

SCRATCH MAZE GAME

LET'S FINISH OUR GAME!

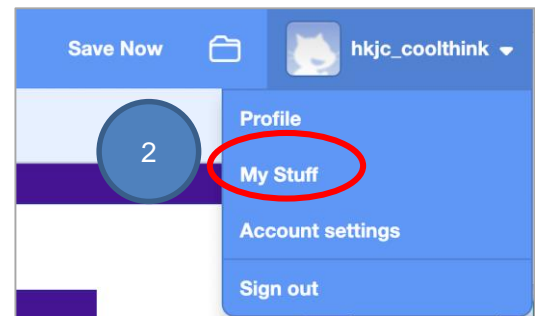
In this game, you guide the panda to its bamboo forest with your keyboard, avoiding the walls of the maze. Reaching the maze earns +1 point and hitting a wall is -1 point.

In this part, you will finish the maze game by adding blocks that can check whether your sprite is touching the walls of the maze or has reached the goal. You will also add speech, score and sounds.



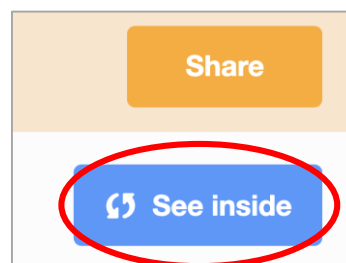
START HERE

Sign into your account at scratch.mit.edu.

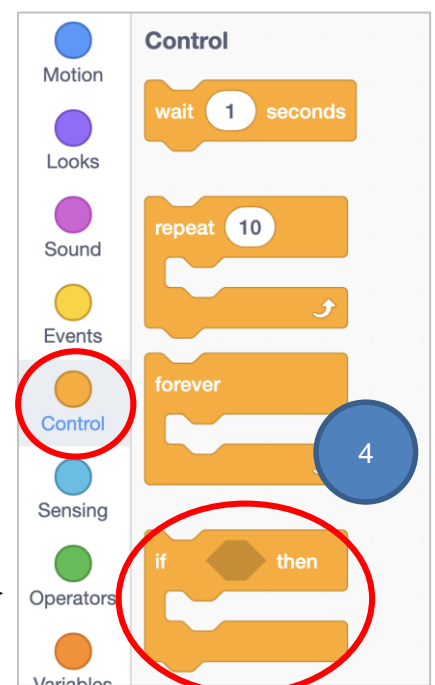


Go to **My Stuff** and open up your maze game project.

Click the **See inside** button in the top right area of the website to continue working on your game.

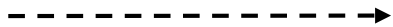


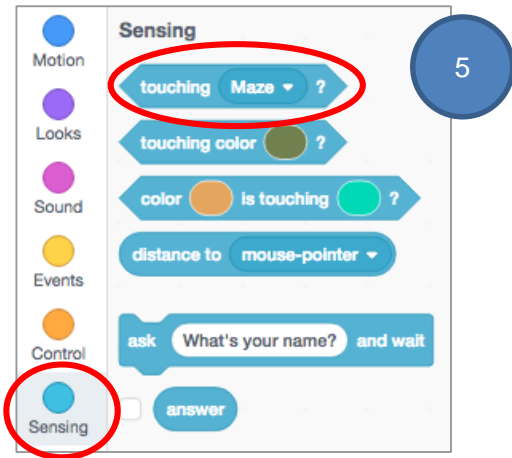
Throughout the game, we want the Panda sprite to be sent back to the starting point if it touches the walls of the maze. To do this, pull out an **if-then** block from the **Control** drawer.



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LET'S CONTINUE

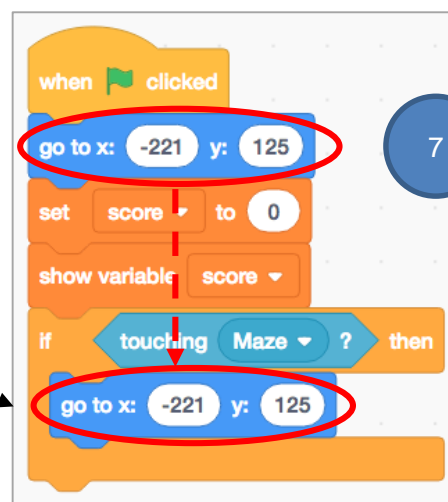
- We want the Panda sprite to go to the start IF it touches the Maze sprite, so also pull out a **touching Maze** block from the **Sensing** drawer. 



