

day69 micro:bit buttons

Due Friday 3/8/24

Your task today:

***Open and go through the "setup" document for today before trying to do today's assignment.***

Create a number guessing game on the micro:bit as follows:

- Create a program named "**microbit buttons**, your name" saved to your computer.
- Put your name in a comment at the top.
- Pick a random number from 0 to 9. See notes below.
- Do a while True: loop. The rest of the program is inside the loop (indented).
- Make the micro:bit show a question mark symbol for six seconds, giving the user time to guess a number by pressing button\_a several times.
- The micro:bit then displays the user's guess for one second.
- If the user guessed the secret number, display a happy face for one second, then say "BYE", then be done. Use the break command to leave the while True loop.
- If the user guessed too low or too high, show an image that indicates if the guess was too high (for example, the down arrow (Image.ARROW\_S) to show them that they need to guess a smaller number) or too low for a few seconds, then show a sad face for 1 second, then go back to the ? to let the user guess again.

Here's a link to all the Images in case you want to refer to it:

<https://microbit-micropython.readthedocs.io/en/latest/tutorials/images.html>

Here's a link to the button tutorial if you want to refer to it:

<https://microbit-micropython.readthedocs.io/en/latest/tutorials/buttons.html>

To get a random number you'll have to add an "import random" to the top of your program. Then, when you want a random number you can do this:

```
r = random.randint(0,9)
```

Make sure your random number is only chosen once per game. In other words, make sure you aren't choosing a different random number for each turn.

To display the user's guess, you need to do this:

```
display.show(guess)
```

Use an **if elif else** structure to evaluate the user's guess.

Call me over to see your program when you are done. Also, please turn in your code on the Google Classroom.

Extra credit challenge: make the game begin again with a new number if the user presses button\_b after the game is over.