Welcome To Our Presentation

The Longest Night & Pop Balloons

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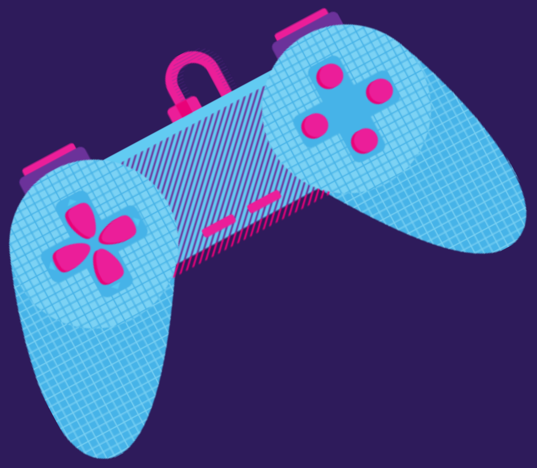
Our Team

- **Who we are?**

  We are the Legendary Pair(LP), CSc 102 students



THE LEGENDARY PAIR

Role of each member

KENEILWE BALOYI

The Longest Night game developer
Balloon pop game collaborator
Researcher

Lisakhanya Tetani

Balloon Pop game developer
The Longest night game collaborator
Game planner

Game description

Pop balloons

The Balloon Pop Game is an exciting typing challenge designed to help players improve their typing speed and accuracy in a fun, dynamic environment. Players must pop balloons containing random letters before they escape the screen, with special balloons adding an extra layer of challenge.

The Longest Night

The game is using arrow keys to move the player around. The player must try by all means to escape the enemies, but at the same time he must collect the key within 10 seconds otherwise the player will lose.

System design

The Pop Balloon

We have 2 packages and 6 classes

Resource folder

```
java.awt.Font;
java.awt.Graphics;
java.awt.event.ActionEvent;
java.awt.event.ActionListener;
java.awt.image.BufferedImage;
java.io.IOException;
java.util;
javax.imageio.ImageIO;
javax.swing.*;
```

The Longest Night

We have 4 code packages 17 classes
4 resource packages

```
java.awt.Dimension;
java.awt.Graphics;
java.awt.Graphics2D;
javax.swing.JPanel;
anime.Anime;
anime.Enemy;
anime.Player;
bgtiles.TileManager;
```

Challenges

Game Loop

We got stuck for a long time trying to get the game to loop

Collision detection

The player cannot move in narrow paths
The detection wasn’t consistent
To come up with the code

Game Threads

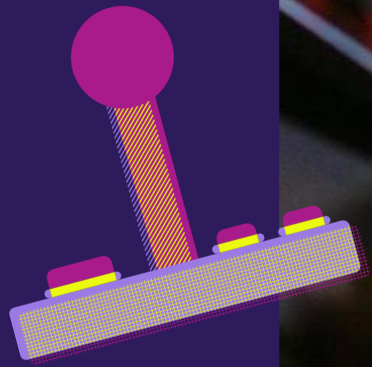
Implementing the thread in the game.
The player didn’t move as the key was pressed it moved based on the time

