ANGRY BIRDS

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OVERVIEW :-

Welcome to the Angry Birds Game project! This is a simplified recreation of the iconic Angry Birds game, developed using the libGDX framework in Java. The project showcases core game development concepts and implements various oops concepts such as inheritance, encapsulation, and polymorphism for structured and modular code and libgdx features such as libGDX's built-in support for graphics, audio, input handling, and physics to create an immersive and efficient game development experience.

GAME FEATURES:-

1. We have used User-Friendly Controls **Drag-and-release** mechanics for launching birds.

2. Our game consists of three different levels **Easy, Medium and Hard** and each with unique designs, obstacles, and targets to keep players engaged.

3. Each level has unique designs of obstacles with increasing difficulty and each level consists of **3 types of boxes** or material ,**3 types of pigs** and **3 types of birds** to create a better interface and user experience.

4. For going to the next level first the user has to kill all the pigs and score increases as the user kills the pig.The user will have **3 chances** to kill all the pigs , if the user fails to do so he/she will lose the game.

5. To pause the game we have to press **P Button** and to restart the game we can use the pause screen which displays various features like **Resume,Restart and Return to main menu**. We can also restart the game just by pressing **Space Bar**.

SERIALIZATION :-

We can save the state of the game(score and number of chances left) by pressing the key **S**. We can also load the saved game state by pressing the key **L.** A file named *game_state_"levelname".ser* in the assets folder is created when the command to save the game is entered and the same file executes when asked to load the game.

GAME COMMAND :-

To run the game we have to use the command - **./gradlew lwjgl3:run --stacktrace**

J-UNIT TESTING :-

We have also added J-unit testing to test the functionality of the game to check the calculations of trajectory and to determine the x and y coordinates of sprites while playing the game.

SOURCES :-

We have used the images in the game from the angry birds movie and some other sites where we could find the textures easily.

GITHUB Link :-

[Github link]