
Runs the simulation for 5 turns where random incidents occur and the user must select the correct emergency unit.
- **Steps:**
 - Create a list of emergency units:
 - `Police Unit 1`
 - `Firefighter Unit 1`
 - `Ambulance Unit 1`
 - Set possible `incidentTypes`: `"Crime", "Fire", "Medical"`
 - Set possible `locations`: `"City Hall", "Market", "Hospital", "Park", "Mall"`
 - Initialize `score = 0`
 - **For 5 turns:**
 - Randomly pick an incident type and location
 - Create an `Incident` object
 - Find all units that can handle the incident
 - Display available units
 - Ask user to select a unit:
 - If correct choice → respond to incident → +10 points
 - If wrong input → -5 points
 - If no unit available → -5 points
 - Show current score
 - After 5 turns, display **final score**

2. Abstract Base Class (`EmergencyUnit`)

- **Properties:**
 - `Name (string)` — Name of the emergency unit
 - `Speed (int)` — Speed of the emergency unit
- **Constructor:**
 - Sets `Name` and `Speed`
- **Abstract Methods:**
 - `CanHandle(string type)` — Checks if the unit can handle the given type of incident.

- `RespondToIncident(Incident incident)` — Defines how the unit responds to an incident.

3. Derived Classes (Specific Emergency Units)

a) `Police` (inherits from `EmergencyUnit`)

- **Handles:** "Crime"
- **Responds:** Prints:
"[Police unit] is handling a crime at [location]."

b) `Firefighter` (inherits from `EmergencyUnit`)

- **Handles:** "Fire"
- **Responds:** Prints:
"[Firefighter unit] is putting out a fire at [location]."

c) `Ambulance` (inherits from `EmergencyUnit`)

- **Handles:** "Medical"
- **Responds:** Prints:
"[Ambulance unit] is treating people at [location]."

4. Incident Class (`Incident`)

- **Properties:**
 - `Type` (string) — The type of incident ("Crime", "Fire", or "Medical")
 - `Location` (string) — The location where the incident occurs
- **Constructor:**
 - Initializes `Type` and `Location`