



基督教女青年會丘佐榮中學  
THE Y.W.C.A. HIOE TJO YOENG COLLEGE



五十五周年校慶活動：  
55<sup>th</sup> Anniversary Celebrating Event:



丘越盃  
Fly with Hioe



Catapult  
Workshop

九龍城區小學生STEAM飛行比賽·2025

Inter-Primary School STEAM Air Race 2025 (Kowloon City District)



[www.htyc.edu.hk](http://www.htyc.edu.hk)

6 Sheung Wo Street, Ho Man Tin

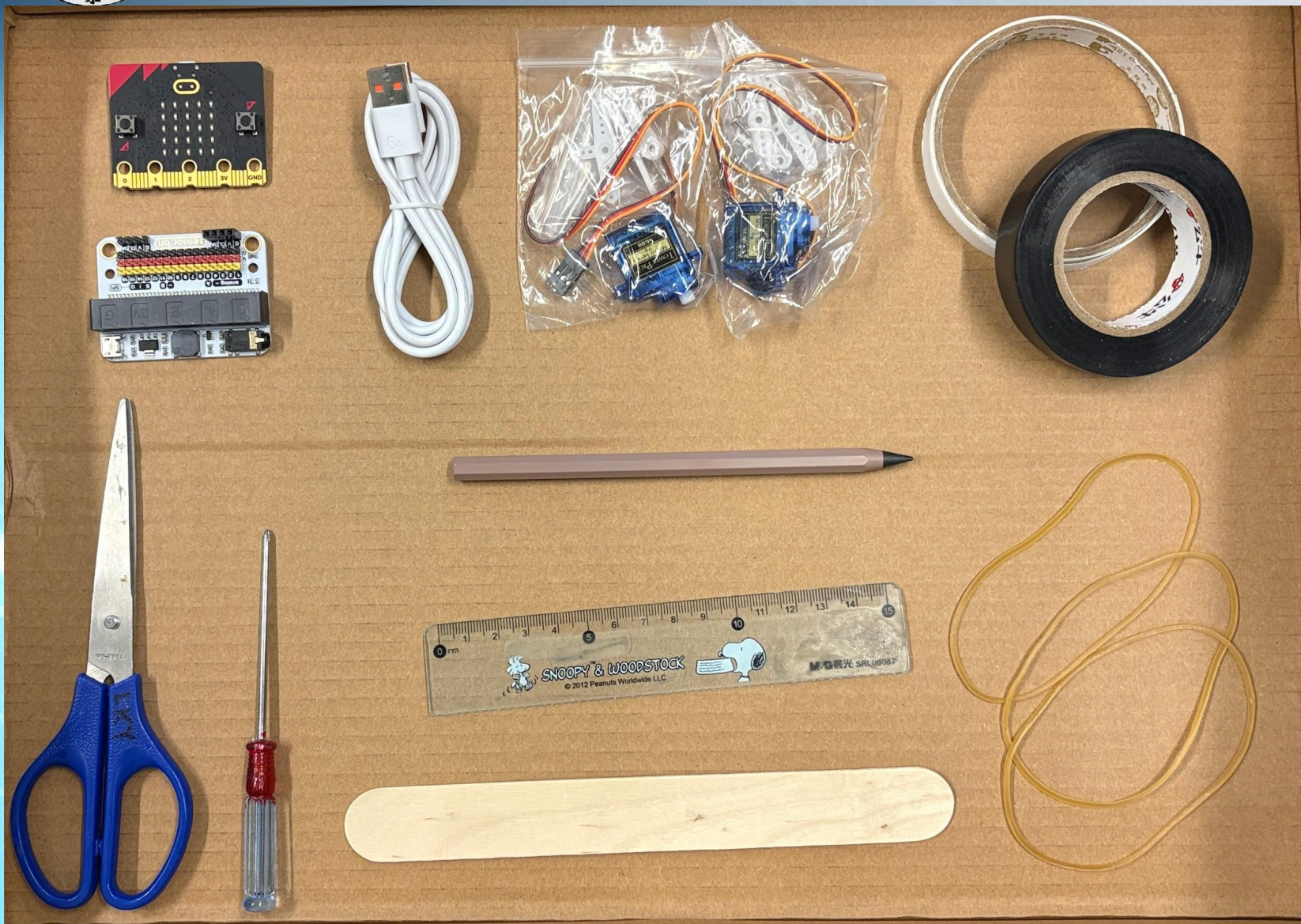
2711 7159

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## Materials

- 1 BBC Micro:bit board (V2)
- 1 Extension board
- 1 USB Cable for Micro:bit
- 2 Servo Motors with lever and screw
- 1 Mounting Tape (double-sided scotch)
- 1 Insulating tape
- 1 pair of scissors
- 1 screwdriver
- 2 long screws
- 1 A3 cardboard box
- 1 Long craft stick
- 3 rubber bands
- 1 ruler
- 1 pencil
- 1 Computer with internet access or Makecode offline editor installed.