Key listeners

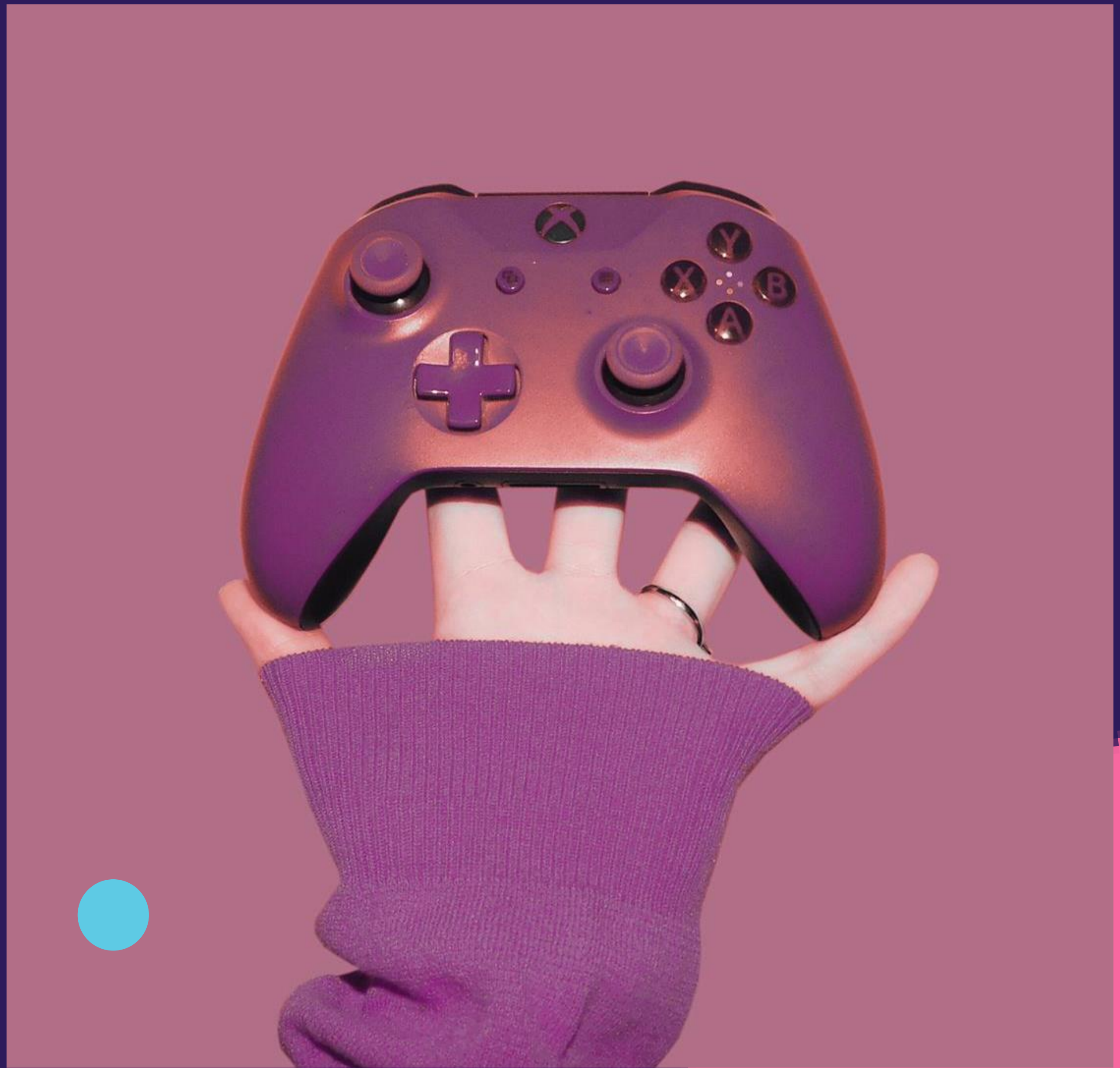
We couldn’t implement the Key Listener interface for a long time

New features

We added a Pop Balloon game and it has a special balloon, which is black and has a speed that is 2 units higher than the other balloons. The balloon has a timer if it isn't pressed at that given time the player loses the game



what have we learnt?



