**Pico Button Click Game Worksheet**

**Pico Button Click Game**

Fidget toys and clickers have long been used as stress relievers and concentration aids.

Let’s make a simple game that allows the user to click the button as many times as possible in 10 seconds and then outputs the number of clicks achieved.

**Import pin** **from machine** and from **time import sleep** and also **ticks\_ms function** ticks\_ms gives the exact time in ms that has elapsed since the system started. It's often used for measuring time intervals.

A screenshot of a computer program

Description automatically generated

Now set up the Pin object as before pin 14 Pin in and Pull\_up

A screenshot of a computer program

Description automatically generated

Provide the player with a warning message to the user so they now the game is about to

start.

A screenshot of a computer program

Description automatically generated

Initialise 3 variables to hold the score and the start time and the duration of the game. In the sample the game timeout is set to 10000ms of 10 seconds you can change this if you want. A short time is good for testing purposes.

A screenshot of a computer program

Description automatically generated

Next, create the main game loop using a **while loop** this time adding a condition that will end the game when the condition is met.

A screenshot of a computer program

Description automatically generated

The condition checks that the **current time** in ms **minus the start time** **is less than 10000** the value set for the timeout game duration. If it's **true** the game continues, therefore stopping once the condition is **false**.

Next, set the **if selection statement** to respond **if a button press** is made by **incrementing** the **score by 1** and adding the **debounce** pause.

A screenshot of a computer program

Description automatically generated

You can now **save and run the game**. Test it out for the debounce to check the number of presses recorded are accurate and adjust the debounce accordingly.

**Challenge 2**

Can you make it a 2-player game, by adding a 2nd button to the breadboard and to the code. Make the checks for both buttons and then output the end scores.

**Challenge 3**

Can you make a reaction game that turns on the LED and the first person to press the button wins the game? You could make it the best of 3 tries.