Birthday App Inventor

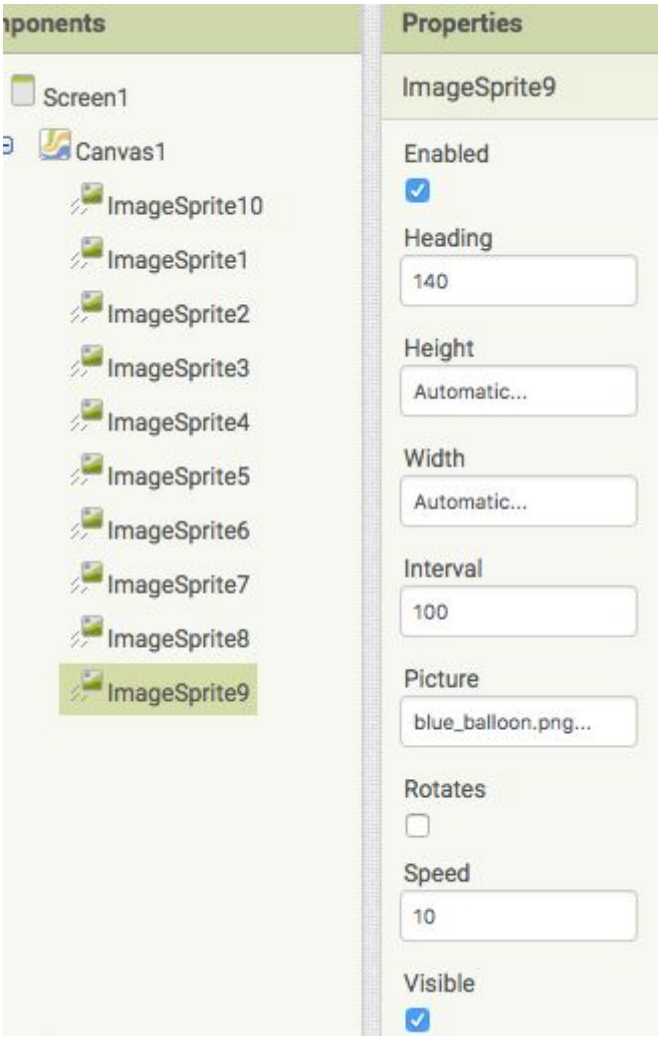
CoderDojo

Normal

App Inventor ★

You're going to make an app with balloons that float around the screen! You can either search the web for images to use for your sprites (you don't have to stick to balloons!), or download the ones in the example at http://dojo.soy/balloons (you will need to connect with a Google account).

Start a new project in App Inventor. In the **Pallet** on the left, click **Drawing and Animation** and drag the **Canvas** component onto your screen. In the **Properties** panel on the right, set the Width and the Height of the Canvas to "Fill parent".

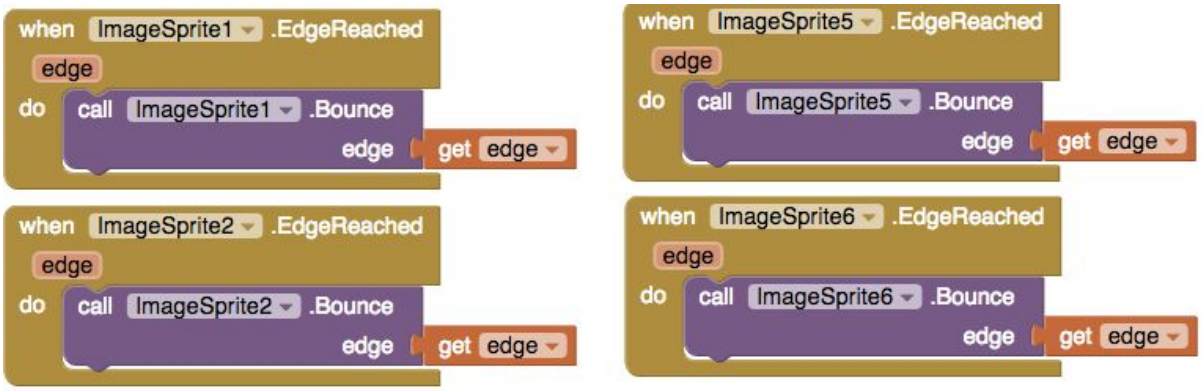


Next drag a few **ImageSprite** components onto the Canvas on your screen. I did ten. These will be your balloons. For each one, click on its name in the **Components** panel and set the following **Properties**:

