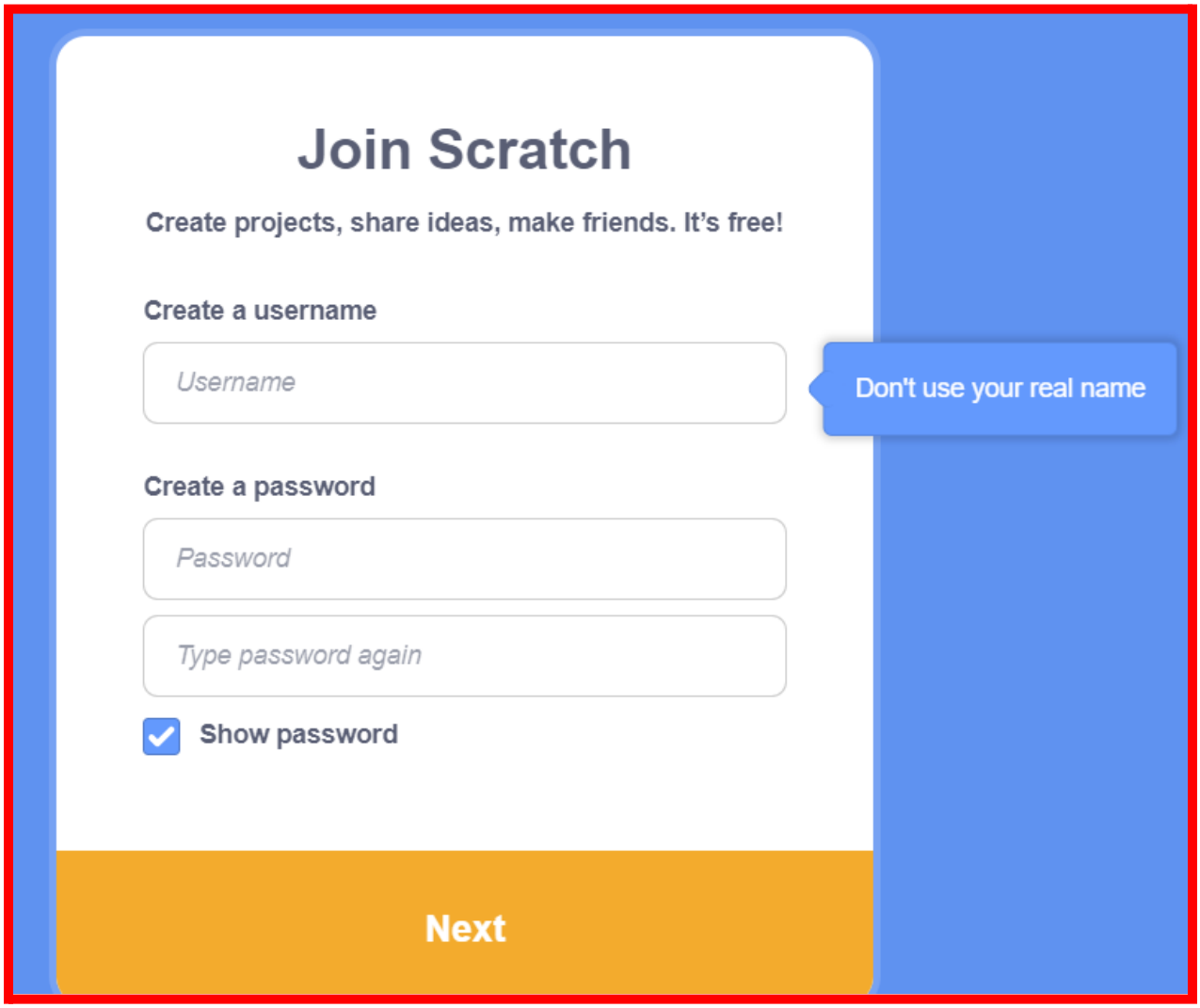
Access Scratch Through this link : https://scratch.mit.edu/
Preamble: After this lesson you will know how to create and access variables. In addition, how to prompt the user with what data will be inputted in the program.

1. Make an account by going on the Join Scratch tab present in the header of the website click on highlighted “Join Scratch”.

