

## **Catacomb Crawler UML**

### **Purpose**

To test the ability to generate UML diagrams based on problem details.

### **Directions**

Your task is to design classes for a game called Catacomb Crawler.

The game will consist of a set of actors - a hero and a set of monsters. Heroes will have a user defined name. Each actor will have a name, a health, and a location - a coordinate on a 2D grid. The hero's and monsters can hit for a random amount of damage and their health will be reduced by the damage taken. Dead monsters should be removed from the game. The game should end if the hero is dead or reaches the exit.

The hero and the monsters will be located in a catacomb. The size of the catacomb will be defined by the user. The hero will start in the first "room" - coordinate 0, 0 of a 2D grid. The exit will be the last "room" of the grid - the coordinate of the size of the catacomb minus one. Monsters will be randomly placed throughout the catacomb.

The user playing the game will need to be able to move the hero, detect monsters (the hero can smell when monsters are nearby), and view the hero's health and location.

The intent of this practice problem is to take the implementation (code) out of the picture and focus on laying out what needs to be implemented. You are allowed to modify your UML as you go into the project.

### **Verification & Deliverables**

The deliverable is an image of the UML diagram of your classes.

We recommend using LucidChart to generate your UML diagram for your classes.

You should have your TA review your UML diagram of your classes when you have a good draft to get feedback and ideas.

### Example UML for a class named Vehicle

- The first block will be your class name
- The second block will contain fields for the class
- The third block will contain methods for the class

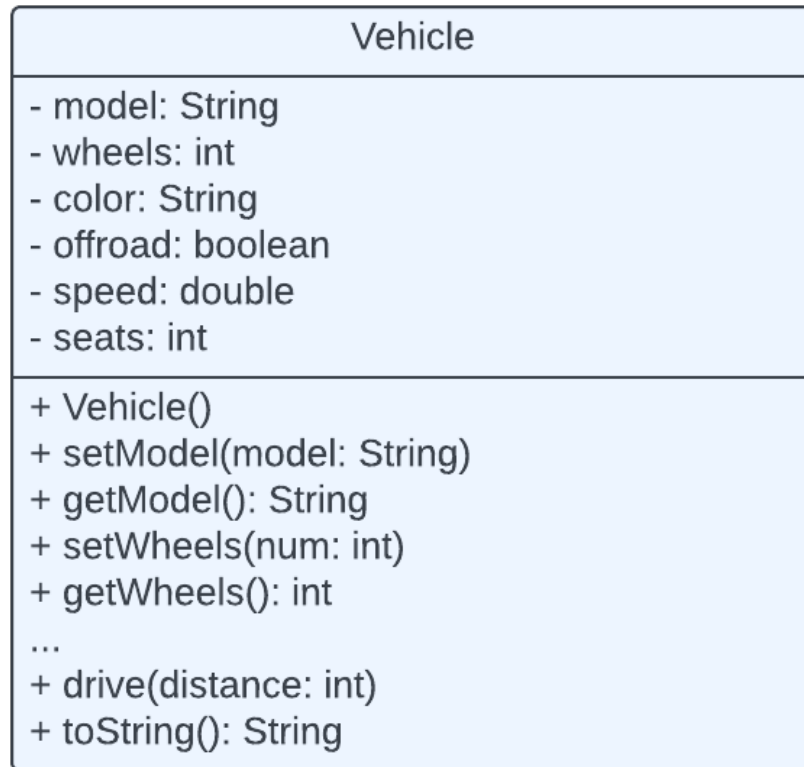


Figure 1: UML Diagram for Vehicle Class