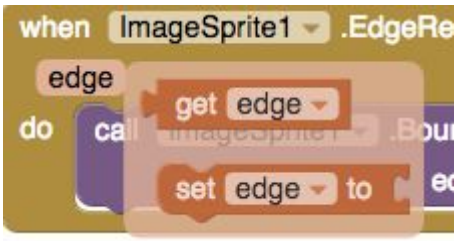
- Heading: Any number between 0 and 360. Give each balloon a different number. This is the direction it will move in at the start.
- Picture: Upload or select your picture
- Rotates: untick this box
- Speed: 10

The **Speed** and **Heading** properties make the sprites move. Now you need some code to make them change direction whenever they hit the edge.

Click on **Blocks** at the top right to start coding. You'll need three blocks for each ImageSprite that you have. Here is what it looks like for four different ImageSprites:



The blocks can be found by clicking on the ImageSprite objects in the **Blocks** list on the left. For the "get edge" hover the mouse over "edge" on the ".EdgeReached" block and drag the piece out.



That's it! There are a number of ways you can try out your app. You can either use the Emulator as described in the App Inventor Sushi Cards, or connect with the AI Companion app or via USB. Alternatively you can click "Build" and select the "QR code" option to generate a QR code that you can scan to install the app on your device.

Hard

App Inventor ★★

Everything at Normal, plus:

Make one of the balloons pop when you tap it! The popped balloon will disappear and confetti will fall.
The game is to try and find the balloon that pops. When you find it you win, and another sprite appears which you can tap to restart the game.

Designer

Add five more **ImageSprites** near the top of the screen. **Rename** them to streamer1, streamer2,... etc. They will be the confetti that appears when you pop the balloon. Choose a small image for them, e.g. a small ribbon or a star, and also set the following properties for each one:

- Heading: 270
- Rotates: unticked
- Speed: 0
- Visible: unticked

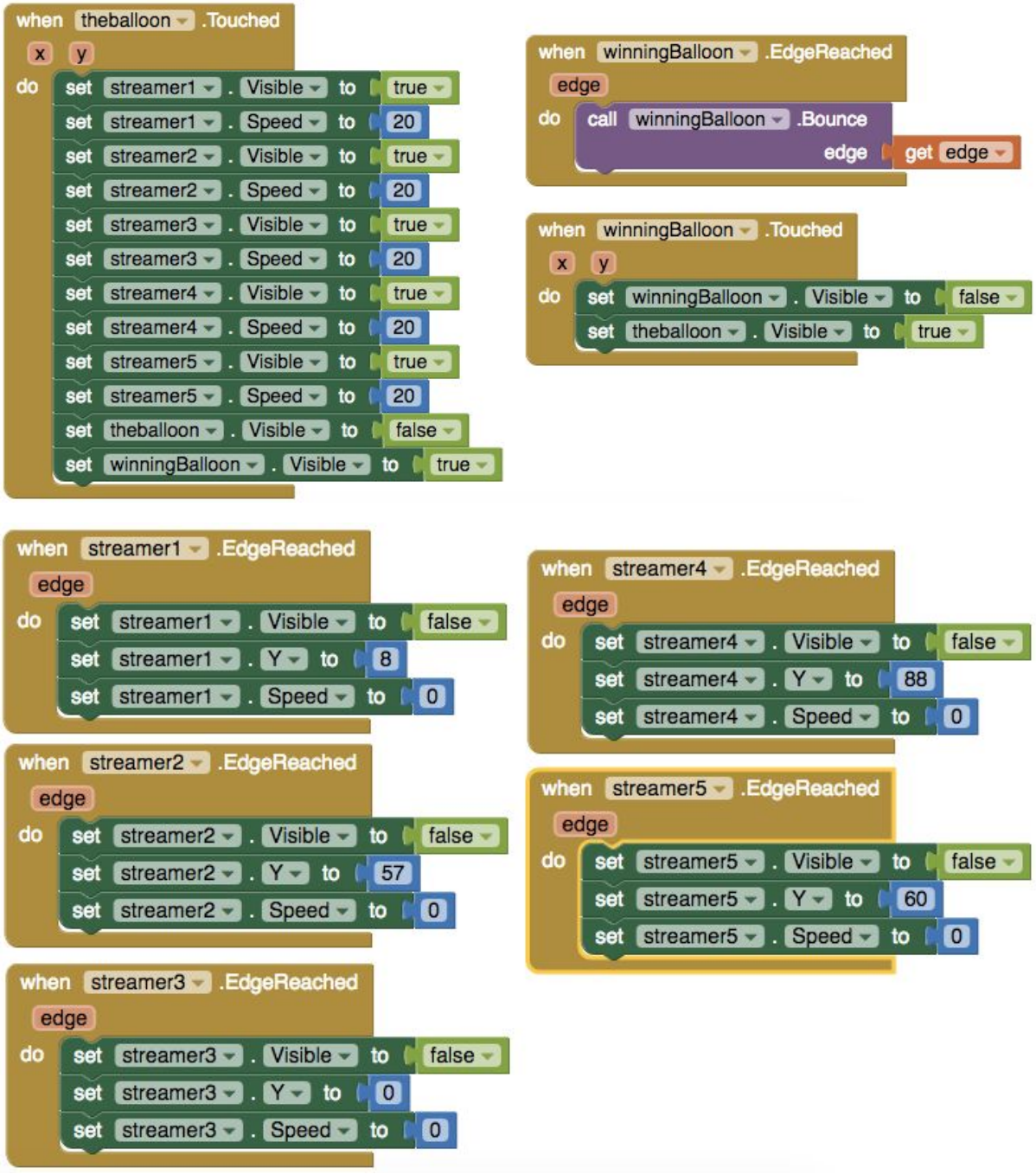
Add one more **ImageSprite** and **Rename** it to “winningBalloon”. This will be a picture to tell the player they have won! Choose any image you like and also set the following properties:

- Heading: 90
- Rotates: unticked
- Speed: 10
- Visible: unticked

Finally choose one of your balloon sprites and **Rename** it to “theballoon”.

Blocks

You will need all the blocks from “Normal” plus the following additional blocks:



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Ultra

App Inventor ★★

This time you have to pop all the blue balloons! One piece of confetti appears for each one that you pop. The "You win!" sprite only appears when all of the blue balloons are gone.

Click "Projects" and select "Save project as…" to make a copy of your app before continuing.

Designer

Delete the **ImageSprite** called "theballoon". This will delete the blocks that go with it as well.

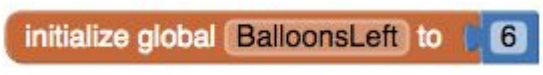
Find the **ImageSprites** that have a blue balloon as their picture and **Rename** them to BlueBalloon1, BlueBalloon2,... etc. Add more if you want to.

Count how many blue balloons you have. Make sure you have the same number of **ImageSprites** called "streamer", with the small confetti image, by adding or deleting **ImageSprites** as needed. I have six of each.