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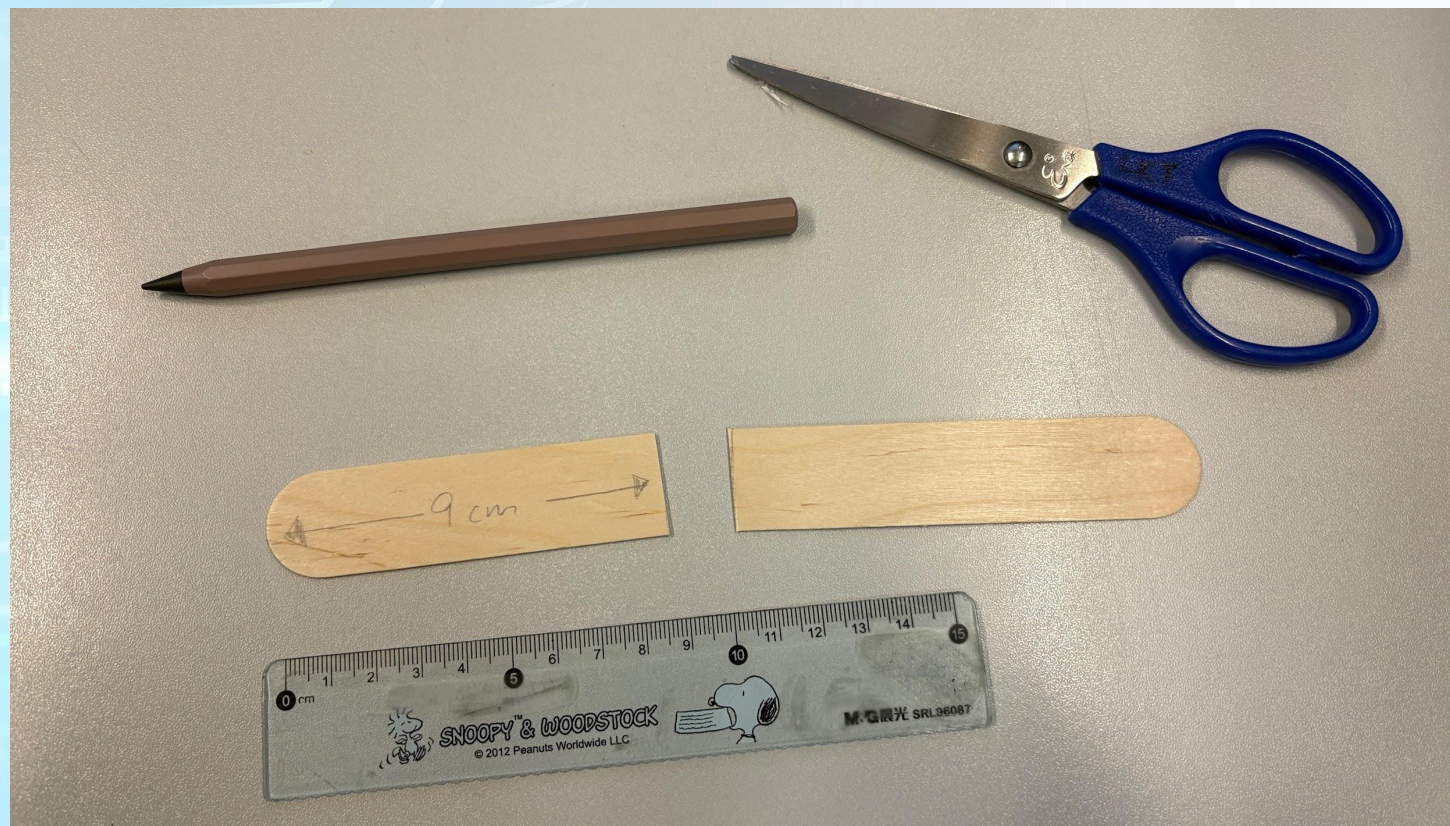
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## Step 1:

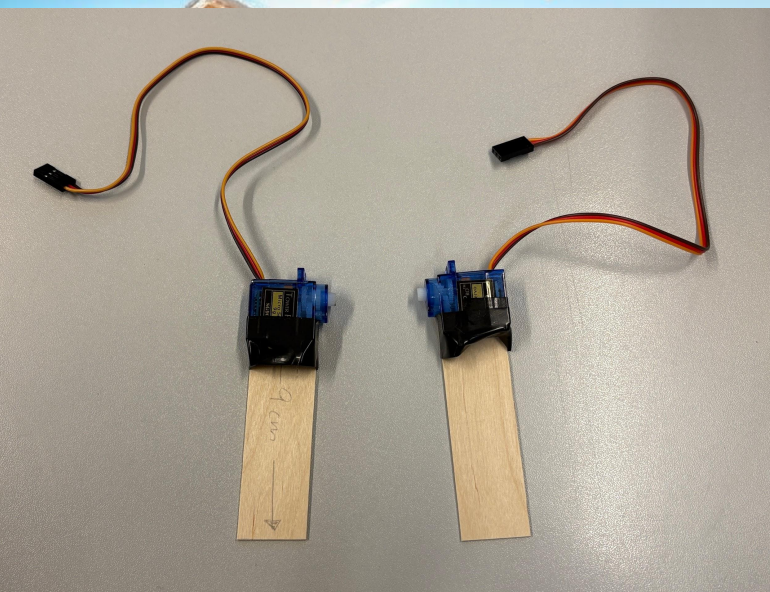
Take one craft stick, measure 9 cm and cut it in that point.

Make 2 pieces.



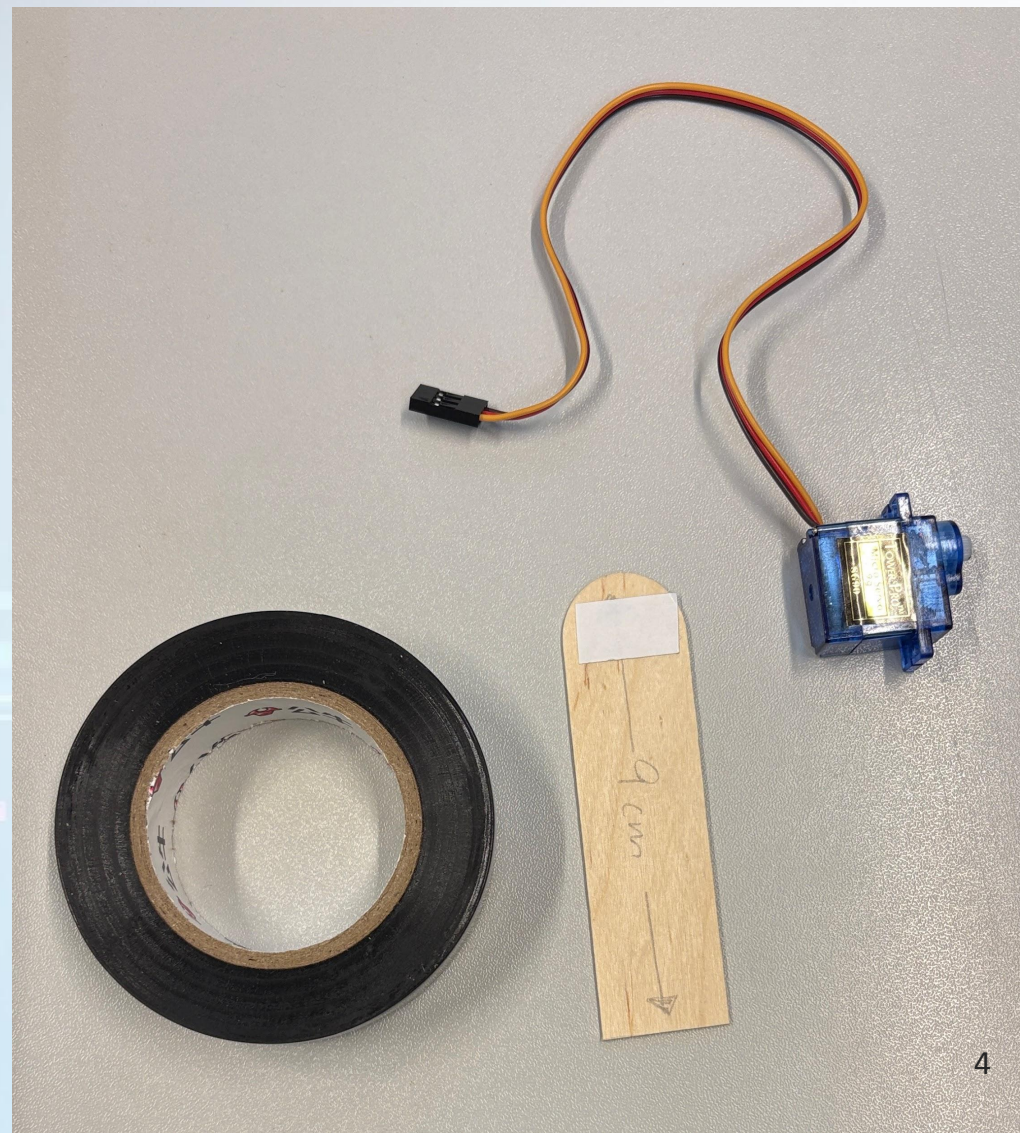


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### Step 2:

