Report On

SPACE RUSH-THE GAME

Submitted in partial fulfillment of the requirements of the Course project in Semester III of Second Year Artificial Intelligence and Data Science

by
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CERTIFICATE

This is to certify that the project entitled "**Space Rush game**" is a bonafide work of "Dnyanesh Baburao Panchal (34), Krithik Devendra Pandey (35), Shubham Sanjay Mohanty (30)," submitted to the University of Mumbai in partial fulfillment of the requirement for the Course project in semester III of Second Year Artificial Intelligence and Data Science engineering.

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OVERVIEW

Title: SPACE RUSH

Overview:
Space Rush is an exciting and action-packed Java game where players take control of a powerful rocket and engage in intense battles with waves of invading spaceships. Your mission is to defend the Earth from these intergalactic invaders by shooting them down with your rocket's powerful weapons.

Key Features:
1. Space-Themed Graphics: Space Invader Showdown features stunning, space-themed graphics with detailed spacecraft designs and captivating galactic backgrounds, immersing players in a visually captivating gaming experience.

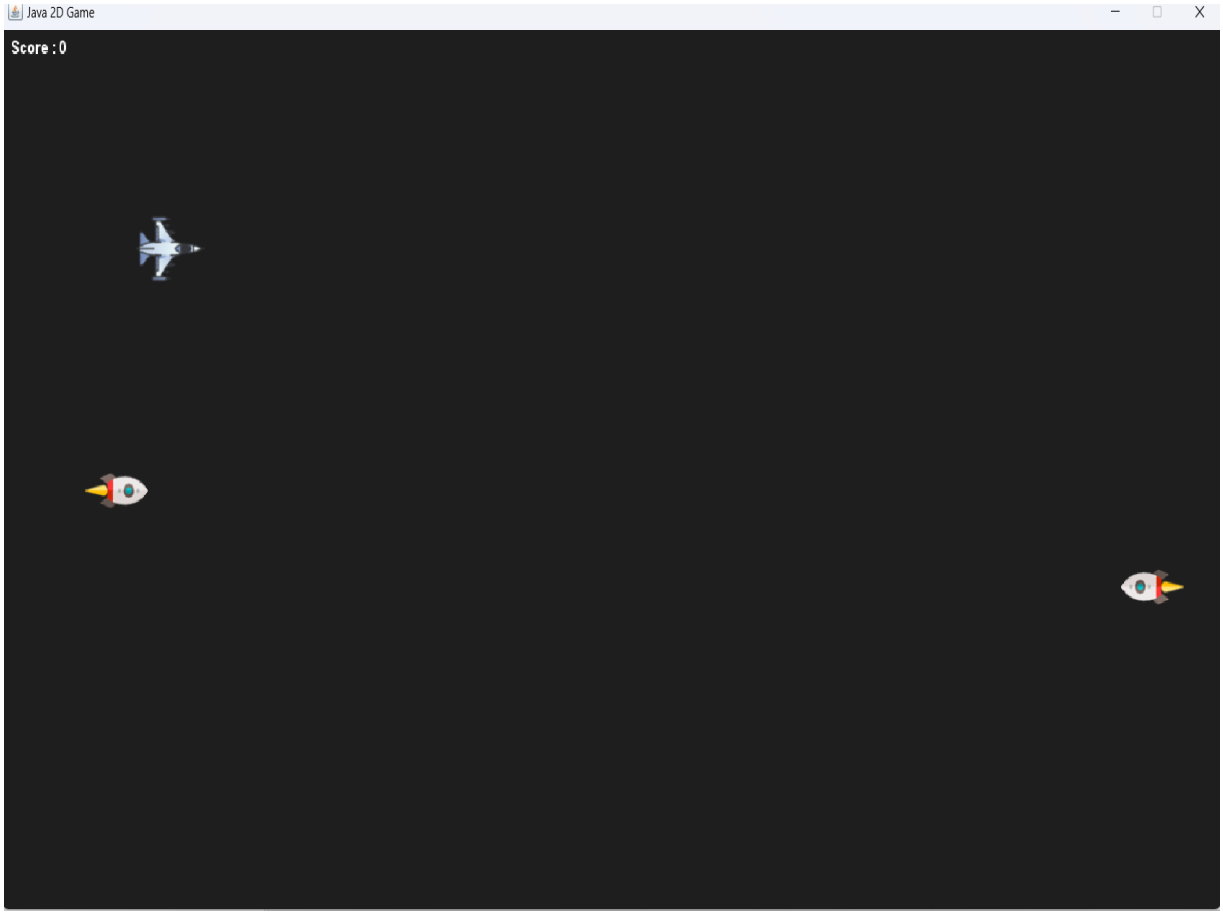
2. Wave-Based Gameplay: The game is divided into waves of increasing difficulty, each containing a variety of enemy spaceships with unique attack patterns and abilities. Players must adapt their strategies to defeat each wave and progress further into the game.

3. Engaging Soundtrack: The game features an immersive soundtrack and sound effects that enhance the overall gaming experience, drawing players deeper into the world of Space Rush.

