## Product Backlog

- Code base preparation: S, 1 Task
  - Code base testing
- Create 2D Maze: S. 3 Tasks
  - o Random Maze Generator
  - Maze Solver
  - Holes in maze
- 2D Game Graphics: M, 5 Tasks
  - 2D grid on hosted webpage
  - o 'Player' motion inside the 2D grid
  - Creating and displaying solvable 2D random mazes on the webpage
  - o Testing standard 'player' movement inside the maze
  - o Add first person perspective (from the codebase) to the player movement
- 3D Game Graphics Part 1: M, 3 Tasks
  - o 3D website generation (hosted on GitHub, tested on wamp server, using three.js)
  - Collisions in three.js
  - 3D Maze generation and first person movement (using Babylon, tested in Babylon online playground)
- Transfer code to object orientation: S, 1 Task
  - Rewrite and reorganize code to create 'objects'
- 3D Game Graphics Part 2:M, 4 Tasks
  - Full maze generation using blocks to create walls
  - Restricting camera movement
  - O Hosting new website on GitHub (later we will realize that we cannot use GitHub because it does not allow us to use php, so we will use the people.eecs.ku.edu server)
  - Textures and meshes
- Start Menu: L, 4 Tasks
  - O 3D clickable text for the start menu (the process took too long and we had to settle for a normal webpage for the start menu)
  - O Difficulty options that controls the size of the maze
  - o Adding additional pages (Testing Suite, User Manual, D&M Plans, High Score)
  - Communication of information between pages
- Game Levels and Special Spaces: L, 4 Tasks
  - o Define and display the start space, end space, and holes
  - o Player interaction (camera collision) with the special spaces
  - o Creating and displaying new mazes and re-displaying previous mazes
  - Disposing the scene to either display a new maze or end the game
- High Scores: M, 3 Tasks
  - o Set up the database and test communication
  - Creating the backend: adding values to database and then checking the highest score
  - o Connecting the end of game information with the backend (page communication)
- Testing Suite: L, 3 Tasks
  - Tests for the Maze Generator and Maze Solver
  - Tests for the camera collisions with special spaces and correct movement
  - Tests for the disposal of the mazes
- Music: S, 2 Tasks
  - Find free use music and check licensing
  - Research HTML5 audio support and implement
- Product Documentation: L, 4 Tasks
  - Update ULM (use case, class, and state diagrams)
  - o Update Gantt Chart
  - Comment code and add sources
  - Update Scrum Artifacts