

ourkidscode.ie/reflexes

Reflexes

Design and make a game to test your reflexes – when the Micro:bit signals 'go', see who can close their switch the fastest!

What you need

- Corrugated cardboard & tin foil
- Glue and scissors
- Crocodile clips
- Micro:bit

1 Set up

- Explain being positive to new members
- Look at project and agree jobs

2 Warm up

One person acts as a trigger and holds up their hand quickly to signal 'go'.

Up to three others try to react quickest by banging the table.

Another person keeps score and organises everyone to play five rounds to find a winner.

Play this together with another family to make up the numbers.

3 Create - code

Coder job

Connect to the MakeCode website: makecode.microbit.org

1. Click on 'New Project'.
2. Name it 'Reflexes'.
3. Find the pieces in the middle column under Variables, Basic, Logic and Math.

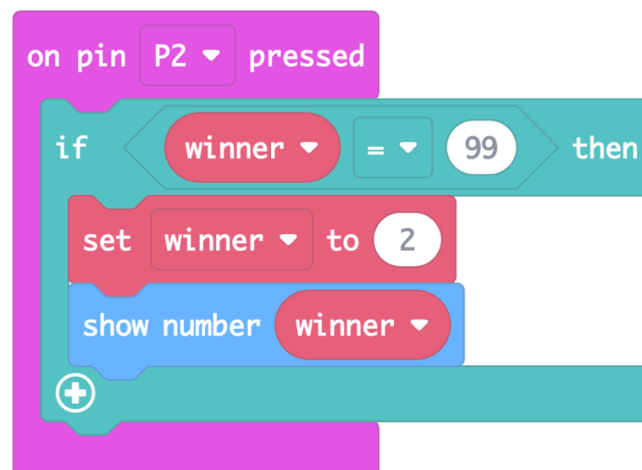
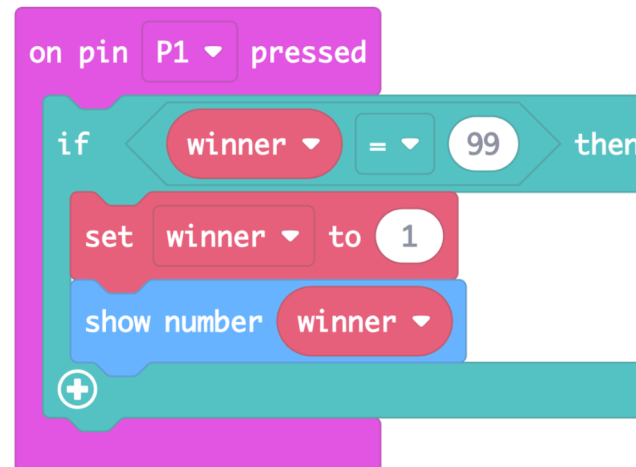
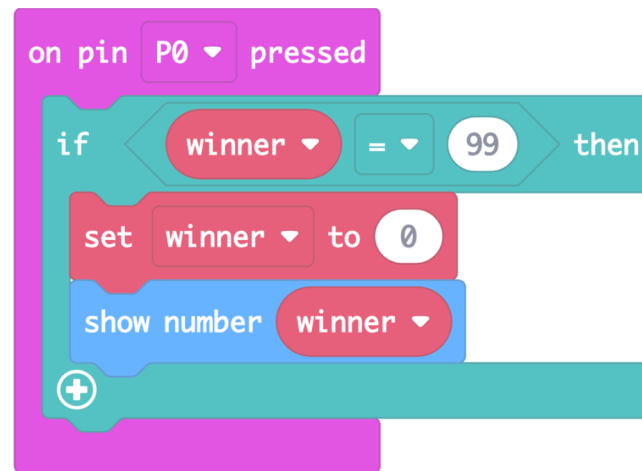
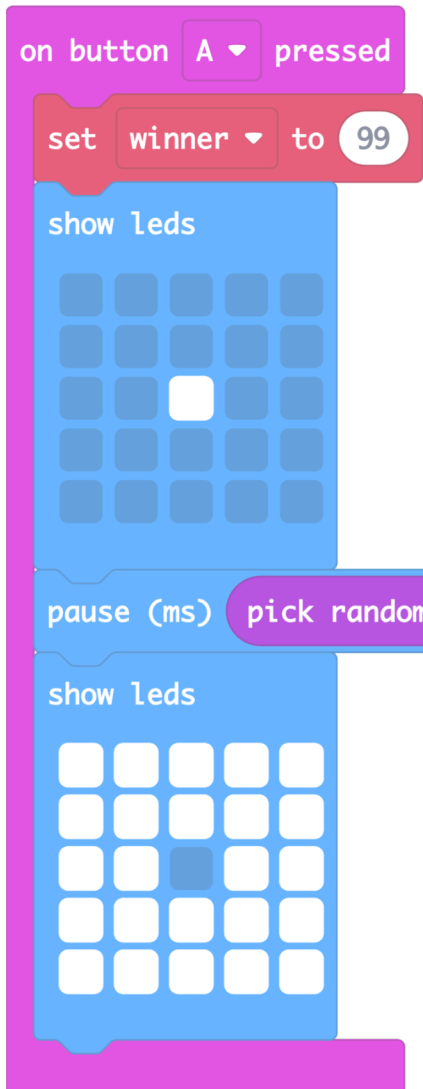
You can make the game harder by shortening the pause time before showing the 'trigger'.