- Put the **touching Maze** block in the empty slot of the **if-then** block and put that combined block under the **when green flag clicked** block. Set the touching variable to be your Maze sprite.



- Copy and paste the "go to x:# y:#" block inside the "if-then" block.

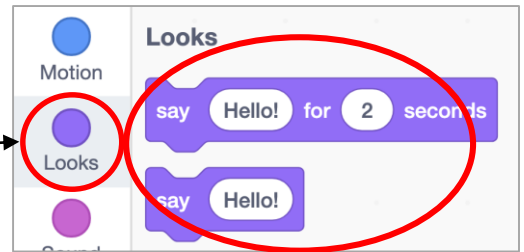


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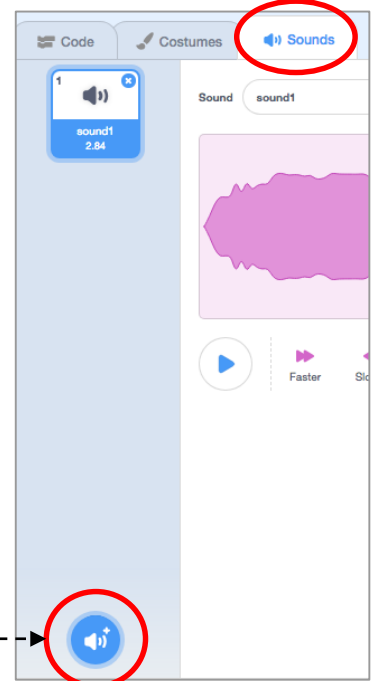
LET'S CONTINUE

❑ Add the appropriate additional **if-then** block for the following situation:

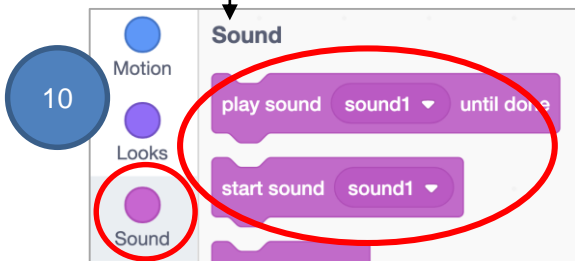
- If the Panda sprite touches the goal, it says "You win!" and plays a sound.
 - To make your sprite say something, go to the **Looks** drawer. Which block do you use? Why?
 - To add a sound to your project, go to the **Sounds** tab. Click on the **Choose a Sound** icon at the bottom left to select a sound.
 - To make your sprite play the sound you found, go to the **Sound** drawer of **Code** tab.



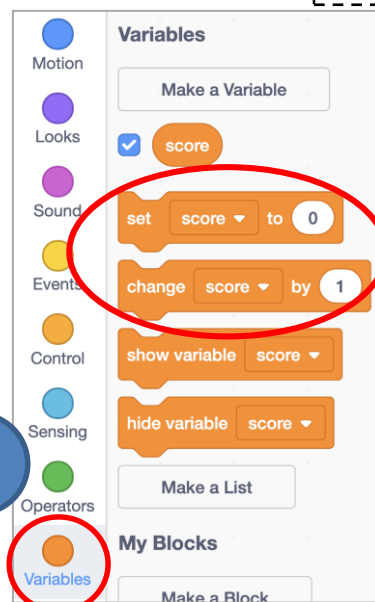
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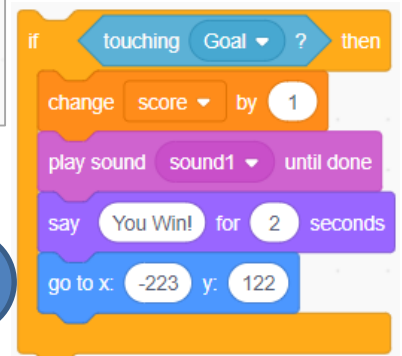
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❑ Change the score by 1 when the Panda sprite reaches the bamboo and decrease the score when it touches the maze. Hint: Look in the **Variables** drawer for how to change the score.

