

Intro to Programming Scratch #9 – RPS (Rock Paper Scissors)

Objective: Continue to demonstrate your understanding of conditionals, costume changes, random numbers, and the use of variables.

1. Download *first_last_scratch_9.sb3* file from the www.missblomeyer.com website and save it on your flash drive (if you are using a MacBook) or your downloads folder if you are using a Chromebook.
2. Rename the Scratch file to be your first name and your last name. (*first_last_scratch_9.sb3*)
3. Now, login to the Scratch website. Create a new project. Do *File>Load from your computer*. Find your *first_last_scratch_9.sb3* file and click *Open*. When asked if you want to replace the contents of the current project, click *OK*.
4. You are to finish the code so that a user can play Rock-Paper-Scissors with the computer. The rules for Rock Paper Scissors are:

Who Wins?	If the Computer has	And the Player has
Computer wins	Rock	Scissors
	Paper	Rock
	Scissors	Paper
Player wins	Rock	Paper
	Paper	Scissors
	Scissors	Rock
Tie	Rock	Rock
	Paper	Paper
	Scissors	Scissors

- a. Click on the *computer* sprite. Find the script that starts with *When I receive determine winner*. Add the code so that the *computer* will say the following for 1 sec:
 - If the computer wins, say: *I win!!!! Ha Ha Ha!!!!*
 - If the player wins, say: *You win! Darn...*
 - If it is a tie, say: *This one was a tie!*

You are to fill in the conditions in the *if-else* blocks and say the correct message in the existing code. Do **not** add another *When I receive determine winner* script. **Write all of your code in the existing structures!**

- b. Now, add a variable for *total-times-played*. When the green flag is clicked, the variable should be set to 0. Figure out a good place to increment (change by 1) the variable to

keep track of how many times the game has been played. Make sure this variable is visible on the stage.

- c. Next, add 3 variables for *computer-wins*, *player-wins*, and *ties*. Figure out how to keep track of how many times the computer wins, how many times the player wins, and how many times it was a tie. Don't forget to initialize (set to 0) these variables when the green flag is clicked.
 - d. **All** variables must change values **before** the computer says anything.
5. Always do *File->Save now* before you log out of the Scratch website.
 6. Now do *File->Save to your computer*. If you are using a MacBook make sure to save to your flash drive. If you are on a Chromebook, it should download automatically to the downloads folder.
 7. Turn in your *first_last_scratch_9.sb3* file to *missblomeyer.com* in the usual way.