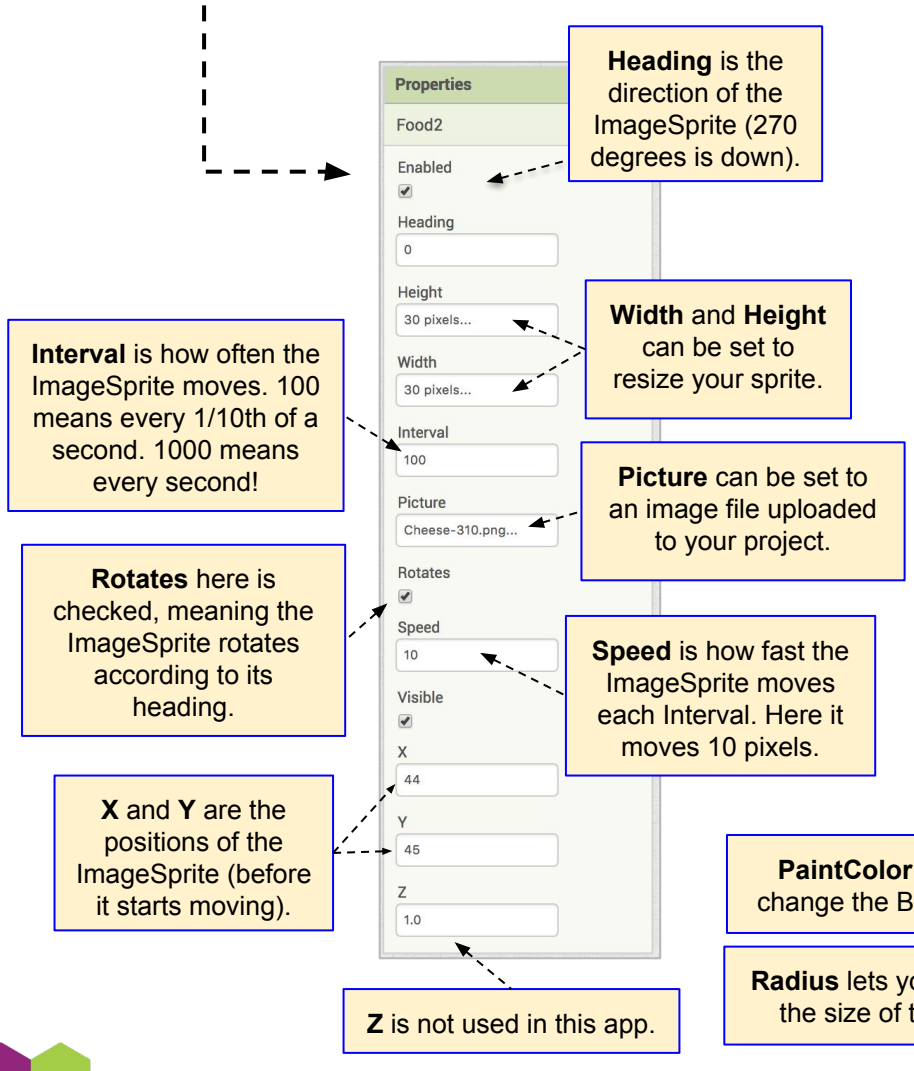
FOOD CHASE GAME

In this unit, you will create an animated game where you chase food and grow bigger!

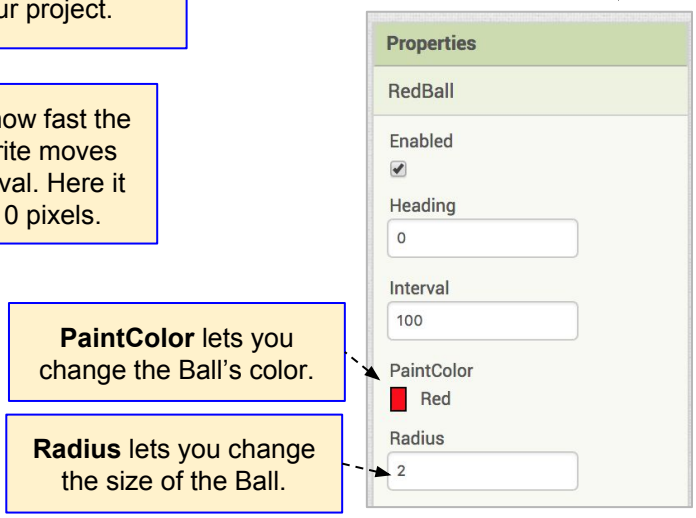
DESIGNER

1. Login to the MIT App Inventor website (http://ai2.appinventor.mit.edu) and open the FoodChase_template project provided by your teacher.