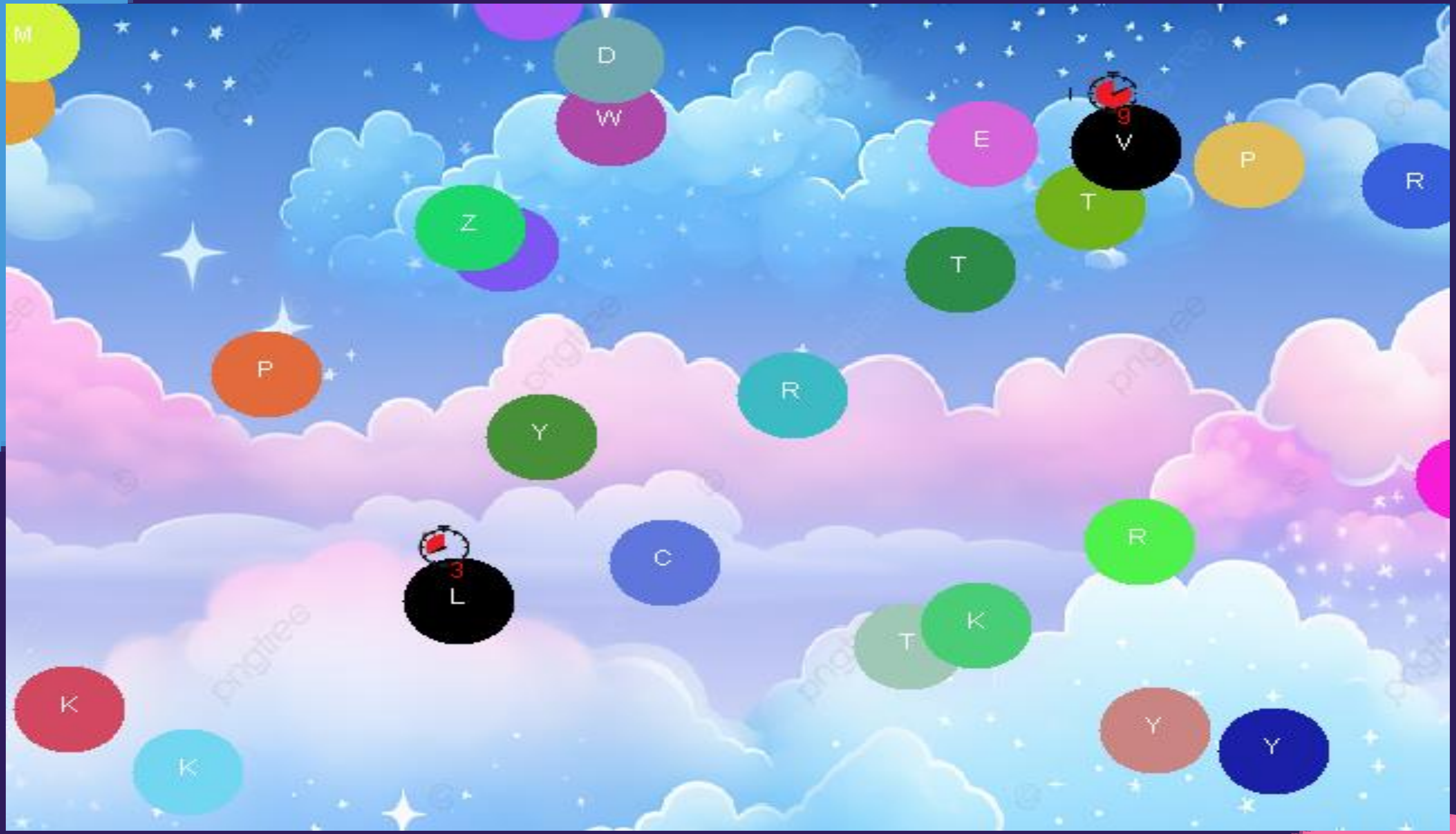
From the game

We have learnt a lot from making the game, it has given us a wider view about OOP and how easy it can make our lives in coding, but learning and understanding it is not that e

We have learnt about graphics, objects, atleast now we know some of the things we see in games are not magics.

