Name\_\_Samuel Beal Mark \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/50

The UML tool you suggested also doesn’t have a working website anymore, and I couldn’t find

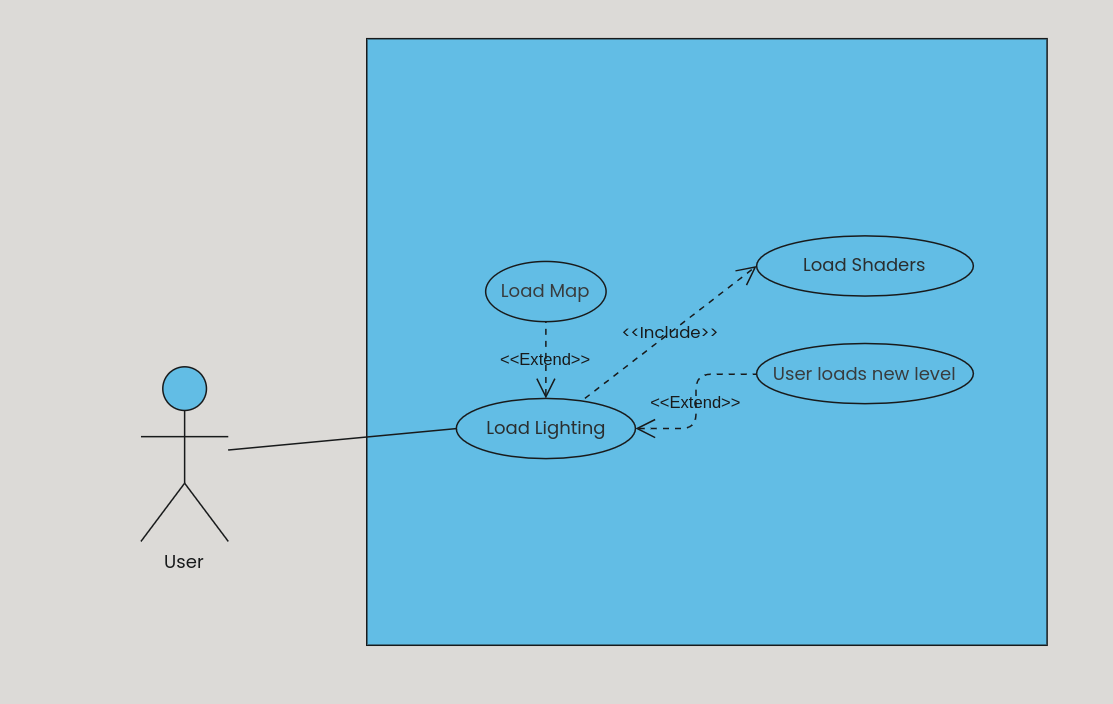
good tools for free for this project.

## Brief introduction \_\_/3

Lighting and Shadows. Essentially I will be adding light in some sort of way to the map so that edges and corners blend in, adding a more natural look to the game, and to make it look good.

## Use case diagram with scenario \_\_14

### Use Case Diagrams



### Scenarios

**Name:** Load Lighting

**Summary:** User loads into a new level and lighting is loaded into the map.

**Actors:** User

**Preconditions:** Map has been loaded and the user starts a level.

**Basic sequence:**

**Step 1:** User loads a level

**Step 2:** Map is loaded

**Step 3:** Load Lighting

**Exceptions:**

**Step 1:** Map should be loaded without lighting

**Step 2:** User loads a new level and the map isn’t loaded yet.

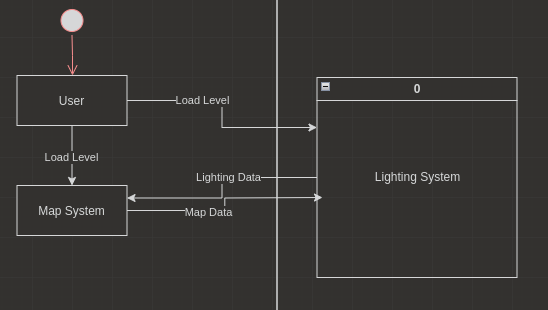
**Post conditions:** Lighting is loaded.

