

Mission 8 Remix

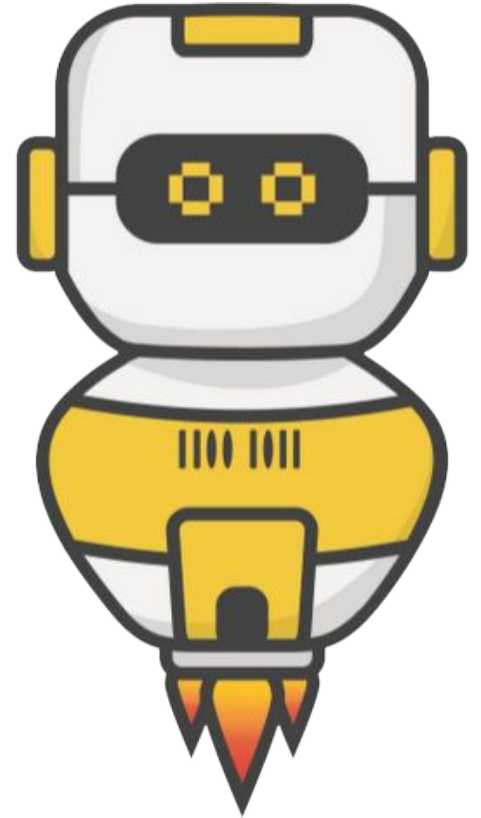
Create your own project from Mission 8



Warm-up

In your Mission 8 Remix Log, answer the pre-mission preparation questions:

- What is a programming skill you want to improve during this remix?



Time for a project remix!

A remix can be:

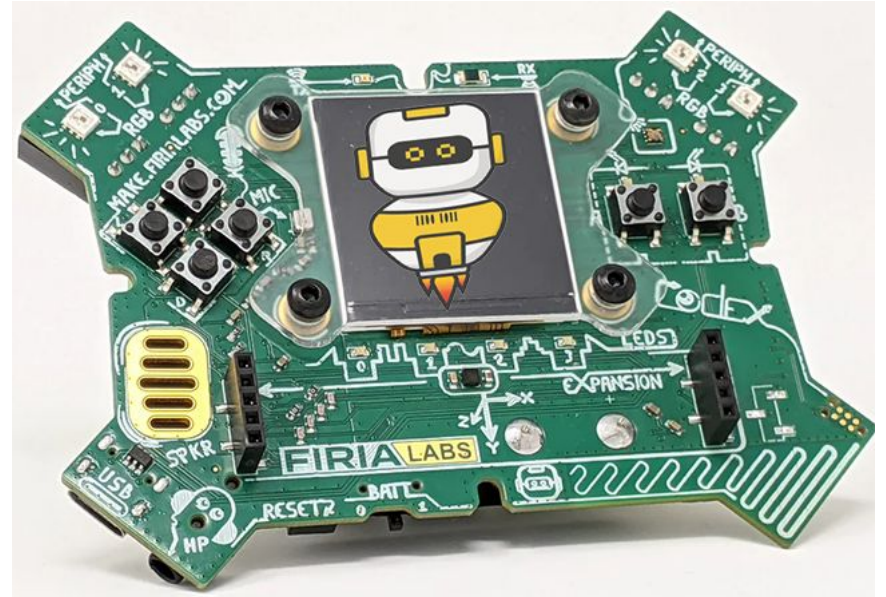
- A new program created by adding new code to a program you already created
- You can combine parts of two or more programs in a remix
- Use a similar idea in a different way



Project Remix

Creating a remix will let you:

- Improve your skills and practice the concepts from the mission
- Be creative
- Remember code from earlier programs and missions
- Work with other students
- Design an original program and write the code all on your own



Step #1

Review the mission

- Open your project from Mission 8
 - What does the program do?
 - What skills were used or concepts learned?

DO THIS:

- Fill out the information in the Mission 8 Remix Log for **Step 1**



```
import random
from time import sleep

# What's for lunch?
answers = ["Pizza", "Burger", "Salad",
           "Burrito", "Nothing", "Pasta"]
my_choice = answers[6]

while True:
    # Flashy pixels
    color = random.choice(COLOR_LIST)
    pixels.set(0, color)
    color = random.choice(COLOR_LIST)
    pixels.set(1, color)
    color = random.choice(COLOR_LIST)
    pixels.set(2, color)
    color = random.choice(COLOR_LIST)
    pixels.set(3, color)
    sleep(0.25)

# Display random answer from list when
# Button A is pressed
if buttons.was_pressed(BTN_A):
    my_choice = random.choice(answers)
    display.print(my_choice, scale=3)
```

Step #2

Brainstorm ideas

- Read through remix suggestions from your teacher

Six suggestions are on the next 3 slides. You can use any of these ideas or come up with your own.

