

## Reflection

*What was your overall approach to tackling this project?*

We decided that our game was going to be a Museum Heist where there is a robber who will try to break in at the museum at night and to steal the Hope Diamond which is the most expensive display in the Smithsonian National Museum of Natural History in Washington, DC. Little did the robber know that everything in the museum comes to life at night. So, we thought of having rooms which had different themes. Each room would have had monsters who would fight the robber. So our first step for our project was to make a map of the museum and to decide on what rooms and monsters we will have. Once we had those, we decided where each room was located in the museum. We thought of using an array list for this, so we assigned grids for each of the rooms. Afterwards, we figured out how to move the robber around the museum with user input of the directions. After that, we had to make the robber able to pick up items from the Ancient Weapons Gallery. We made the items list an array list. We then made monsters for each of the rooms with their maximum damage to the robber. The robber also has 100 points of life. The robber can also attack the monsters with the items they grabbed. Lastly, they have to find the Precious Items Display where the Hope Diamond is located and steal it. Once they steal it, the game will be over and the robber wins. This was how we were able to complete our game. We had to list our subtasks, complete them, and move on to the next. Our group met every other night and figured the code out together. There were also times that one of us would just let the group know that they figured out how to do some parts of the code.

*What new thing(s) did you learn / figure out in completing this project?*

We learned how: (1) to use object oriented programming effectively throughout the project; (2) to apply what we have learned in the past homework to complete the game; (3) to communicate and help each other, (4) how to create the map by going through each row and column in the array list.

*Is there anything that you wish you had implemented differently?*

We think that we could have implemented the weapons into the game differently. They could have been available in all of the rooms or multiple rooms instead of just the ancient weapons room.

*If you had unlimited time, what additional features would you implement?*

If we had additional time, we would implement a way to gain back health with food or another item, so when the user is attacked by a monster, they have a way of gaining back that health they lost. In addition, we could have also implemented a way for the player to get out of the museum once they got the diamond. This could have been through adding more obstacles that they have to get through. Because an alarm would sound when the player gets the diamond, there could be tighter security that the player has to get through in order to get out of the museum. We also did not have time to add spaces with restricted access and if we did we'd have implemented that.

*What was the most helpful piece of feedback you received while working on your project? Who gave it to you?*

We really found Professor Jordan's help about how to make the museum map really helpful. The advice was to make an array list and assign parts of it depending on where we want the rooms to be located at. When our group figured this out, the other parts of the code were easy to figure out.

*If you could go back in time and give your past self some advice about this project, what hints would you give?*

Our group only started writing the code after Thanksgiving break and it was a time crunch for us. We would tell ourselves to start the project sooner so we can have more time writing the program.

*If you worked with a team: please comment on how your team dynamics influenced your experience working on this project.*

We are all friends in the group so it made the project easier to complete. In the beginning, we decided that this member would do these specific tasks and all of us did what we were assigned to. At times, one of us will also just message the group chat saying we figured out this task and so all of us showed initiative on finishing the project. We were all willing to meet and make adjustments to do the project together because we figured we will be more productive if all three of us are present.