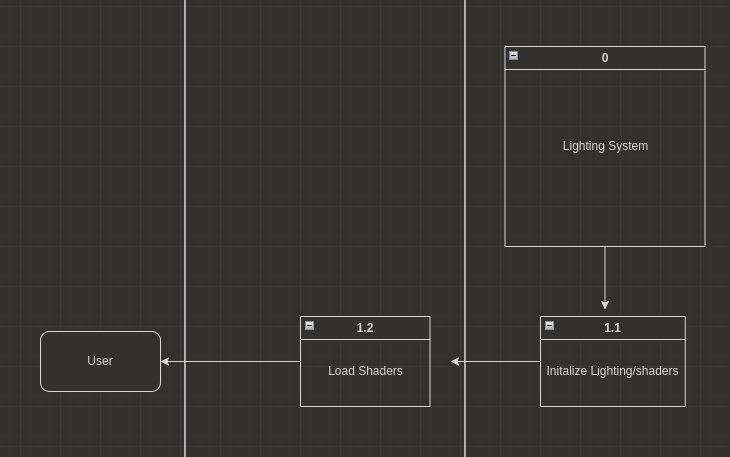
**Priority:** 3\*

## Data Flow diagram(s) from Level 0 to process description for your feature \_\_\_\_\_\_\_14

[Get the Level 0 from your team. Highlight the path to your feature]

### Data Flow Diagrams





### Process Descriptions

Initialize Lighting\*:

Load images, Shader packages, and any other needed data

Set variable names and values

Load Shaders\*:

WHILE we are running the game,

update\_player\_view() // data needed for update\_shaders

update\_shaders()

reload all packages and data into respective locations

END WHILE

## Acceptance Tests \_\_\_\_\_\_\_\_9

[Describe the inputs and outputs of the tests you will run. Ensure you cover all the boundary cases.]

**Lighting Feature**

Run features in various scenarios with the map a number of times. Test it by visuals and using different percentages of lighting/opacity/strength type thing.

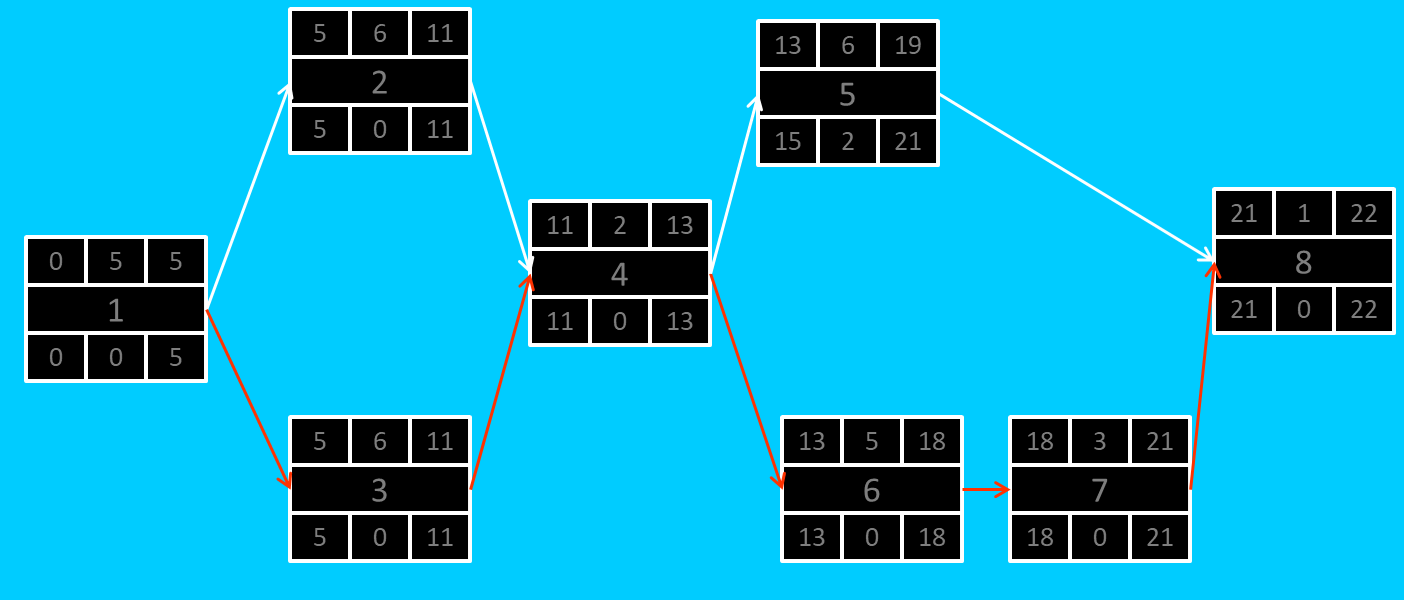
| Input | Notes on Visuals |
| --- | --- |
| 50% | Interesting amount of lighting, possibly overly bright |
| 100% | Sun blinds and makes it impossible to see anything but white |
| 10% | Shadow like, good for corners. |
| 3% | Very difficult to see but could be used for main area |
|  |  |

