

Sprint 1 Plan

3D model generator

team name(Henry Chang,Andrew Dato, Nir Jacobson,William C King,Austin Shelton)

revision number:1

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Goal: we want to have a basic visual interface for the user that allows the uploading of pictures, the physical interaction with said pictures, and conversion of the resulting pictures into arrays of data.

User stories

Sprint 1

User story 1 As a consumer, I want to be able to take up to 6 images and generate it into a 3D model, so that I can work with it in a 3D environment.

Task 1: Set up environment for developers (2)

Task 2:Take in and store multiple pictures from user and assign correct dimensions and alignment to each array based on image input slot selected. (1)

Task 3: convert each picture inputted to 2d arrays of numeric color values (1)

Task 4: have each image vote on every slot in a 3d array based on each color at a certain spot of each image using 2 of the slot's 3 dimensions. Weigh the votes of an image based on distance from the side it represents and a user input variable (3)

Task 6: using the votes, determine the color of each point, which should be the exact color of one of the votes. (2)

Task 7: Nullify any point on the 3D Matrix within a tolerance value of the background color. (1)

Task 8: copy the 3d matrix to a new one, while copying nullify any point on the copy array whose original is not touching a nullified point (2)

Task 9: connect all the touching points with triangles in away where no 2 triangles overlap. (8) (dependency on story 2 task 1 or 2)

Story 2 As a consumer, I want export my generated 3D model as a .obj file, so that I can use it across multiple platform.

Task 1 Create 1 of every n vertices in the OpenGL environment using the 3D array from story one (3)

Task 2 Assign vertices. Export one of every n vertices to a created text file (5)

Task 3 take all triangles and put them into text file (1)

Task 4 make sure .obj file is properly formatted (3)

Task 5 allow naming of .obj file (1)

Story 3 As developers, we would like a basic software executable completed so that we show off our functionality without having to develop a full fledged UI

Task 1 make sure we have a model that the user can rotate and view the images (2)

Task 2 test this with multiple shapes so that we can find any big issues and record them (2)

Story 4 As developers, we need a Github repo, so that we can better organize our files.

Task 1 Set up a Github repo for the team (1)

Team roles:

Project owner

Initial task assignment:

William C King: story 1 task 4.

Nir Jacobson: story 1 task 1

Andrew: story 1 tasks 2 and 3

Austin: story 1 tasks 7 and 8

Henry:

Initial burnup chart: A graph giving the initial burnup chart for this sprint and is labeled as such with sprint number and project name and is located in the lab.

Initial scrum board: Also known as a task board, the scrum board is a physical board and labeled as such with sprint number and project name and located in the lab. This board has four columns, titled user stories, tasks not started, tasks in progress, and tasks completed. Index cards or post-it notes representing the user stories and the tasks for this sprint should be placed in the user stories, tasks not started, and tasks in progress columns. Tasks associated with a user story should be placed in the same row as the user story.

Scrum times:

Tues Thurs at 5:00pm,
Friday 2:20pm