Scope :

The aesthetic 2d game will be made with the help of Unity game engine framework. The basic logic of running, walking, jumping and climbing of the player character would be implemented first. Then comes the game assets, puzzles and enemies. The character will be given a health and die system. Also, a score script will be written which catches the level to which the character has advanced, also being able to remember the checkpoints as it goes along. Game will be having different levels, with each level with an increasing complexity. A* path finding algorithm will be written and the scripts will be attached to the enemy objects. By traversing the nodes, the enemies will be able to find the shortest path to the player character to attack, also by avoiding the obstacles (colliders and rigid body) in between. Finally, a questionnaire will be made that will ensure the quality evaluation of the game. Any enhancements, corrections, bug fixes will be considered at the end of the beta project.

Technology stack :

1 . Unity Game Engine (Version 2018/19) :
Unity is a cross-platform game engine developed by Unity Technologies. The engine can be used to create three-dimensional, two-dimensional , virtual reality, and augmented reality games , as well as simulations and other experiences.

2. C# :
It is an object-oriented programming language provided by Microsoft that runs on .Net Framework.

3. Adobe Photoshop :
It is a raster graphics editor developed and published by Adobe Inc. This is used for creating the pixel arts in the project.

5. Adobe Illustrator :
It is a vector graphic editor developed and marketed by Adobe Ic.

Benefits to the society :

1. It is a stress buster for the people.
2. It indulges the minds into different zones which helps relieving stress.
3. Opens up the logical thinking part of the minds via puzzles.
4. It boosts up the thinking process.
5. It improves brain’s puzzle solving abilities.
6. Hand-eye co-ordination. Gaming can benefit the individual’s co-ordination in different sectors.
7. Helps achieving a sense of accomplishment.
8. Being able to socialise with and relate to other players.

Benefits to the environment :

In an indirect context or perspective, the game application may be a simulation of a quagmire. For example, a life threatening situation can be simulated, like a terrorist attack. User may be asked to make his way through such critical situations.

Applications :

- Learning aid in a software engineering :

  Students learn software architecture by developing a computer game. Games have been used in schools for many years to help children learn skills in math, language, geography, science, and other domains in an interesting and motivating way. Research shows that integrating can be beneficial for games within a classroom with children academic achievement, motivation, and classroom dynamics. There is also evidence that the teaching methods based on educational games are not only attractive to schoolchildren, but also to university students. There have been conducted researches on games concept and game development used in higher education before, for example, but we believe there is an untapped potential that needs to be explored. Games can provide teachers in higher education with teaching aids that can promote more active students, provide alternative teaching methods to improve variation, and enable social learning through multiplayer learning games. It also promotes student participation.

- Entertainment :

  Games are played for entertainment, sometimes for achievement or reward as well. They can be played alone, in teams, or online; by amateurs or by professionals. The players may have an audience of non-players, such as when people are entertained by watching a chess championship. On the other hand, players in a game may constitute their own audience as they take their turn to play. Often, part of the entertainment for children playing a game is deciding who is part of their audience and who is a player.