How to Play:

1.Control your Rocket rotating clockwise by pressing “D”
2. Rotates Anti-clockwise by pressing “A”.
3.Moves Forward by pressing “SPACE-BAR”
4. Press “K” to shoot.
There is no going back.
Space Rush offers an exhilarating and challenging gaming experience for fans of space shooters and action games. Defend Earth and take on the relentless waves of invading spaceships as you strive for the highest score and leaderboard glory. Are you ready to embark on this intergalactic adventure and save the planet from the space invaders?

SNEAK-PEEK:-



PROGRAM:-

```
package game.main;

import game.component.PanelGame;
import java.awt.BorderLayout;
import java.awt.event.WindowAdapter;
import java.awt.event.WindowEvent;
import javax.swing.JFrame;

public class Main extends Jframe {

    public Main() {
        init();
    }

    private void init() {
        setTitle("Java 2D Game");
        setSize(1366, 768);
        setLocationRelativeTo(null);
        setResizable(false);
        setDefaultCloseOperation(Jframe.EXIT_ON_CLOSE);
        setLayout(new BorderLayout());
        PanelGame panelGame = new PanelGame();
        add(panelGame);
        addWindowListener(new WindowAdapter() {
            @Override
            public void windowOpened(WindowEvent e) {
                panelGame.start();
            }
        });
    }

    public static void main(String[] args) {
        Main main = new Main();
```

```
package game.component;

public class Key {

    public 8oolean isKey_enter() {
        return key_enter;
    }

    public void setKey_enter(8oolean key_enter) {
        this.key_enter = key_enter;
    }

    public 8oolean isKey_right() {
        return key_right;
    }

    public void setKey_right(8oolean key_right) {
        this.key_right = key_right;
    }

    public 8oolean isKey_left() {
        return key_left;
    }

    public void setKey_left(8oolean key_left) {
        this.key_left = key_left;
    }

    public 8oolean isKey_space() {
        return key_space;
    }

    public void setKey_space(8oolean key_space) {
        this.key_space = key_space;
    }

    public 8oolean isKey_j() {
        return key_j;
    }

    public void setKey_j(8oolean key_j) {
        this.key_j = key_j;
    }

    public 8oolean isKey_k() {
        return key_k;
    }

    public void setKey_k(8oolean key_k) {
        this.key_k = key_k;
    }
```

```
    private 9oolean key_right;
    private 9oolean key_left;
    private 9oolean key_space;
    private 9oolean key_j;
    private 9oolean key_k;
    private 9oolean key_enter;
}

        main.setVisible(true);
    }
}
```

TECHNOLOGIES USED:-

In the development of Space Rush, a Java-based game, several key technologies were utilized. Eclipse, as the Integrated Development Environment (IDE), played a crucial role in providing a versatile and robust environment for coding, debugging, and managing the project. Here's a short overview of the technologies used:

1. **Java**: Java was the primary programming language used to develop Space Invader Showdown. Java is renowned for its platform independence, making it ideal for creating cross-platform games. It offers powerful libraries for graphics rendering, input handling, and more, making it well-suited for game development.

2. **Eclipse IDE**: Eclipse is a widely adopted Integrated Development Environment for Java development. It offers a range of features, including code highlighting, debugging capabilities, project management, and version control integration, which greatly facilitate the game development process.

3. **OpenGL**: OpenGL is a graphics library that was likely employed to handle the rendering of the game's graphics. It allows for efficient and high-performance rendering of 2D and 3D graphics, crucial for creating visually appealing games.

4. **Audio Libraries**: Game audio is a critical component of the gaming experience. Libraries for handling sound effects and music were likely used to provide an immersive auditory experience to players.

5. **UI Libraries**: To create user interfaces, libraries or tools for building menus, settings screens, and other in-game UI elements would have been employed to ensure a user-friendly experience.

Eclipse, with its rich feature set and strong support for Java development, is an excellent choice for developing Java-based games like Space Rush. The combination of Eclipse and the above-mentioned technologies provides a robust development environment that enables game developers to efficiently create engaging and visually appealing games while ensuring a smooth and enjoyable gaming experience for players.

EXPLANATION:-

This code is a Java program for creating a simple 2D game window using Swing. Here's a brief explanation of the code:

1. It defines a class named `Main` that extends the `JFrame` class to create the game window.

2. In the constructor `Main()`, it calls the `init()` method to set up the window properties.

3. In the `init()` method, it sets the title, size, location, and other properties of the JFrame.

4. It creates a `PanelGame` object, which is a custom component for the game, and adds it to the JFrame.

5. It adds a `WindowAdapter` to listen for the window's open event, and when the window is opened, it calls the `start()` method on the `panelGame` to start the game.

6. In the `main()` method, it creates an instance of the `Main` class, makes the window visible, and starts the game.

Overall, this code sets up a basic game window with a custom game panel and initializes it to start when the window is opened. The specifics of the game logic and rendering would be inside the `PanelGame` class, which is not provided in the code snippet.