Attach the servo motor to one of the ends of the craft stick using a piece of mounting tape. Tape it using the side of the servo without the sticker. Then fasten the servo using Insulating







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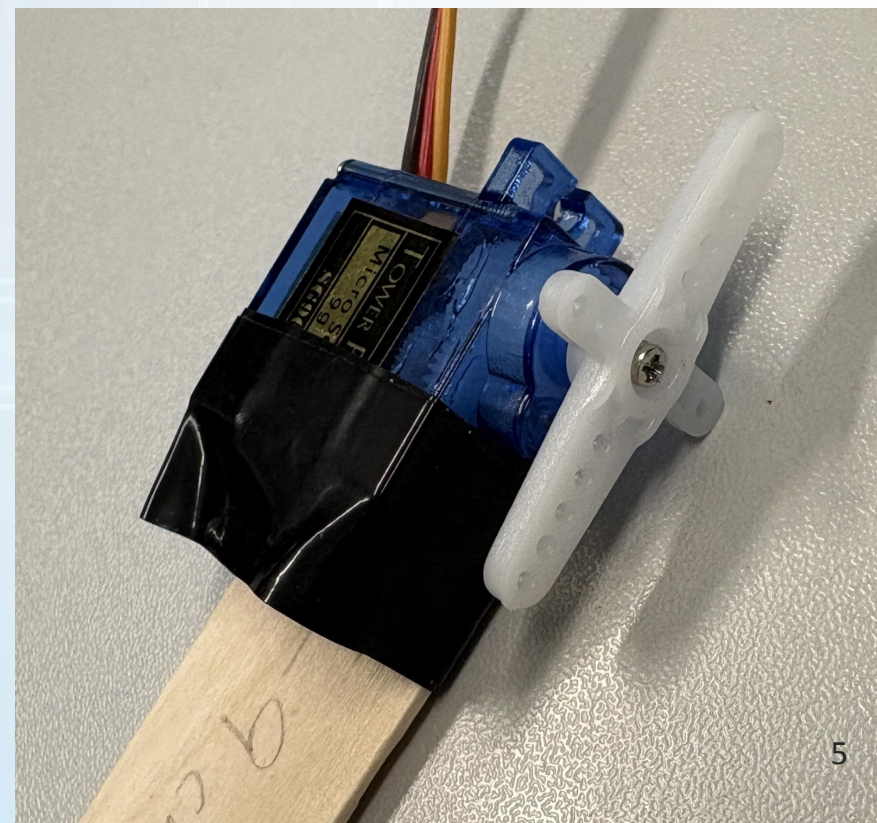
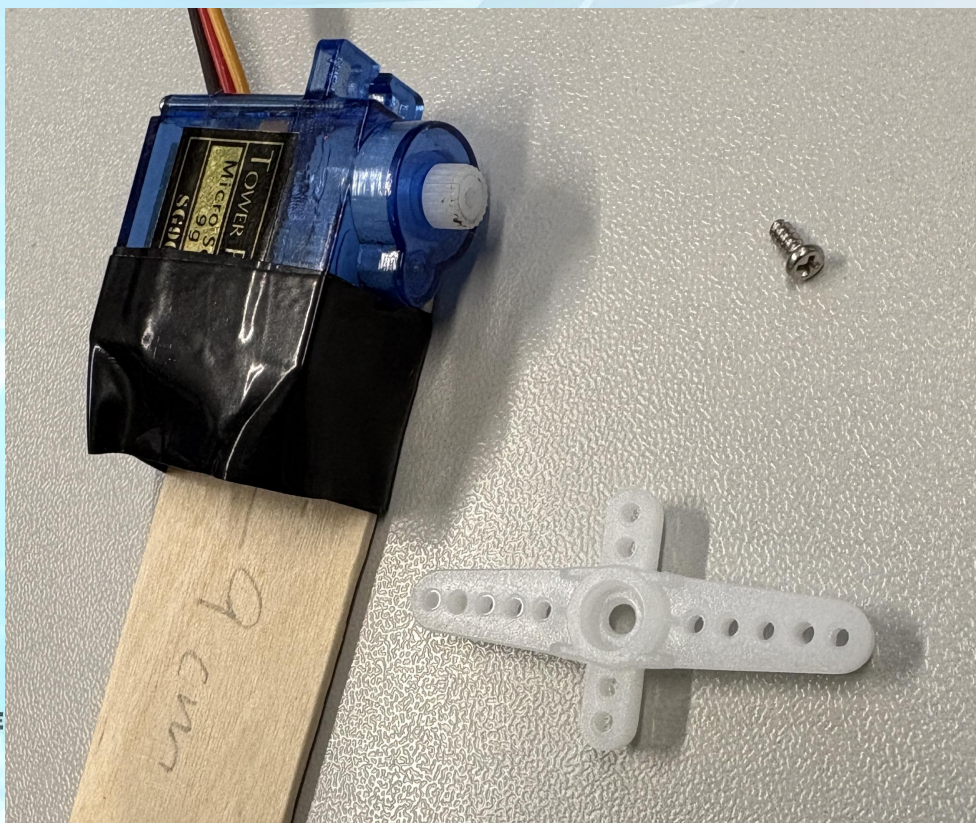
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## Step 3:

Attach the double-arm horn to the servo's shaft using a screwdriver.







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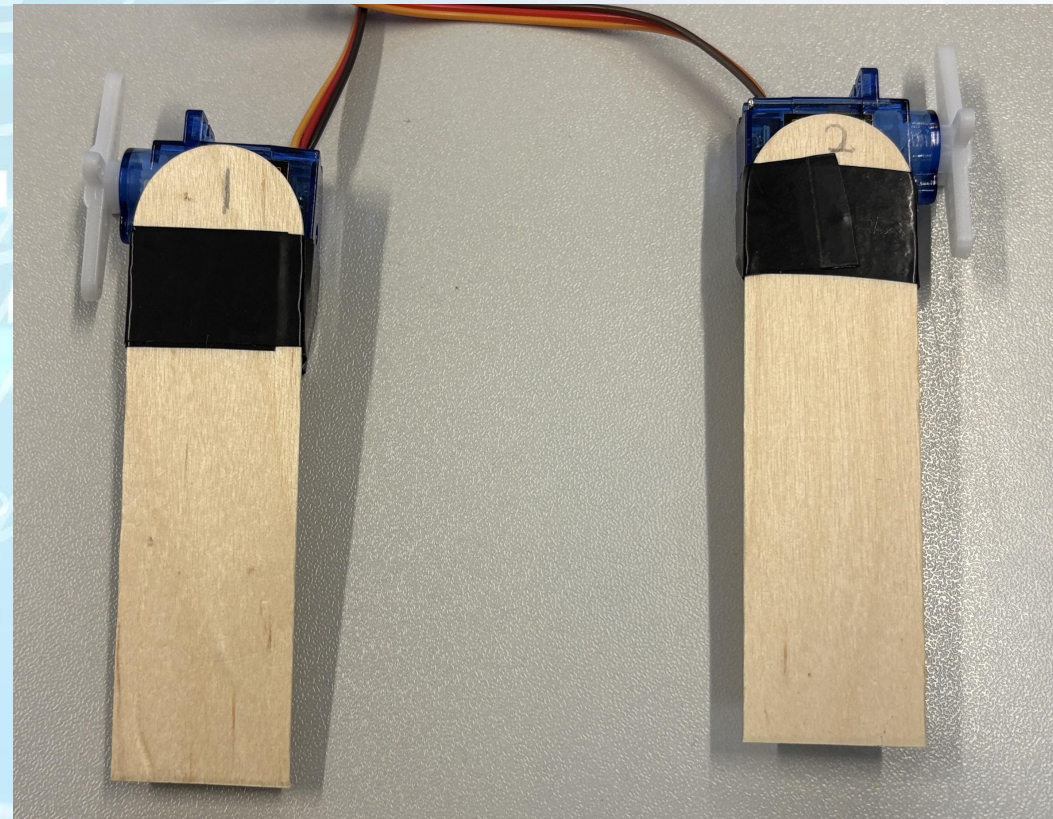
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## Step 4:

Make 2 pieces of the servo motor with the craft stick.

Mark number 1 & 2 to indicate the pin number.







