**SENG201 Project Report**

Student 1: Phillip Kim (ID:63083227)

Student 2: David Buick

**The Structure**

One of the main classes we used is the class for managing the various aspects of the game such as the number of days left to find all transporter parts and starting the game itself and various random events that happen throughout the game.

The other class we had is the spaceship class. The main purpose of this class is to keep track of the status of the spaceship itself and its crew members and the inventory of items. The spaceship class uses ArrayLists to keep track of item inventory and the crew members.

The other class is the item class this class is the super class for all items in the game. We decided not to include the transporter pieces as items as they cannot be used by crew members and we only need to keep a track of the number of pieces the player finds. We divided items into two main categories, food and medicine. These are the child classes of item class. From there, food and medicine classes have their own child classes which are the individual items in the game.

The last of the main classes is the crew class. This class contains the status of the individual crew member, as well as the activities they can perform. This class is also the super class of the different types of crew members, which the player gets to choose.

When the player starts the game, the game class takes in the user input of the duration of the game and details of crew members and creates the crew objects and the spaceship object. From there, the crew class handles the activities of each crew member, while the spaceship class handles the events that affect the spaceship, such as change in inventory or crew member list. The game class checks if certain requirements are met during the game and triggers events.

**Tests**

For the game class the test coverage was 62%. This was due to the random events not being able to be tested as it occurs randomly.

For the crew class the test coverage was 55.8%. The reason for this is the search method not being able to be tested properly as the result is random.

For the item test the test coverage was 85.4%. This was due to some getter methods not being tested.

For the spaceship class the test coverage was 58.7%. The reason for this was due to the getter methods no being tested which are very simple.

**Thoughts**

I thought the project was interesting. I was overwhelmed when I looked at the specifications first but, in the end, I thought it was manageable.

**Retrospective and improvements**

The thing I thought that went well was that we finished the project. What I thought didn’t go well is that we lacked in communication. An improvement can be made is to communicate with the group a bit more, maybe set up rules such as make a push to the git depository at least once in 3 days.

**Time spent**

Phillip Kim: Around 60 to 70 hours.

David Buick:

**Work distribution**

Phillip Kim 70 : 30 David Buick