CS-499-11429  
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4-1 Journal: Career Choice and Artifact Update

I have changed my original career plans, initially I really thought I wanted to go into Video Game design, but through my research and my growing experience I have found that I am not quite as interested to have a career within the field. I actually found that software development and database management to be more interesting and enjoyable. This change developed after getting more experience with computer science especially within software development and database courses. Initially I was really focused on game design and development, and it is still a large part of my goals for my degree but over time my career plans did evolve as I learned more about computer science. I am much more interested in Software Development, Database Administration, and Data Scientist currently.

I initially focused on researching the process of becoming a Video Game Designer, but through my research I found that the field may not be exactly as enjoyable as I once thought and something that I could perhaps do more as a hobby. I found great enjoyment database management, and software development. I absolutely loving creating applications. I plan to go for my master’s degree in computer science after getting more hands-on experience within the computer science career field.

I have achieved the following course outcomes so far:

“Employ strategies for building collaborative environments that enable diverse audiences to support organizational decision making in the field of computer science.”

* I showcased and met this outcome by ensuring and promoting a collaborative coding environment by utilizing well documented code that broke down how my code functioned and the intent of my application. I also made sure that my code was well commented which would allow other developers to easily adjust features of the application. My code is also designed in a way that would allow for further adaptation and improvement to the code.

“Design, develop, and deliver professional-quality oral, written, and visual communications that are coherent, technically sound, and appropriately adapted to specific audiences and contexts.”

* I showcased and met this outcome by ensuring that communication within my applications code and gameplay was clear. This would allow clear communication not only for the players of the application but also for any future developers that utilize my code. I also ensured that my application was appropriately adapted to the android studio environment and adapted to the needs of the users of that environment. I also utilized a clear user interface design which will help audiences better understand the application navigation.

“Design and evaluate computing solutions that solve a given problem using algorithmic principles and computer science practices and standards appropriate to its solution while managing the trade-offs involved in design choices.”

* I showcased and met this outcome by creating algorithms that would solve the problem of a game timer and of room randomization. With this I have been able to utilize algorithmic principles and computer science practices and standards that were able to appropriately solve the problem at hand. To overcome these challenges, I utilized ArrayLists and HashMaps to better randomize the rooms while also ensuring consistency in room connectivity. With this enhancement I introduced uncertainty and a timer to players of the game. Although this was an initial downside for the player this will add more intensity and engagement for the player base while also introducing a more interactive experience when playing through the game. In order to meet the expectations of the enhancement I also had to keep in mind the potential trade-offs and effects this would have on the original aspect and design of the game. Removing description guides of where the player should move to encourage a more exploration-based gameplay was important to increasing the playability of the game.

I have not achieved the following course outcomes but plan on achieving them with my final database enhancement.

* Demonstrate an ability to use well-founded and innovative techniques, skills, and tools in computing practices for the purpose of implementing computer solutions that deliver value and accomplish industry-specific goals.
* Develop a security mindset that anticipates adversarial exploits in software architecture and designs to expose potential vulnerabilities, mitigate design flaws, and ensure privacy and enhanced security of data and resources.

**Provide an update to your instructor on your progress with each category of artifacts for the ePortfolio:**

Software design and engineering – I have completed the enhancement, received feedback and the final polish was applied. I feel very happy with the goals I have reached and the skills I have been able to showcase during this enhancement.

Algorithms and data structures – I have made tremendous progress on this enhancement, and reached my goals and expanded my goals on the aspect of the timer enhancement. As for the room randomization enhancement I have encountered many issues during the coding process and have not yet fully completed the enhancement. I feel I am very close. Currently I have the rooms randomizing, and items and descriptions carrying over. But the room layout is very inconsistent and does not always have the number of rooms it should have. Which without the proper number of rooms with items the game cannot be completed.

Databases - I have not made much progress on the database yet, I have very much focused on Software design and engineering and prepping Algorithms and data structures. I created the technical Leaderboard menu within my game application and the menu is functional at the minimum level currently.

Status Checkpoints for All Categories

|  |  |  |  |
| --- | --- | --- | --- |
| Checkpoint | Software Design and Engineering | Algorithms and Data Structures | Databases |
| Name of Artifact Used | Artifact Name: SpaceShip Escape!!!  Origin: IT-140-Final Project | Artifact Name: SpaceShip Escape!!!  Origin: IT-140-Final Project | Artifact Name: SpaceShip Escape!!!  Origin: IT-140-Final Project |
| Status of Initial Enhancement | Enhancements Completed | Enhancements actively being worked on and showing strong progress – Currently progressing on getting the logic of randomization to work within the application. | Working on enhancement but on track for the submission deadline with adequate time to navigate issues. |
| Submission Status | Submitted with feedback from the instructor | Planned but not yet completed | Planned but not yet completed |
| Status of Final Enhancement | Feedback was applied, and the final polish was applied | Planned but not yet completed | Planned but not yet completed |
| Uploaded to ePortfolio | Planned but not yet completed | Planned but not yet completed | Planned but not yet completed |
| Status of Finalized ePortfolio | Planned but not yet completed | Planned but not yet completed | Planned but not yet completed |

Overall, My Enhancement Two Algorithms and Data Structures is going well. I was able to set up the timer efficiently and effectively within the game application to run as the player is playing, it changes color when the player reaches 3 minutes on the clock, and finally when the player successfully completes the game it informs the player how long it took them to reach victory. Randomizing the rooms has caused many issues throughout the past week and a half sadly. I have figured out how to technically randomize the map while also keeping the items up. But I have been unable to force the map to always be 8 rooms. I am very positive it is a logic issue within my code that I am struggling to find, But I am going through the code line by line and hoping I find the solution soon. Currently when starting the game, it could have 2 rooms connected to each other than no other rooms, or it can have 7 rooms fully connected. It is inconsistent with the goals of the game. Anything less then 7 rooms with items would mean the player cannot achieve the victory screen.