Space Explorer Game Report

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Structure of the application and design choices

At the start, we aimed to minimize the confusion in our code. Therefore, the structure of our code is modularized to reduce complexity of each classes and methods as shown in our UML diagram.

In our program, we have six different types of our crew member and have decided to make a crew member as parent class that has all the methods of a crew member. Also, we have two different types of items and decided to do the same structure that has the items class as a parent. We have also decided to put the classes that runs the game into one package, while GUI and JUnit testing are in separate classes too.

As a group, we have decided that the UML and use case will be done towards the end of the project. We have decided to finish the command line of the program and then quickly do the UML and use case diagram then start the GUI.

The game is designed in small part of modular, this is how them easy communicate each other. Especially, when applying GUI, modularization become very important it makes GUI can immediately reuse the modular. And some small part of Game environment variables are initialized in public in order for easy communication in some extreme case. Overall, most part of variable, are being send and get by getter and setter.

Collections

In our program, we made an item type array list named shop that contains all objects the objects that you can possible buy in the outpost. Also, we made a feature that shows the stock items that the player can buy in the current day. Therefore, we also made integer array list type that contain how many items available in the current day.

Junit test coverage

Due to the program structure that we have, we have decided to test the crew class and the crew member class because it has the important methods for the game. Both of these tests scored roughly 80% to 90% in the class that they're testing. This approach is to ensure that the important methods are working as it should.

Thoughts and feedback

I, Hezekiah, thought that the project was a great experience to learn Java and to build a program as a team. Personally, I found it hard to construct my thoughts and turned it into a program. I found that constructing the game environment class was the hardest of all. However, Enyang was very helpful and considerate when it comes to turning both of our ideas into a running method in a class.

I, Enyang, thought that the project was very useful, especially for improving idea about how to create a big project. I realize pointer are extremely useful for this kind of game design, it make it easy to keep an instant under control.

Reflection

Looking back, starting the project early did not go according to plan as Hezekiah flew back to Palmy and working apart is not a very good idea. Therefore, we have decided to start the project just before half of the semester starts. Due to this, we feel that spend most of the time fixing the bugs that are on our code. Also, the game feature of having a doctor that can add healing value to the item are not implemented in the GUI though it is implemented in command line. On the other hand, everything went well from planning how the game would run and what features would it have to coding the program.

If we are given another chance to work in another project as a team again, we would try and improve our schedule and planning phase. Also, starting the project early and having to spend on it with more time before the submission date will help us to improve our program, add more features and possibly turn it into an interactive arcade game.

Effort and Contribution

Due to other papers and commitments that we have, as a group we worked on this project in a week (hours wise). However, when it comes to personal hours I, Enyang, have worked on parts of it for roughly 3 days in GUI and 2 days in command line. While I, Hezekiah have worked on parts of it for more than a week due to my lack of knowledge in Java.

As a group, I, Enyang Zhang and Hezekiah Dacillo have agreed that each of us have contributed 50% of work in this project as we have divided the work based on our strengths.