

LUDUM

How To Use Game Engine

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Chapter 1

Overview

1.1 Install Ludum game engine

1.1.1 Requirements

- vscode
- nodejs
- npm or yarn
- jest

1.1.2 Installation

Open terminal in vscode. Go to project folder via terminal and type:

- npm i
- npm start

Chapter 2

Components

2.1 Entity

All objects that the user wants to create get created via the Entity class.

The constructor of Entity takes these arguments:

- name
- body
- physics
- collisionDetection
- audioManager
- sprite

Example of how to create a *Entity*:

```
1 class Pipe {  
2     constructor(startPos, topPos, height, width) {  
3         this.len;  
4         this.entity = new Entity(  
5             "Bottom pipe",  
6             new Body(this, 1920 + startPos, topPos, height, width),  
7             new Physics(this, -8.85, 0),  
8             new CollisionDetection(this),  
9             null  
10        );  
11    }  
12 }
```

2.2 Body

Body class is the body of the entity.

The constructor of Body takes these arguments:

- entity
- left
- top
- height
- width

The body class contains only setters and getters for these parameters.

```
1 class Bird {  
2     constructor() {  
3         this.entity = new Entity(  
4             "Bird",  
5             new Body(this, 300, 540, 100, 100),  
6             }  
7     }
```

Here is a small example of how to move the entity bird:

```
1  
2 if (this.getBody().getTop() > 1040) {  
3     this.getBody().setTop(400);  
4     this.getBody().setLeft(300);  
5 }
```


2.3 CollisionDetection

2.4 Physics

2.5 AudioManager

2.6 Sprite

2.7 ResourceManager

2.8 Background

2.9 Menu

2.10 ScoreBoard