Interesting part of our game

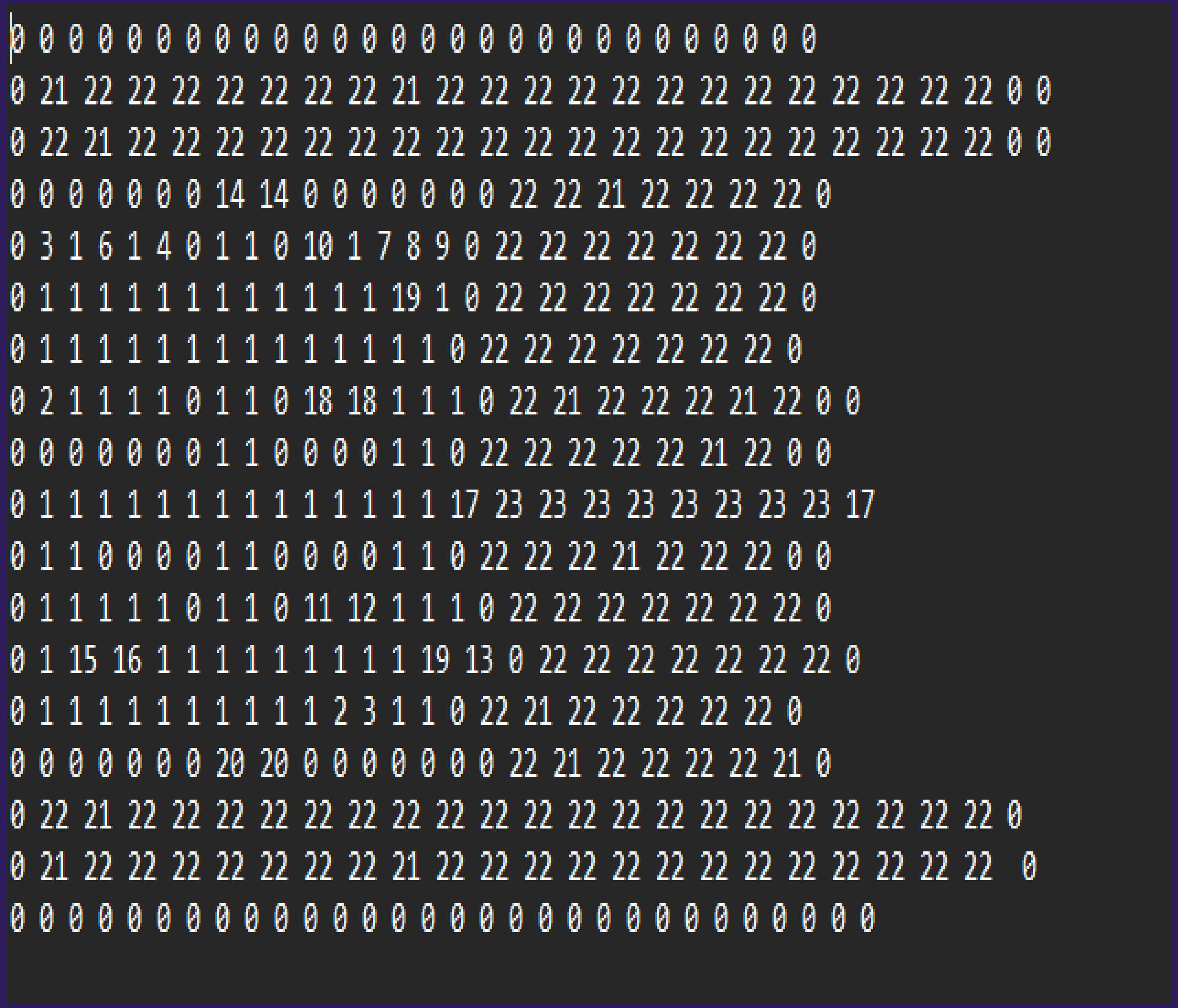
The Pop balloon has bomb balloons that have to be popped before the time ends