Blocks

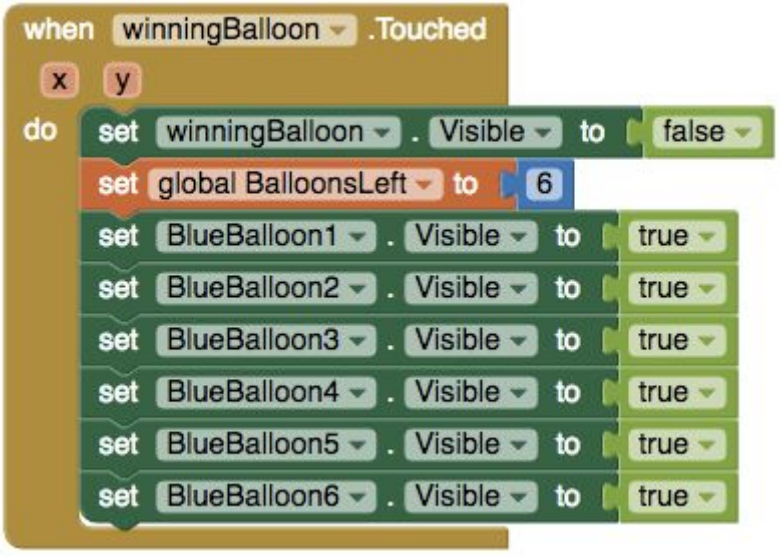
This code has some extra **Logic**, an "if then" **Control** block and a **global variable**.

Put the following block at the top of your page, before all the other blocks. You'll find it in the **Variables** blocks. Click on "name" and type in the name "BalloonsLeft" with no space.



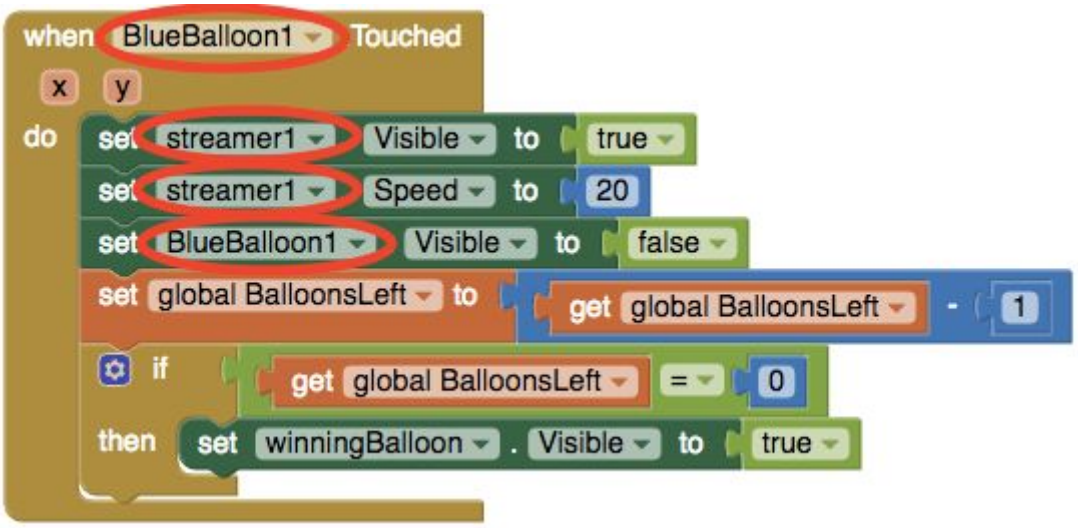
The blue block is found at the very top of the **Math** blocks. You should set the value to the number of blue balloons you have: here it's 6.

Change the “When winningBalloon.Touched” block so that it looks like this:



If you added more ImageSprites either for balloons or for streamers, then add a “When .EdgeReached” block for each one, copying the code you have for the other balloons and streamers.

Add a block like this for each BlueBalloon ImageSprite that you have. Make sure to select the items with matching numbers in each of the dropdowns circled in red here.



If you have six blue balloons, then you should have six of the above code blocks, and this should also be the same number that you initialized your global “BalloonsLeft” variable to!