René Steeman

|  |  |
| --- | --- |
| What I did | How long I worked on it in hours |
| Redone graphics engine structure | 3 |
|  |  |
| Create a new 3D engine |  |
| Setting up libraries (using Gradle) | 2 |
| Allowing the use of vertices and showing a triangle | 2 |
| Adding general shader code and allowing for colors to be used | 1 |
| Adding textures | 1 |
| Adding 3D camera and required linear algebra foundation | 2 |
| Loading 3D models | 3 |
| Adding lights, per-pixel lighting and specular lighting | 3 |
| Adding a simple terrain system | 3 |
| Allowing for transparency in textures | .5 |
| Allowing for multiple textures to be used on the terrain | 1 |
| Adding camera movement | 1 |
| Added 3rd person camera system, including camera movement (move around the ball and zoom) | 3 |
| Added the option to set the height of the terrain | 3 |
| Adding collision detection for the terrain | 3 |
| Adding a click to terrain coordinate system | 4 |
| Added anti-aliasing and anisotropic filtering | 1 |
| Skybox | 2 |
| Added simple flat water | 1 |
| Added reflection and refraction to water | 2 |
| Added water ‘movement’ effect (ripples) | 1 |
| Added Fresnel effect to the water | 1 |
| Added normal map to the water | 1 |
| Optimizations | 4 |
| Reworked terrain generation to be more modular | 4 |
| Prevent the camera from clipping trough the terrain | 4 |
| Real-time terrain texturing (editing the texture of vertices in an area in real-time) | 10 |
| Terrain save/load system (including materials and trees) | 10 |
| Real-time edit mode (use a brush to edit the terrain type and click for adding/removing trees) | 6 |
| Added tree placing system | 3 |
| God mode for letting the ball fly for testing | 2 |
|  |  |
| Created 2D rendering engine |  |
| Allow for images to be displayed on top of the 3D rendering | 3 |
| Add text support | 3 |
| General UI element support (interfaces and template for other UI elements) | 3 |
| Basics for the slider (support for multiple textures per UI element, the slider itself without movement, the function for determining the value of the slider) | 3 |
|  |  |
| Create classes for 3D objects (ball, goal, tree, trees) so we can keep track of them throughout the program | 3 |
| 3D UI system (shoot direction indicator and ball reset preview) | 5 |
| 3D objects and textures rework (ball, flag, trees) | 8 |
| JUnit support | 2 |
| Helping team members on various problems (physics, UI, bot, setting up the project, etc.) | 30 |
| Creating team charter | 3 |
| Leading meetings | 16 |
| Creating the planning | 4 |
| Writing the agendas | 4 |
| Creating the presentation | 10 |
| Creating this document | 2 |
|  |  |

Total: 186,5