**READ ME**

**DESCRIPTION:**

“Fortress Legends” is an alternate version of “Stich Hero” build using Java FX and various concepts of OOPS. This code is based on the plot that a warrior captures various forts one after the other and dodges the dragons on the way by vanishing itself.

**IMPLEMENTATIONS:**

* The code uses various concepts of OOPS :

1. Interface
2. Inheritance
3. Abstract classes
4. Polymorphism
5. Encapsulation

* Java FX has been implemented in the provided code in order to build the game with great UI and animation.
* The code uses J Unit testing to test various scenarios and cases \*(Dependencies to be added by the TA itself):

1. Testing for Stick Growth
2. Test for Stick Hero initialization
3. Test for the game/platform initialization

* Two Design patterns have been used while implementing the code

1. Singleton Design Pattern - This design pattern has been used in Controller1 class
2. Iterator Design Pattern- This pattern is used to iterates the created castles
3. Decorative Design Pattern -The warrior has a special ability to vanish itself and get invisible in order to dodge the dragons.

* Error handling using Try Catch and Throws has also been implemented wherever required.

**USE INSTRUCTIONS:**

The game starts with a Home Page providing the user the option to Start the game.

The Highest score so far has also been made visible to the user.

The user is requested to press the mouse in order to increase the length of the stick sufficiently and then release the mouse in order to make the stick fall and connect the bridges.

In order to dodge the dragons that are being randomly generated the user is requested the press the mouse/ touch pad to make the warrior invisible.

**IDEAS FOR BONUS MARKS:**

We have incorporated some new and unique ideas wherein the warrior vanishes itself and gets invisible in order to dodge the dragons coming his way. Apart from this the warrior has a feature of aligning itself to the bridge even if it crosses it a little for the sake of reflecting the presence of mind and attentive nature of a warrior.

To achieve this, we used the Decorator Design pattern and various other related concepts known.

Apart from that we also used our skills and knowledge to build further upon the Stick Hero game and came up with a new and more engrossing version of it.

\*\*\*\*\*We have tried to use all good coding practices and naming conventions\*\*\*\*\*

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