## Timeline \_\_\_\_\_\_\_\_\_/10

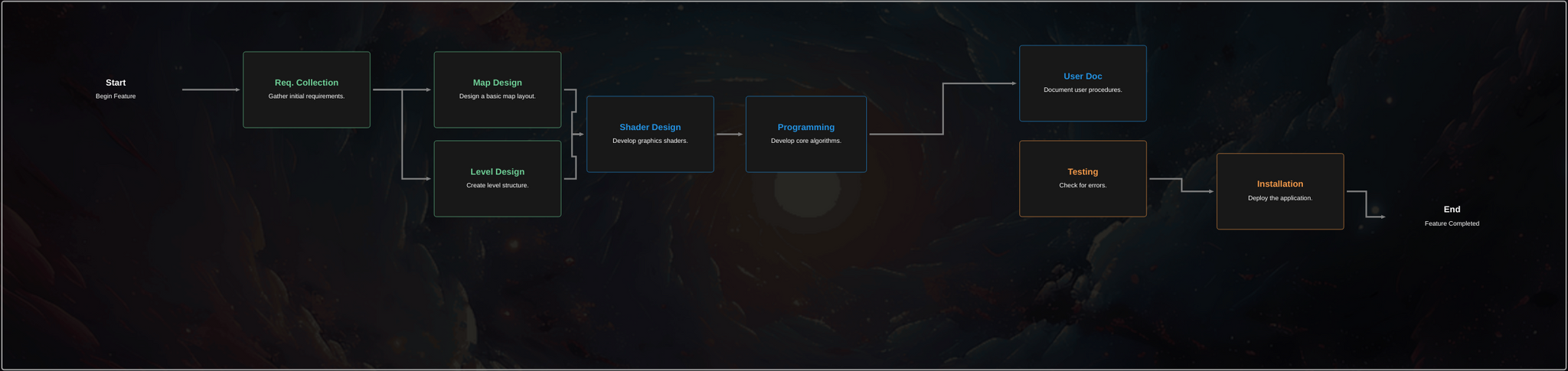
### Work items

| Task | Duration (PWks) | Predecessor Task(s) |
| --- | --- | --- |
| 1. Requirements Collection | 5 | - |
| 2. Map Design | 5 | 1 |
| 3. Level Design | 5 | 1 |
| 4. Shader Design | 2 | 2, 3 |
| 5. User Documentation | 2 | 6 |
| 6. Programming | 5 | 2,3,4 |
| 7. Testing | 2 | 6 |
| 8. Installation | 1 | 5, 7 |

### Pert diagram



I couldn’t find a website to make a proper pert chart as the one above for free, and the UML website is broken. I found one for tasks at least but it didn’t seem quite capable simply to add in the 6 boxes of numbers.



### Gantt timeline

| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |  | 2,3 |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |  |  |  |  |  | 2,3,4 |  | 4 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5,7 |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |