

IDT Short Term Project 1 (Design a Balancing Game)

Description

Students will work in small groups to design a balancing game using the Accelerometer.

Standards

IT-PGA-2 Describe the software application life cycle and use a prototype development model to develop applications.

IT-PGA-4 Design, develop, and implement accessible and usable interfaces, and analyze applications for engaging the user.

Business Ethics

Students will model work readiness traits required for success in the workplace including teamwork, multitasking, integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Expectations

Students are expected to use the skills and concepts learned in the course to design a working guessing game.

Objectives

The point of the game is to keep the happy face in the center of the screen by balancing the device on your foot. Challenge the user to balance their mobile device by programming a sound to play whenever the happy face hits an edge of the screen. You will program a different sound to play when the face hits each different edge, so the user knows which edge they hit. You will also make an end game event that stops the motion and displays a sad face when the HappyImage hits an edge. A user can restart the game after tapping on the sad face to get a prompt to play again.

A different sound plays when HappyImage hits each edge.

The HappyImage is no longer visible when it hits the edge.

A SadImage becomes visible when the HappyImage hits the edge.

Directions on how to replay appear when the SadImage appears.

Clicking on the SadImage makes a notifier pop up to prompt the user to play again.

Clicking a No option on the notifier means nothing happens.

Clicking a Yes option resets the game to play again.

Project Time

The project will take approximately 5 hours to complete.

Rubric

- 50 points Game functions with all the features listed in objectives
- 25 points Game interface is intuitive and easy to use
- 25 points There are no errors when the game is run

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```
do to HandleEdges
do
set happyimage Visible to false
set sadimage Visible to true
set happyimage Enabled to false
call happyimage MoveTo
  x Screen1 Width / 5
  y Screen1 Height / 5

when Notification AfterChoosing
choice
do if get Choice == yes
then set happyimage Visible to true
set sadimage Visible to false
set AccelerometerSensor1 Enabled to true
set replaylabel Visible to false

when sadimage touched
do call Notification ShowChooseDialog
message "would you like to play again?"
button1Text "yes"
button2Text "no"
cancelable false

when happyimage EdgeReached
edge
do if get edge == 0
then call Left Play
else if get edge == 1
then call Top Play
else if get edge == 2
then call Bottom Play

when AccelerometerSensor1 AccelerationChanged
xAccel yAccel zAccel
do set accelerometerLabel Text to join
  X-axis round XAccel / 5
  Y-axis round YAccel / 5
  Z-axis round ZAccel / 5
set locationLabel Text to join
  X-pos round happyimage X
  Y-pos round happyimage Y
call happyimage MoveTo
  x happyimage X * neg to AccelerometerSensor1 XAccel / 5
  y happyimage Y * AccelerometerSensor1 YAccel / 5
```

Overall a good job. Try to avoid leaving empty blocks in your code.

Game functions with all the features listed in objectives - 50

Game interface is intuitive and easy to use - 25

There are no errors when the game is run - 20

Total Points- 95