2. Follow prompts after pressing join scratch to create an account.



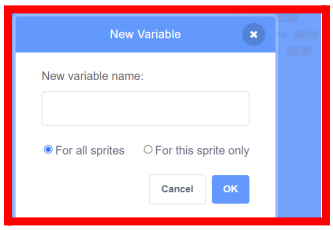
3. Once the account is set up press create highlighted in the top left corner of your screen.

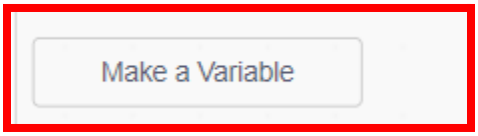
Exercise 1:

1. In events pull the block below into the center window.

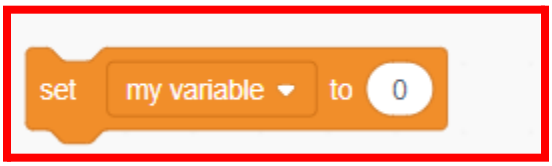
2. In sensing pull block below into the center window and connect it to the bottom of the icon used in the last step. Customize the message you would like to ask the user by typing the message in the white bubble. This will be prompting the user for what x is set to in the input table. Feel free to use “What do you want x set to?”.

3. In the variables click on block below and make a variable and fill out proper values for the named variable that will represent x in the input/output table.



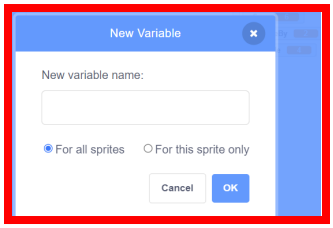


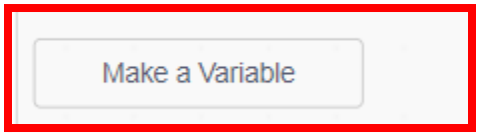
4. In the variables section pull the block below to the custom variable you created by hovering the mouse over the drop down triangle in the “my variable” box in the place where the 0 is, go to sensing and drag answer into the place that 0 is.



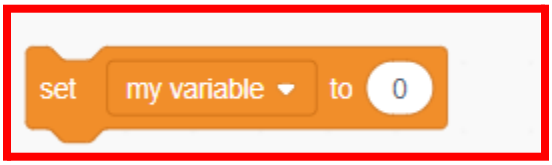
In sensing pull the block below into the center window and customize the message you would like to ask the user by typing that message in the white bubble. This will be prompting the user for what y is set to in the input table.

In the variables click on “make a variable” and fill out proper values for the named variable that will represent the rule of which x will increase to represent y in the output. Feel free to use in the ask block: “What do you want x to increase by?”.

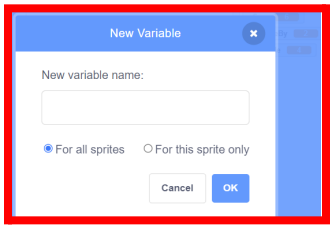


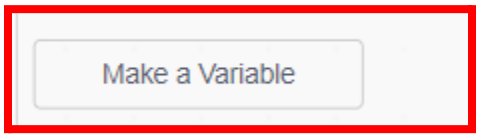


In the variables pull to the custom variable you created by hovering the mouse over the drop down triangle in the “my variable” box in the place where the 0 is going to sensing and drag answer into the place where that 0 is.



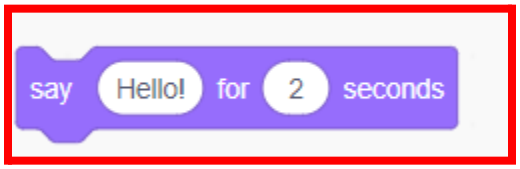
In the variables click on “make a variable” and fill out proper values for the named variable that will represent the y value that is produced in the output table.





In the variables pull the block below to the custom variables you created by hovering the mouse over the drop down triangle in the my variable box. In the place where the 0 is go to operators and drag answer into the place that 0 is in each blank circle in the operator. Go to variables and drag the custom variable the represents the xVariable into the left circle in the operator and the custom value that holds the rule that the output table will follow in the right circle.

In looks pull the variables to the center window then go into variables and select the custom variable that represents y in the output table and pull it into the place that says Hello!



The full code should look like this :

In order to run and see if the code is working press on the green flag on your screen near the stop sign.

When running the application use x variables in the input/output table when prompted for the xVariable value and use the rule specified in direction which is 2 when asked about value of increased by. Verify the application is working correctly by making sure for every individual run the output value matches the y variable in the input/output table.