MENU

Interesting parts about the code

In The Longest Night Game we use text file to do the map and use double array to paste it in the game each number represent a certain tile



```
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```
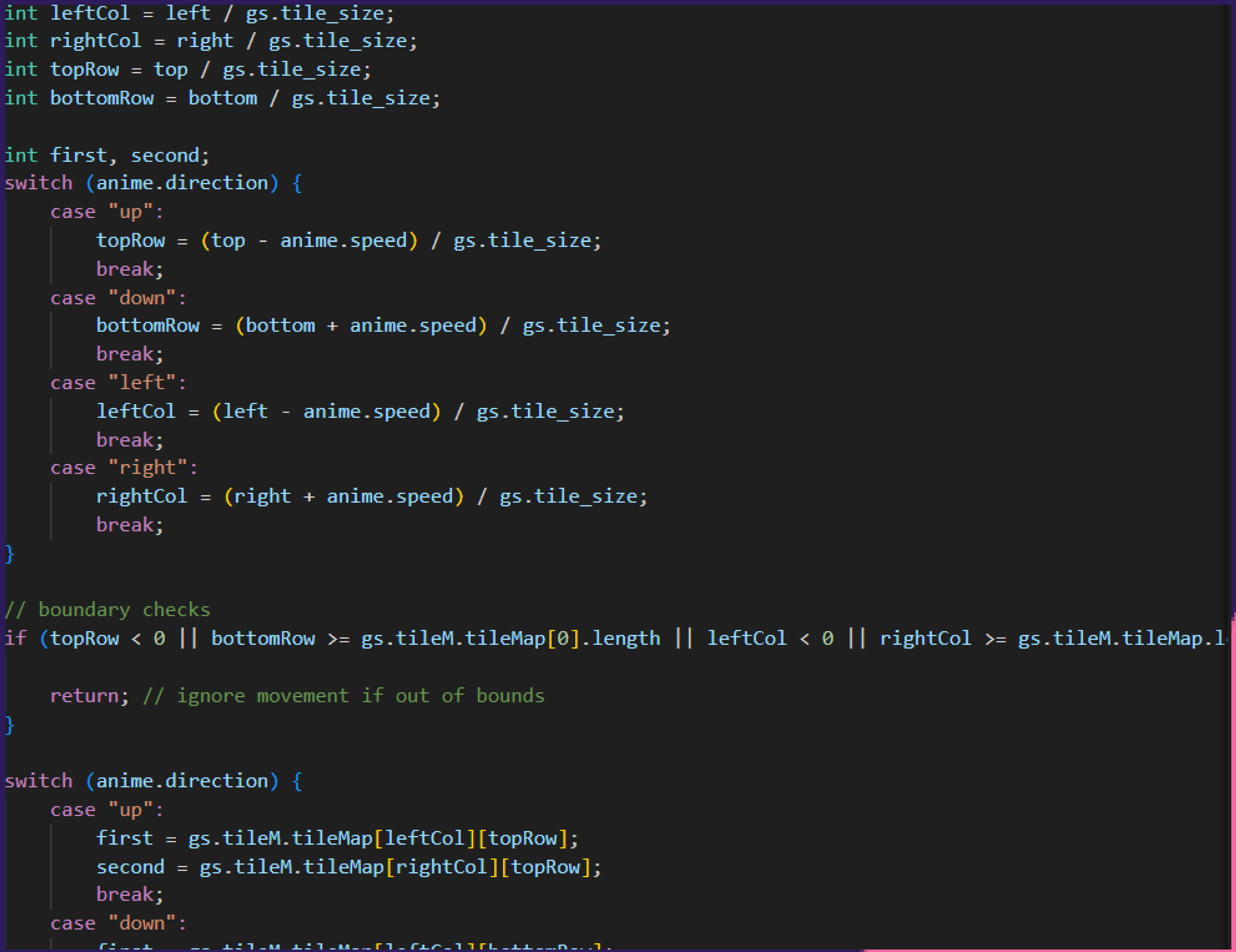

Piece of collision detection



```
int leftCol = left / gs.tile_size;
int rightCol = right / gs.tile_size;
int topRow = top / gs.tile_size;
int bottomRow = bottom / gs.tile_size;

int first, second;
switch (anime.direction) {
    case "up":
        topRow = (top - anime.speed) / gs.tile_size;
        break;
    case "down":
        bottomRow = (bottom + anime.speed) / gs.tile_size;
        break;
    case "left":
        leftCol = (left - anime.speed) / gs.tile_size;
        break;
    case "right":
        rightCol = (right + anime.speed) / gs.tile_size;
        break;
}

// boundary checks
if (topRow < 0 || bottomRow >= gs.tileM.tileMap[0].length || leftCol < 0 || rightCol >= gs.tileM.tileMap.l

    return; // ignore movement if out of bounds
}

switch (anime.direction) {
    case "up":
        first = gs.tileM.tileMap[leftCol][topRow];
        second = gs.tileM.tileMap[rightCol][topRow];
        break;
    case "down":
        first = gs.tileM.tileMap[leftCol][bottomRow];
```

Testimonials

Tshikovhi

"I witnessed everything and I mean everything ...."

Agisanang

We were always together at Hamilton, I saw these guys pushing non stop.

Thank you!

Any questions?...