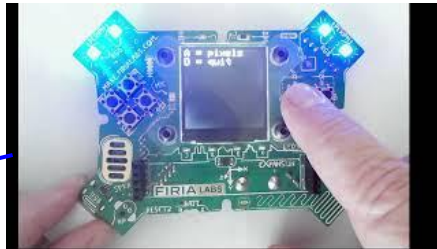


Step #2 Remix Ideas



Mild-1A

Create a list of colors. When a button is pressed, pick a random color and turn on all four pixels. Or use two buttons - Button A for pixels 0 & 1, and Button B for pixels 2 & 3



Mild-1B

Create a list of images and/or colors. When a button is pressed, pick a random image/color to display. Also program a button to break out of the loop and end the program.

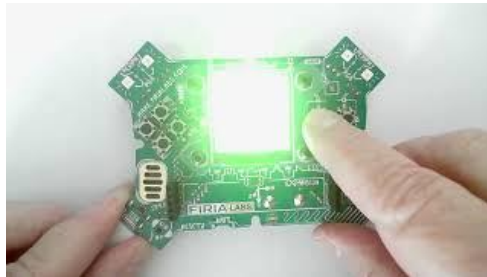


Step #2 Remix Ideas



Mild-1C

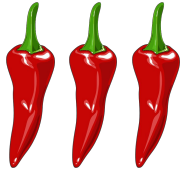
Create a list of sounds. When a button is pressed, pick a random sound to play. Also program a button to break out of the loop and end the program.



Medium-2

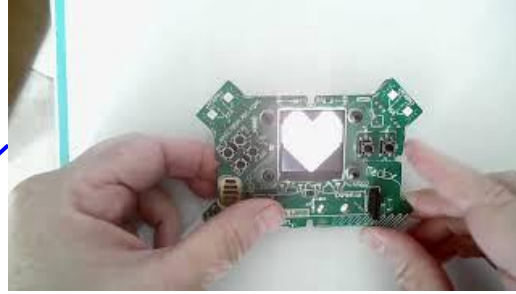
Create two lists. The items can be colors, text, images or sound. The lists do not need to be similar items or the same size. Use BTN_A for one of the lists and BTN_B for the other list and display a random item from the list when pressed. Program a button to break out of the loop and end the program. Include instructions and “wait” button.

Step #2



Spicy-3A

Create 2 different lists, selected with BTN_A and BTN_B buttons. Program BTN_L to scroll backwards, BTN_R to scroll forwards, and BTN_U to select a random item from the chosen list. Include an intro, wait button and exit button.



Spicy-3B

Create a dice roller, showing the number of a 6-sided die. Change the scale of the text so the number is large. Show a message, like “rolling” before displaying the number.

Step #2

Brainstorm ideas

- Read through remix suggestions from your teacher (previous slides)
- Use the suggestions as presented, or combine some of the options for your own mild, medium, spicy or extra spicy project
- Use your creativity to come up with your own idea for a project
- Decide with your partner what project you will do

DO THIS:

- Fill out the information in the Mission 8 Remix Log for **Step #2**



Step #3

Make a plan

- What variables will you need? What will you use them for?
- What lists will you use, and what will be their items?
- What buttons will you program, and what will each button do?


DO THIS:

- Fill out the information in the Mission 8 Remix Log for **Step #3**



Step #4

Code your project

- **IMPORTANT:** In CodeSpace, go to the sandbox 
- Start with a new file and give it a descriptive name (**Remix8**)
- You can leave any program open, including **Answer Bot**, and use it as a guide
- Import your modules
- Create your lists and define your variables
- Write your code, testing frequently



Step #4

Stop and test frequently!

- Don't try to write all the code at one time
- Mistakes happen, so find them early
- Type just a few lines of code and then run the program
- If there is an error, fix it before continuing
- Use the debugger and your other programs for help



Step #5

Documentation!

- Make sure your code is readable by adding blank lines
- Add comments to sections of your code that explain what they do



Step #5

Get feedback

- Show your code to other students
- What do they think? Have them fill out the feedback form on your Mission 8 Remix Log
- Give yourself some feedback Is there something you want to change or improve or add? Fill out the feedback form on your Mission 8 Remix Log

Modify your code to make your project even better



And now you have your own remix!

Congratulations!

By completing this remix you have:

- learned more about programming
- practiced the skills and concepts from the missions
- been thinking! And problem solving and much more!



Mission Reflection

- Wow! Great job!
- Share your project with your friends!
- Run at least three projects from other students
- Complete your Mission 8 Remix Log

- Don't forget to clear your CodeX by running your **Clear** program