2. For this game, you will add six sprites - 2 **Ball** sprites, and 4 **ImageSprites**. They all work the same way. **Ball** sprites are automatically round. **ImageSprites** let you change shape and appearance by attaching images.Look below at the Properties panel for an **ImageSprite** to become familiar with each property.

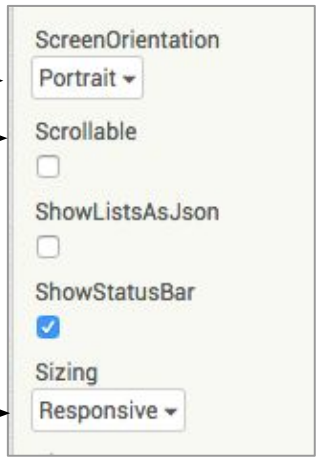


3. Note that the Properties for **Ball** components are very similar to **ImageSprites**, except for a few related to color and size.



SCREEN1

5 Set the properties for **Screen1** so the animations appear and work well. Click on **Screen1** in the Components panel,
and set its:
- *ScreenOrientation* to **Portrait**
- Uncheck the *Scrollable* property.
- *Sizing* to **Responsive**

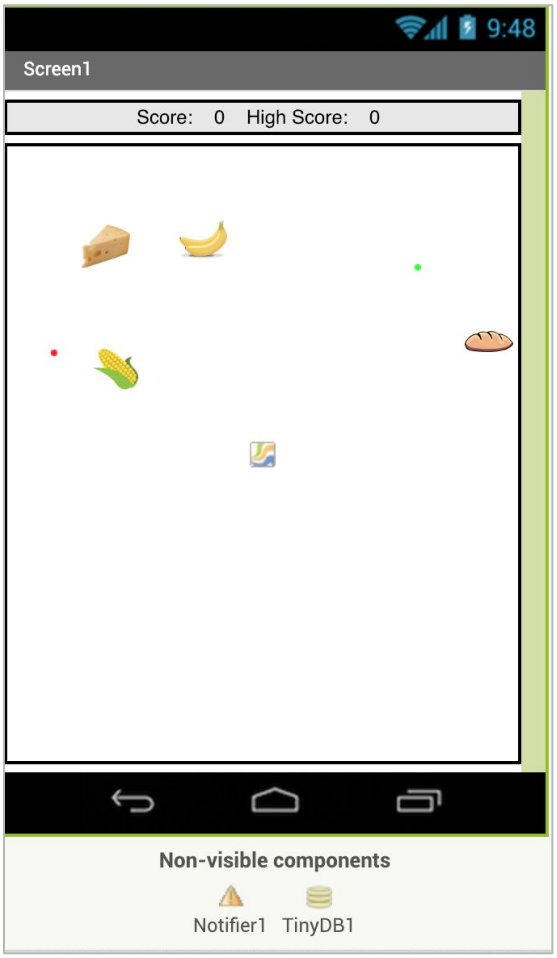


Scrollable property allow the user to scroll on the screen if checked. No scrolling allowed if unchecked.

Responsive
Sizing changes the size of components based on the resolution of the device.

DESIGNER

The app screen should look something like this:



THE APP CHALLENGE

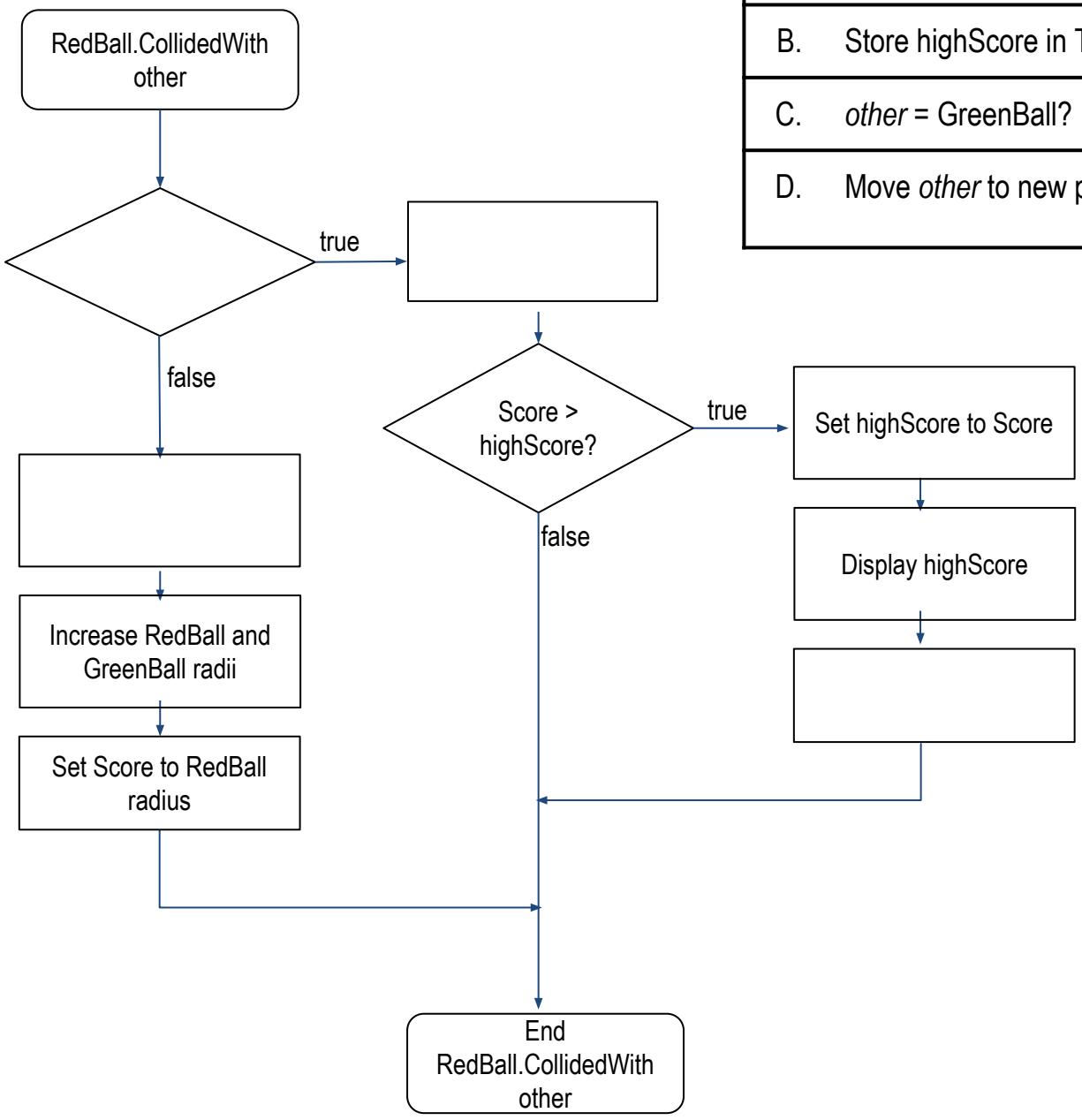
Using the template provided, make a game app with the following behavior:

- ❑ RedBall and GreenBall start in random positions, with a radius of 2.
- ❑ Food ImageSprites appear in random positions on the screen.
- ❑ When user flings their finger on the Canvas, the RedBall's Speed and Heading will reflect the speed and heading of the fling action.
- ❑ RedBall grows larger every time it "eats" a Food ImageSprite. GreenBall also grows when RedBall "eats' Food, but at a slower rate.
- ❑ When a Food ImageSprite is eaten it appears in a different random position.
- ❑ GreenBall moves in a random path around the screen, bouncing off edges.
- ❑ When RedBall and GreenBall collide, game is over.
    - ❑ Notify user and allow them to play again or quit.
    - ❑ If user decides to play again
        - ❑ Reset all Balls and ImageSprites to size and random positions.
        - ❑ Use a procedure called Restart to perform the resetting.
- ❑ Displayed Score is the current radius of RedBall.
- ❑ When a game ends, if Score is greater than the current High Score, replace High Score with the current Score.
- ❑ Store High Score in TinyDB, so that when the app starts, the current High Score is displayed.

FLOWCHART OF REDBALL.COLLIDEDWITH

1 With your partner, look at the following flowchart and fill in the missing blocks with the correct letter, according to this table.

