**COMP 491L HWK1**

Final updates are in Red

1- Project/Game Name: CodeEscape

The name of the game is based on how the in-game character must learn Java to escape from a dungeon. The player must navigate a complex set of rooms. Each room is a different puzzle that teaches the player a different programming ideal. When a puzzle is solved the player is transported to the next room.

2- Product Owners: Ernie Ledezma and Dani Odicho

Scrum Master: Tariq Rafiq

Team Members: Oscar Lugo, Jose Pech, Abel Lawal, Kasun Hettiarachchi, and J[oseph](https://moodle.csun.edu/user/view.php?id=15821&course=67604)

[Pena](https://moodle.csun.edu/user/view.php?id=15821&course=67604).

3- The objective of this project is to create an educational first-person game that will teach players the basics of java. The expected customer’s for this product will be students who are taking an introductory course in Java and for those who are interested in learning the language. Normally, Java is learned through the classroom or through online guides. This product can be very useful to the customer, since it offers a different, scary and fun manner in which to learn a programming language.

4- These are the characteristics:

* The game shall be made for the PC platform
* The game shall be made using the Unity Game Engine and Blender
* The game shall be programmed in C#
* The game shall have 10 puzzles/tasks for the player to complete (6 levels will be completed during the second semester)
* The game should teach the gamer the basics of Java programming

These requirements will be expanded upon throughout the duration of the project. It is also possible that there will be more requirements added if time allows.

5- For the second semester, these tasks should be accomplished:

* Complete the remaining 6 puzzles. (All 10 puzzles were completed)
* Polish both the artwork of game and the UI (We created a logo and made certain touches to levels to give it a more appealing look)
* Add more cut-scenes (if time allows) (We were able to add a cut-scene to the final level)
* Add voice acting to certain scenes (This is a task that will be worked on in the future)
* Adding hints and quizzes to existing puzzles. (A user manual was created as well as hints)
* Adding enemy and friendly NPCs (This was accomplished)

The second half of the semester will be used to finish the game. This includes finishing the rest of the planned 10 puzzles. But in addition to this it includes fleshing out the game. This will be accomplished by adding hints and quizzes, cut-scenes and voice acting to complete the video game experience. In the same fashion as the first semester tasks will be assigned to individual members each sprint and then be compiled into a finished product. Towards the end of the semester the focus will shift towards testing and quality control of the software product.

6- During the first semester, we were able to develop approximately 4000 lines of code. We also used 26000 lines of generated code. For the second semester, we plan to develop at least 6000 lines of code to complete the project. In total, we had 10,604 lines of code that we wrote. There were a total of 31,783 lines of generated code.

7- Potential Risks are: (Status in blue)

* Whether each project member has enough time to work on their assignment during the course of the sprints
* Over the course of the semester each project member’s time availability changed gradually, however any time a member was running behind we just informed our Scrum Master and things were moved around. Sometimes it meant that tasks were modified or that the schedule was altered.
* Finding adequate time to meet with team members outside of the lab sessions
* Last semester everyone’s availability was pretty similar and we were able to meet weekly for “wing-stop” meetings.
* How long it will take for Unity and C# to be learned
* Unity and C# were learned pretty quickly. There are numerous tutorials on YouTube for Unity which really helped. C# is very similar to Java so the learning curve was not too bad.
* Whether 10 puzzles might be too much to complete
* During the first semester we were able to finish more puzzles than we initially expected so completing the 10 puzzles should not be a problem.
* Failure to address priority conflicts
* We instantiated a procedure on how to merge, which was strictly adhered so that we didn’t cause conflicts.
* Failure to resolve the responsibilities between team members
* The appointment of a Scrum Master helped. As he had overall authority on all issues between team members there was a clear chain of command to resolve any disagreements.
* Making sure the project requirements don’t change drastically
* The product owners had a clear vision of the project and any changes have only strengthened the overall design of the project rather than derail it.
* Make sure the communication between team members stays strong at all times
* With frequent weekly meetings, on site and off site, it was easy to keep in contact. Also every one exchanged emails; we created a google drive to sync our changes, and through Github we can all work remotely on the project.
* Trying to find the perfect balance of difficulty for a beginner programmer
* This risk is very tricky as trying to find the balance between fun and educational is very tricky. But we are aiming for the game to be on the side of simplicity. We are hoping to instill the fundamentals of programming rather than showing sample programs you can find online.

New Risks for Semester 2

* The project not being finished in time. (We were able to complete the project on time)
* Not being able to add enough details on each level. (We were able to add details, which included the helpful Robot and Enemy Spider)
* Team member’s availability being different this semester and team members not being able to meet adequately outside of lab. (We were able to work around this issue throughout the semester)
* Github issues have occurred resulting in slower performance during sprints (We were able to work around these issues and make a finished product)

8- The project code and all the resources can be found by following this link: <https://github.com/eledezma/firstpersonpuzzle>

The Planning Spreadsheet and all the project documents can be found in the “doc” folder.

9. The progress of the project is tracked using a variety of tools, such as the MIT schedule and transcribing the meeting notes taken during every sprint meeting. Details are also being kept in the Sprint Retrospective document in the PAL.

10. The process from the first semester seems to be working well. Each team member is handling one aspect of the game. To illustrate, a team member who was working on animations during the first semester will continue to work on animations during this semester as well. We are able to complete a playable level during each sprint. It should also give us enough time to polish the levels by improving artwork and playability. Therefore we will keep the same procedure but we will constantly be evaluating what needs to be done to make sure that they are working effectively.

We had another issue that caused a number of reverts. A seemingly small change to one area of code had a ripple effect that effectively broke the game. However, other than this, completing the levels is going according to plan.

To summarize our experiences on this project, we set a goal for ourselves and we ultimately completed it. We set out to make 10 levels and we were able to accomplish that within the 2 semesters. While the Senior Project is complete, there are still areas to improve on this game. We can add voice acting, add more levels, and we can even bring this game to mobile devices. We had a fun time creating this game and we hope that it can be of aid to someone in the future.