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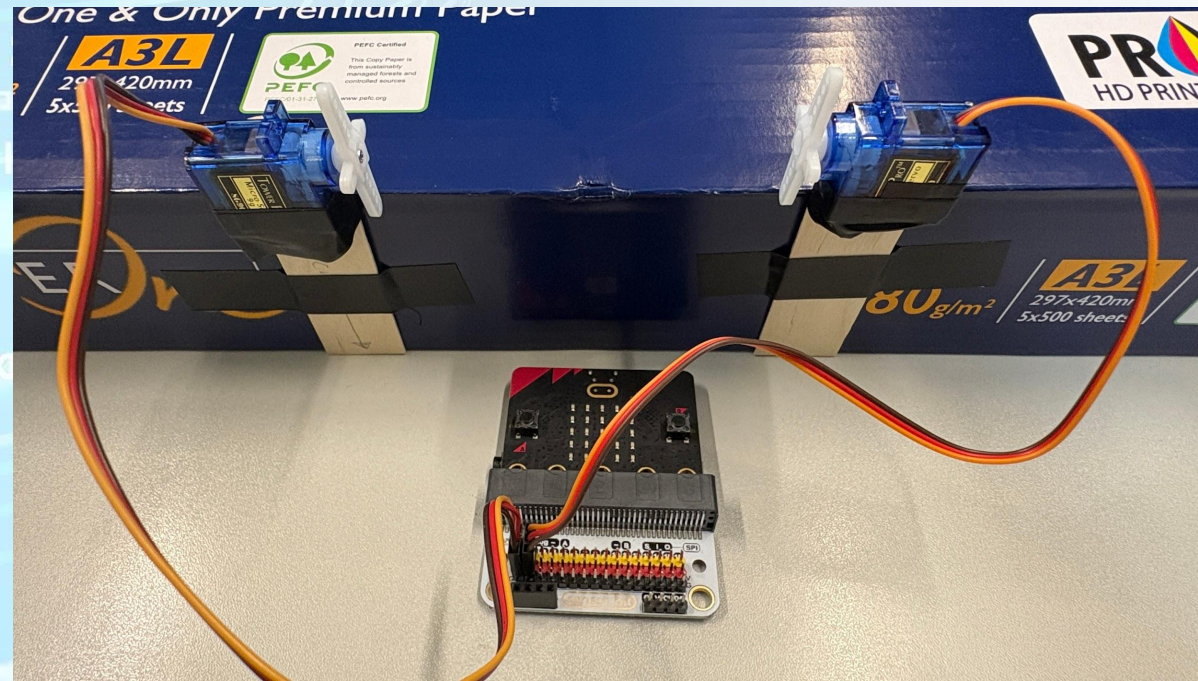
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## Step 5:

Using mounting tape, stick the other end of the clear side of the craft stick to one side of the box and insert to the extension board and Micro:bit board.







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## Step 6:

Screw the two screws into the corner of the cardboard box opposite to the servo motors, and then hook the rubber bands onto them.







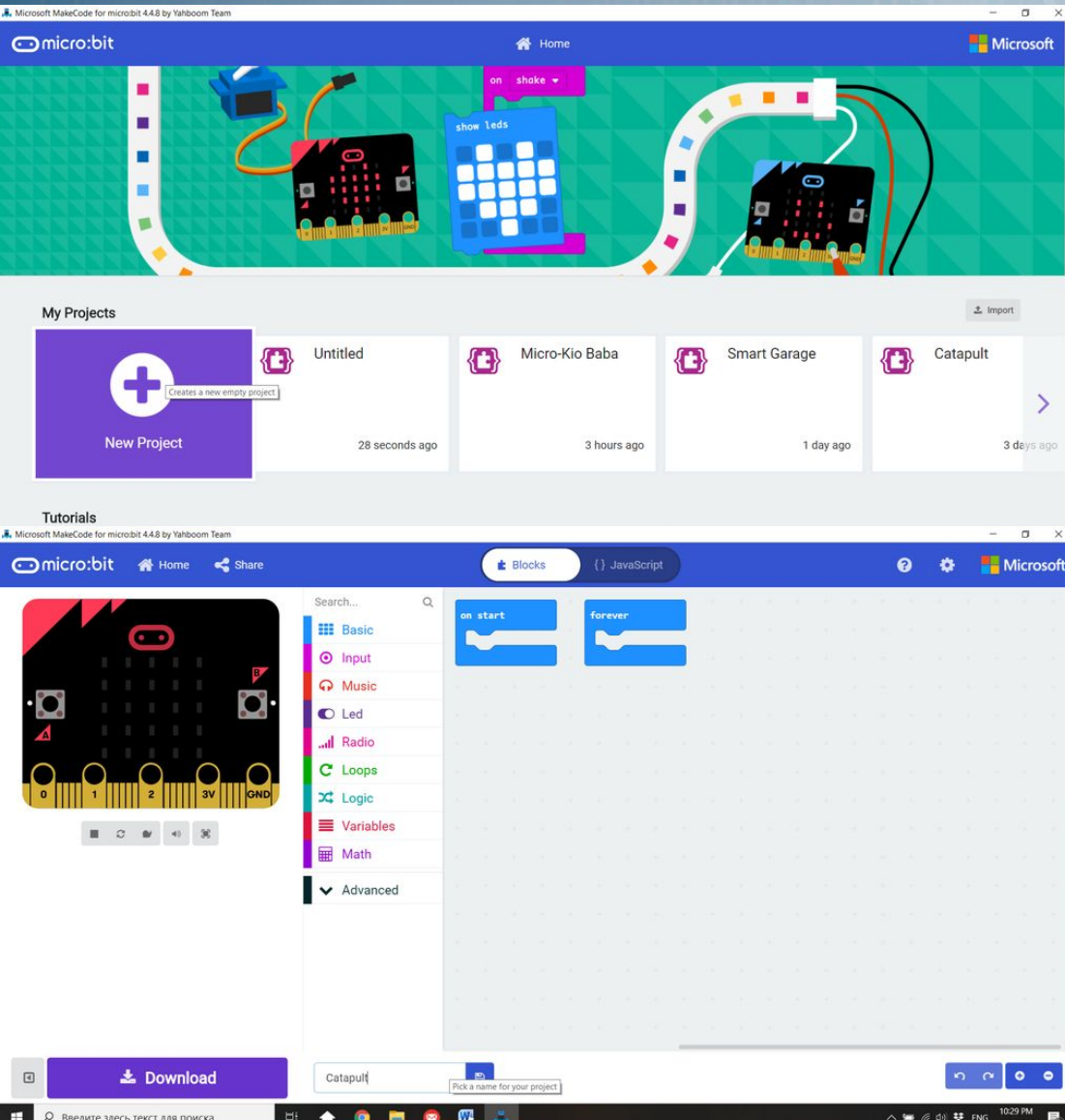
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## Step 7: Coding