A.	Notify user game is over
B.	Store highScore in TinyDB
C.	*other* = GreenBall?
D.	Move *other* to new position



Choose Ways to Extend Your App

Here are a few features you could add if you want to expand your app

Add sounds! One for eating food and another for losing game

Make the GreenBall move faster as time goes by

Make the Food Sprites move too

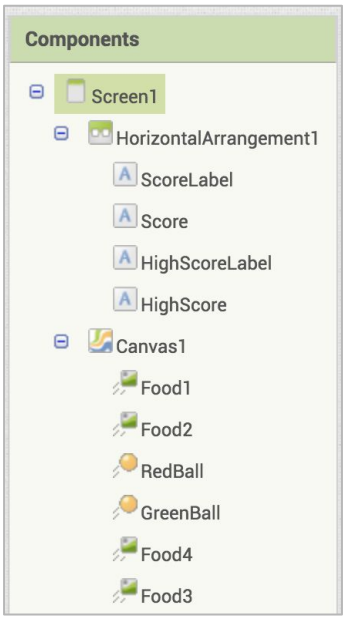
What other ideas do you have?

COMPUTATIONAL THINKING CONCEPTS and PRACTICES

The following are the Computational Thinking Concepts learned in this unit.

Food Chase Game

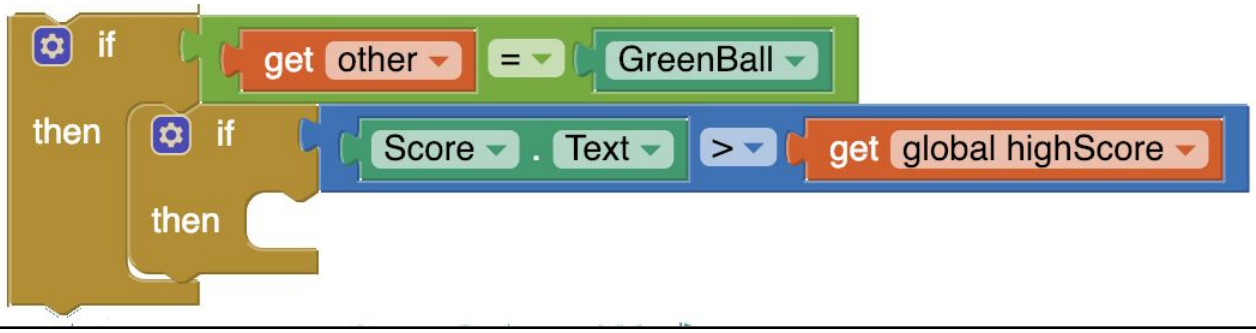
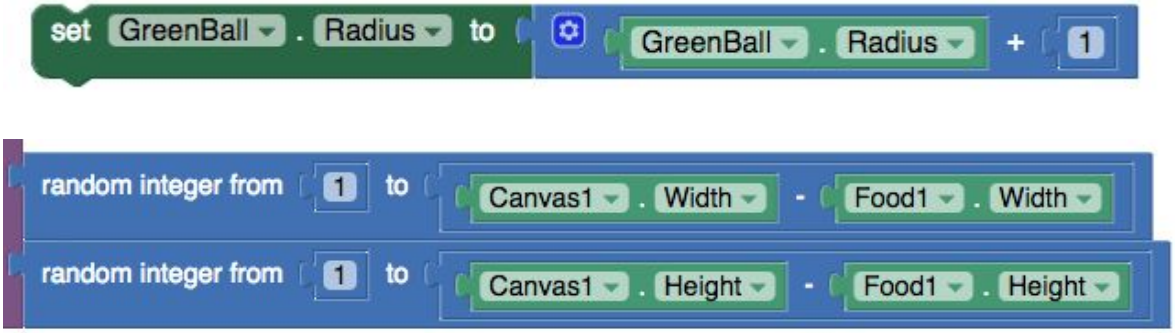
1. Naming/Variables:



2. Events:

COMPUTATIONAL THINKING CONCEPTS and PRACTICES

The following are the Computational Thinking Concepts learned in this unit.

Food Chase Game
3. Conditionals 
4. Operators 
5. Abstraction and modularization (procedures) 

COMPUTATIONAL THINKING CONCEPTS and PRACTICES

The following are the Computational Thinking Concepts and Practices used in this unit.

Food Chase Game
6. Manipulation of data and elementary data structures
7. Testing ing

❑ Test your app! Your high score should display correctly, even if you close the app and open it again!