Number Guessing Game

In this activity, you will create a number guessing game on the micro:bit. The micro:bit will randomly display a number between 1 and 10 and the player has to choose higher or lower using the A and B buttons.

Import the radio library and set player and micro:bit scores to zero.

Show the random number generated by the micro:bit and use selection to see who has one.

Shake the micro:bit to check your score

```
#imports including random
from microbit import *
import random
mbNumber = 0
score = 0


# Game will repeat. Aim to have have several players, playing several rounds
# Player with the highest score wins
while True:
    # Randomly generate a number that the microbit holds
    mbNumber = random.randint(1,10)
    # Randomly generate a number for the player
    playerNumber = random.randint(1,10)
    display.scroll(mbNumber)
    sleep(2000)
    # Simple message asking the player to guess higher or lower
    display.scroll("?")
    # Nested selection to check whether the micro:bit number is higher or lower than the player'
    if button_a.was_pressed():
        if playerNumber > mbNumber:
            display.scroll('W')
            score = score + 1
        else:
            display.scroll('L')
    if button_b.was_pressed():
        if playerNumber < mbNumber:
            display.scroll('W')
            score = score + 1
        else:
            display.scroll('L')
    # Shake the micro:bit to show the player score.
    if accelerometer.was_gesture('shake'):
        display.scroll(score)
```

Explorer Task Ideas

- Add a start up logo to make the player know they are playing a number guessing game game
- Show animations when a player reaches a score threshold
- Play a sound when player reaches a score

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