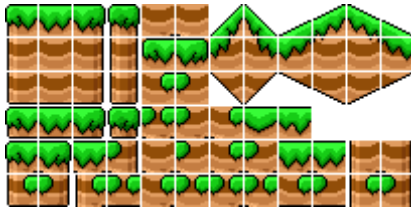


Lab 10 – Tiles

Task 1

Download the code files from Blackboard “Lab 10 Tiles.zip” and add them to your project (Tile.h/cpp and Map.h/cpp). With the code files a test Tile sheet is provide that looks like this:



In the lecture example I only used the 9 top left tiles.

First, you will need to define a new Map variable in Game.h and need to include Map.h.

Second, in the Game constructor we will need to setup the map by loading the texture, creating the TileSet and creating the TileMap. Loading the texture is straight forward:

```
level.loadTexture("gfx/marioTiles.png");
```

Creating the TileSet:

```
Tile tile;
std::vector<Tile> tiles;

for (int i = 0; i < 7; i++)
{
    tile.setSize(sf::Vector2f(32, 32));
    tile.setAlive(true);
    tiles.push_back(tile);
}

tiles[0].setAlive(false);
tiles[0].setTextureRect(sf::IntRect(187, 51, 16, 16));
tiles[1].setTextureRect(sf::IntRect(0, 0, 16, 16));
tiles[2].setTextureRect(sf::IntRect(17, 0, 16, 16));
tiles[3].setTextureRect(sf::IntRect(34, 0, 16, 16));
tiles[4].setTextureRect(sf::IntRect(0, 34, 16, 16));
tiles[5].setTextureRect(sf::IntRect(17, 34, 16, 16));
tiles[6].setTextureRect(sf::IntRect(34, 34, 16, 16));

level.setTileSet(tiles);
```

Creating the TileMap:

```
// Map dimensions
sf::Vector2u mapSize(10, 6);

// build map
std::vector<int> map = {
    0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
    0, 0, 0, 1, 3, 0, 0, 0, 0, 0,
    1, 2, 3, 4, 6, 1, 2, 3, 0, 0,
    4, 5, 6, 0, 0, 4, 5, 6, 0, 0
};

level.setTileMap(map, mapSize);
level.setPosition(sf::Vector2f(0, 408));
level.buildLevel();
```

Finally, rendering:

```
void Game::render()
{
    beginDraw();

    level.render(window);

    endDraw();
}
```

Once all up and running the level should look like this:



Task 2

Modify the map to create a different looking level using the same Tiles. Something like:



Task 3

Build your own Tile-based level/section. Keep it simple, a 9 by 9 map will be fine. Find or create your own Tile Sheet and TileSet. Use previous resources for finding art work

<https://www.sprisers-resource.com/>

<http://opengameart.org/>

Task 4

Make use of any remaining time for working on coursework.