<https://makecode.microbit.org/#>

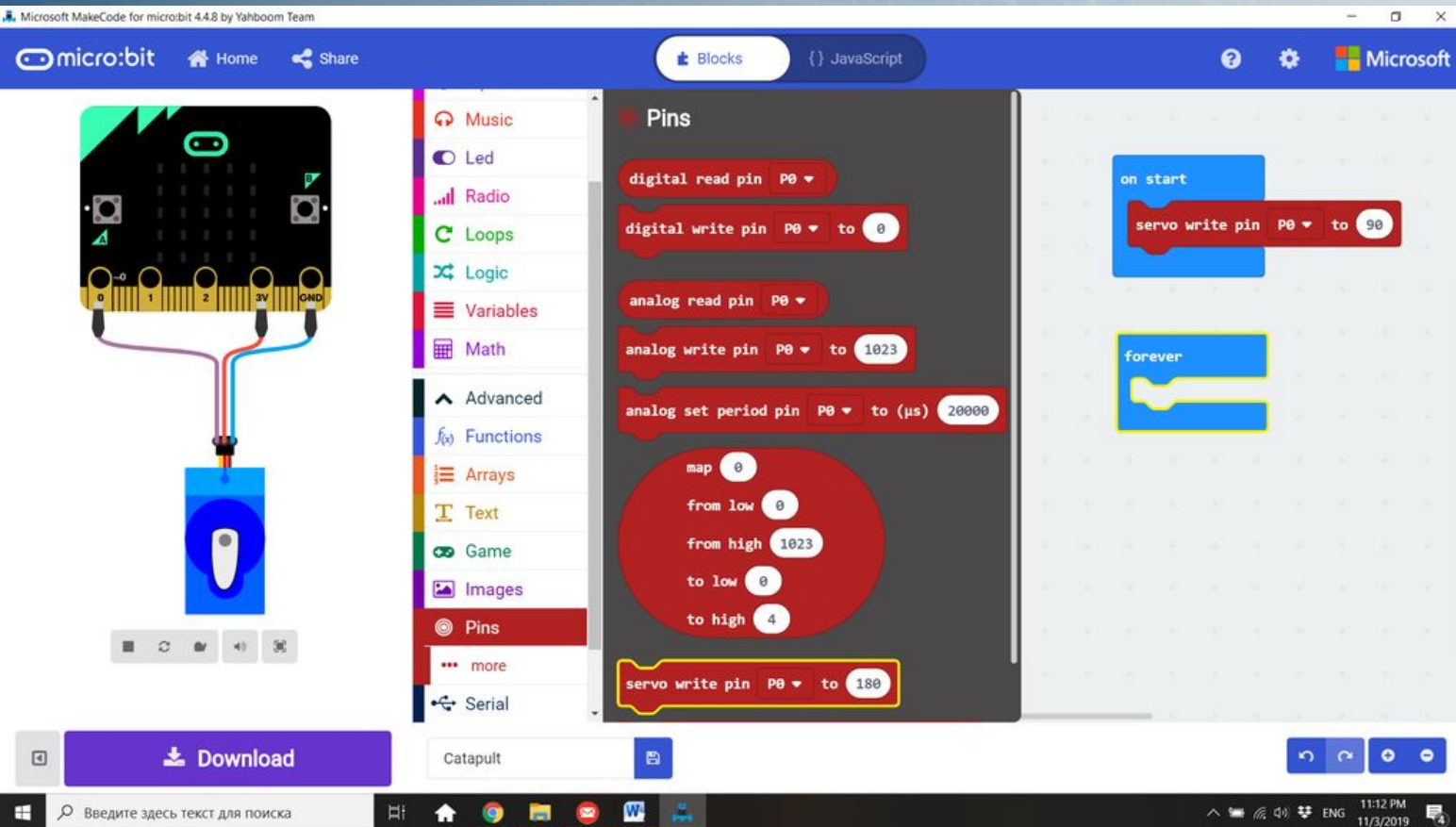
Sign in your account. open Makecode and click in “New Project”. Click the word "untitled" and rename your project.