❑ Send the Panda sprite back to its starting position.

CT Tips
"if-then" is a **conditional**, which means "if" a condition is met, "then" things will happen.

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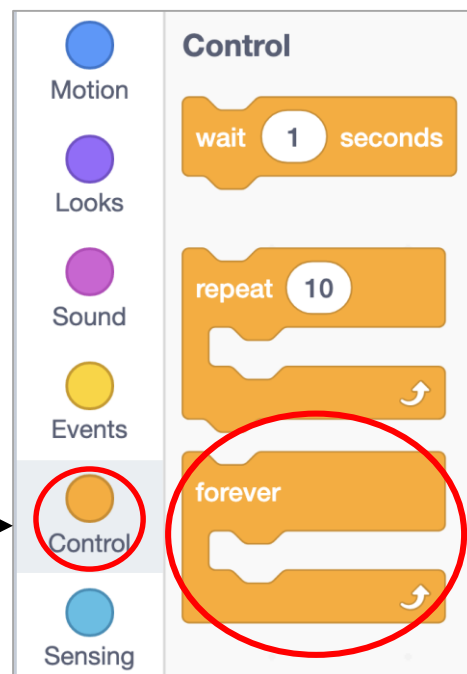
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ALMOST DONE!

Play your game again. Does it work? If not, what do you think is missing? 13

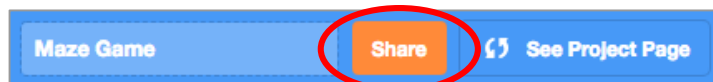
The **“forever”** block allows the program to constantly check for the conditions you are testing. Add the **“forever”** block from the **“Control”** drawer. Does your game work now?

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If your game still doesn't work, ask your teachers and classmates to help you **DEBUG**. 15

When your teacher tells you to do so, add your project to the teacher's Studio:



16 Save your project by clicking **Save now** under the File menu.

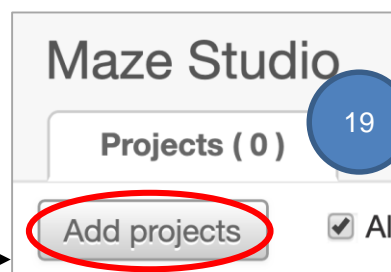
Click the orange **Share** button.

18 Go to your teacher's Maze Studio (they will give you a URL).

Click the **Add projects** button.

Select your project from the bottom of the page and add it to the Studio.

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SCRATCH MAZE GAME

COMPUTATIONAL THINKING CONCEPTS

The following are the computational thinking concepts learnt in Lesson 2.

L1U8.3 Making a Maze Game with Scratch

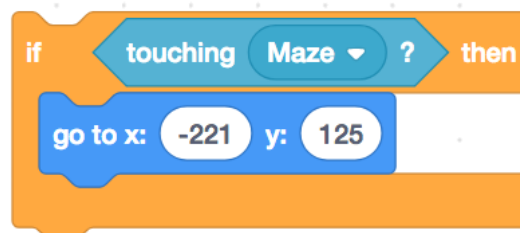
1. Sequences:



2. Repetition:



3. Conditionals



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COMPUTATIONAL THINKING CONCEPTS

The following are the computational thinking concepts learnt in Lesson 2.

L1U8.3 Making a Maze Game with Scratch

4. Naming:



5. Operators:



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COMPUTATIONAL THINKING PRACTICES

The following are the computational thinking practices used in this unit.

L1U8.3 Making a Maze Game with Scratch

1. Reusing and remixing:

- a) Use the template project and remix it

2. Being incremental and iterative:

- a) Add blocks to control the sprite movement
- b) Make a score variable
- c) Add if-then to the project
- d) Add the “forever” block

3. Testing and debugging:

- a) Test and debug collision
- b) Test that the score is updated when the sprite wins or loses

4. Algorithmic thinking:

- a) Learn to make the sprite move based on key press events