

day52 Scratch broadcast and translate

Due: Friday 1/19/24

Today you will learn about variables and extensions in Scratch as well as how to broadcast messages from one sprite to another.

Your first job is to create a translating sprite. When you click on the sprite it asks you for text to translate then translates it into a language of your choice. Then, four sprites appear in random locations all announcing the translation. We will use a broadcast message to make this happen.

Here are screen shots showing how this might work:

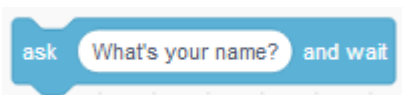


The above translates "Good morning, students, I hope you are having a great day!" into Russian.

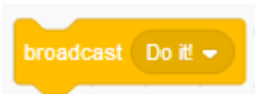
To do this you will need to use blocks in the following areas:

- Ask block under Sensing
- Broadcast blocks under Events
- My variable under Variables
- Translate block under Extensions

Here are some tips:



When you want information from the user you use an ask block. Whatever the user types is stored in the Answer variable, just under the Ask block.

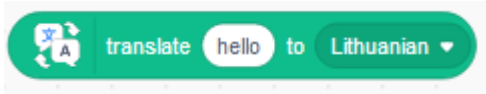
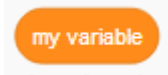


When you use the broadcast block any other sprite in your program that has a receiving broadcast block will get triggered. The receiving block looks like this:



The receiving block works like a "when green flag clicked" block, it starts whatever code you put below it.

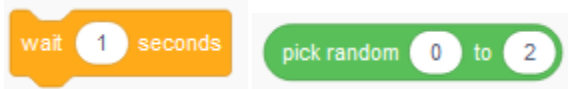
Under the Variables group you can create and set up variables. In today's program you will need to store the translated text in a variable (the one they give you by default would be fine) so that all the announcing sprites have access to it.



You get to the translate blocks by clicking on the Extensions area at the bottom left, below all of the command groups:



There you can find command families known as extensions. We'll play with other ones on other days, but today we're using the translate family and the text to speech family.



You can wait a certain amount of time (pause a program) using the wait block in Control. You can wait a random amount of time using the pick random block in Operators.

Checklist:

- You have a fun background and only one sprite showing by default. Nothing happens when the green flag is clicked.
- When you click on the sprite it asks you for text to translate into another language (the language is set in your code, the user doesn't choose the language they want).
- The sprite translates the text and stores the result in a variable.
- The sprite says the translated text out loud (use the set language to block and the speak block in the text to Speech family of extension block)
- The sprite then does a broadcast message telling the four other sprites to do their thing.
- The four sprites each wait their own random time from 0 to 2 seconds, then appear in random locations, use the variable to announce the translation for 3 seconds, then hide themselves. These four sprites should just show the translation, they shouldn't speak it out loud.
- Rename your project "day52 broadcast and translate".

Call me over to check you off in person, then also turn in a share link on the Google Classroom.

If you finish early, please add support for additional languages somehow (your choice).