

CE291 Team Project Challenge
July 2022
Project Information

1. Project Description

Your Team Project Challenge is to build a Game Level Generator and a Smart Game Solver. Your team may choose between a 2D arcade game or a puzzle game. Some possibilities are Space Invaders, Pac-Man, Spot the Differences, Find the Hidden Objects, Tower of Hanoi, Sudoku, Maze puzzle, Sliding Blocks puzzle.

The purpose of the Game Level Generator is to create a new level of the game based on a given map or grid size and other relevant parameters. It shall generate a screen display and a data file of the level as well as a recommended solution to complete the level in the most effective and efficient way.

The purpose of the Smart Game Solver is to read the data file and complete the level in the most effective and efficient way. After which, it will make a comparison of its best solution and the Game Level Generator's solution and produce an analytical report. The analytical report shall provide recommendations for a new level with relevant parameters for the Game Level Generator. The new level may be more difficult or easier.

Your client expects your team to be innovative and produce high-quality, well-written codes as well as to follow Project Management best practices.

2. Agile Development

Your Lecturer is your Project Supervisor as well as your client. Your team is expected to engage your client to explore new features and shape the final product.

All team members are expected to play the roles of Scrum Master and Product Owner at least once throughout the project. Your team is expected to hold regular stakeholder review meetings and scrum ceremonies including stand-up meetings, sprint retrospective and sprint planning. Some of these meetings may be required outside the lesson time. Your team is expected to use Jira as your primary Agile Project Management tool and diligently use it to plan and record the team's progress.

3. Code Development

The project codes shall be written in Python. The team may propose to use an alternative programming language and subject to the Project Supervisor's approval.

All team members are expected to contribute to the code development. Your team is expected to use GitHub for code version control and collaboration.

4. Team Communication and Collaboration

The Team Project Challenge requires effective communication and close collaboration amongst team members to be successful. Your team is expected to take reference from your Project Team Charter developed during Lesson 1 and refine your working methods as your project progresses.

You should inform your Project Supervisor at the earliest opportunity if any of your team member falls below your expectations without addressing the team beforehand. A mediation session will be held, and evidence are required to substantiate the respective parties' claims including efforts to address one another's concerns and support one another. Your Project Supervisor may refer the case to the Module Supervisor for final decision which may include splitting the team or awarding the non-contributing member zero marks.

5. Plagiarism

There is zero tolerance towards plagiarism. References must be made using the IEEE referencing style. The team is recommended to check with the Project Supervisor if they wish to use any 3rd party libraries in their codes.

All plagiarism cases will be referred to the University for disciplinary actions.