### Step 7: Coding

From the “Advanced” option, open the “Pins” group of blocks and bring the “Servo write pin P0 to 180” block. Change 180 to 90.







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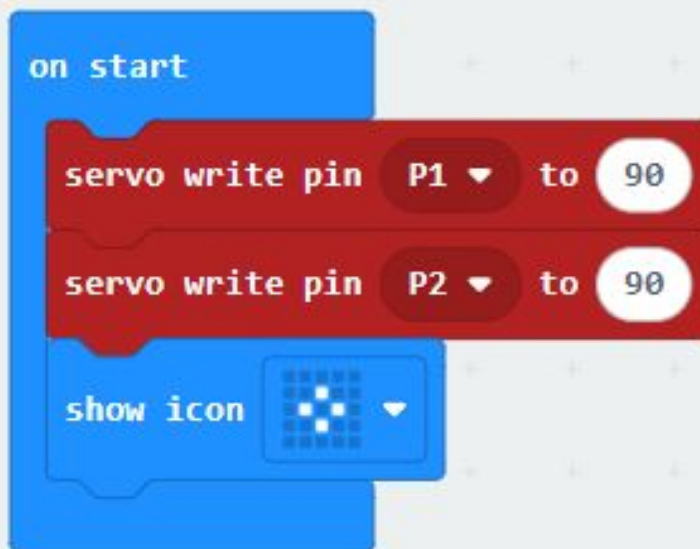
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## Step 7: Coding

Insert the following codes.







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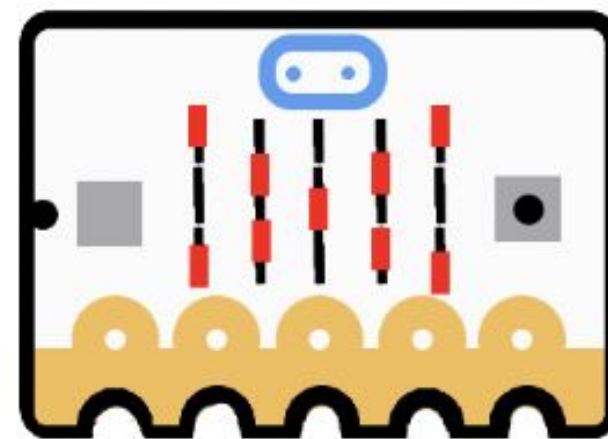
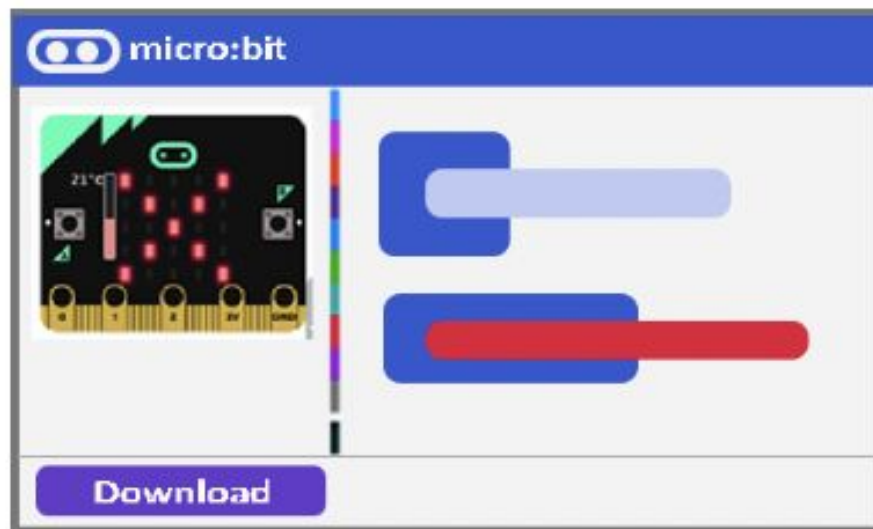


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## Last Step: Test

Download (or “burn”) the new code into your Microbit

**TEST TEST TEST TEST TEST TEST**







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