Pipe Game –

Functional Req.

1. The app must generate a maze.
2. The app must allow the user to solve the maze.
3. The app must allow saving a current game state.
4. The app must allow loading previously saved stages or new stages.
5. The app must show in GUI.
6. The app must show Best Players table.
7. The app must limit each stage’s time.
8. The app must show a solution upon the user’s request.

Non-Functional Req.

1. The app should be a desktop app.
2. The app must fetch a solution to the current stage within 3 seconds.
3. The app must show in 3D or 2D.
4. The app must be compatible in all the OS.
5. The app needs to lucrative.

Use Cases –

1. Start a new stage (New or previous)
   1. Actor: User
   2. Trigger: The user had asked for a New/Load Game.
   3. Prerequisites: The server is on, the user machine has active internet connection, the user has allowed the app access to the computer through a firewall.
   4. Sunny Day Scenario:
      1. The user opens the app.
      2. Requests a new game.
      3. Chooses a new game or a saved game.
      4. A new or saved stage shows up on the screen.
   5. Alternative Scenario:
      1. The server is offline – The client sends a request to the server, the server returns a message saying it’s offline, the client informs the user that the server is offline, try again later.
      2. The computer doesn’t have an active internet connection – The client sends a request to the server, the request is denied because of the issue, the client informs the user he doesn’t have an internet connection and asks to try again later.
      3. The client doesn’t have access to the computer through the firewall – The client sends a request to the server, the computer returns access denied, the client informs the user to allow access.
2. Show a solution for a stage
3. Show the Best Players table
   1. Actor: Client Side
   2. Trigger:
4. Save the current stage