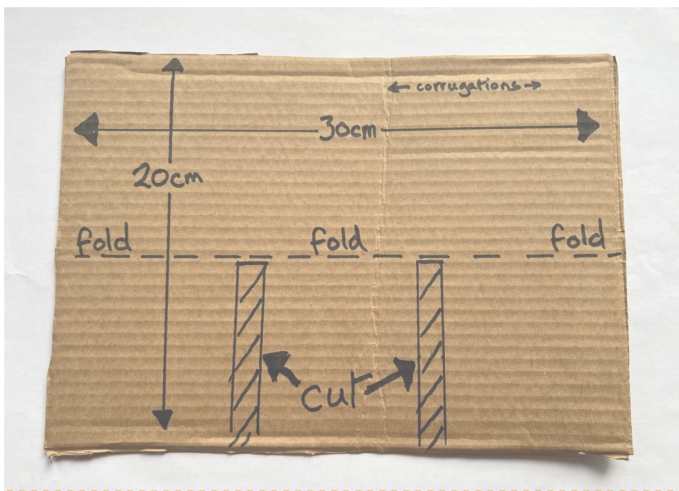
Reviewer job

Test the program

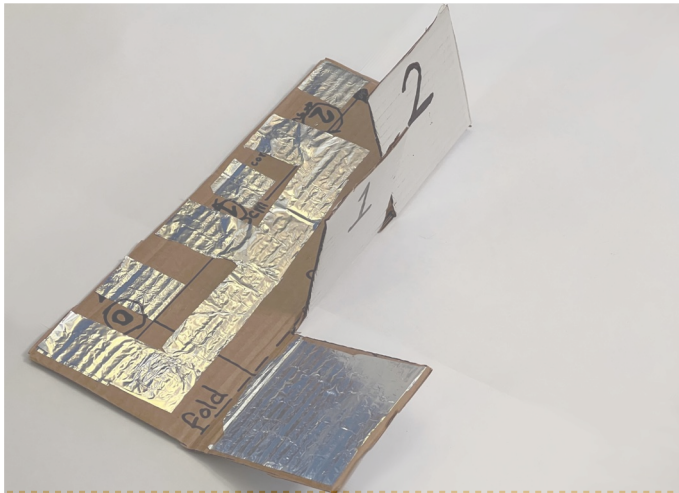
Click button A on the picture of a Micro:bit on the left of the screen to reset the game - a single led shows before then showing the 'trigger'.

Click Pin0 to test closing switch 0- it should show '0'. Test the other pins.

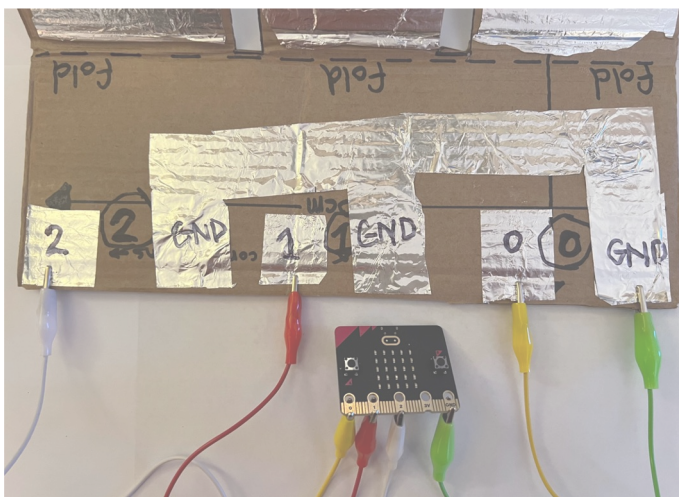




1. Cut a piece of cardboard about 30 cm by 20cm with the corrugations run along the longer side.
2. Cut the cardboard and fold over to make three switches in one piece.
3. Label them 0, 1 and 2.



4. Cut a piece of foil about 30cm long and squares for each switch. Stick the long piece to make a ground for each switch and trim a square piece of tin foil to make 'contacts'. Stick one bigger square on each switch top to connect ground the two contacts from above when pressed.



5. Connect a crocodile clip from the GND on the Micro:bit to the long 'forked' piece of foil.
6. Connect three crocodile clips from pins 0, 1 and 2 on the Micro:bit to the smaller squares for each switch.
7. The piece on top should connect GND to each pin when depressed.

3 Create - make

Maker job

You can make the switches as decorative as you like.

Help: Watch out for painted cardboard – the paint can conduct electricity! Best is to use plain brown cardboard.

Reviewer job

Once the code is downloaded, test the game by pressing button A to start and then when the 'trigger' shows, try each switch. Make sure pressing another switch after the first makes no effect – only the winner should show!

4 Share

Play with what you have made.

Show it off to everyone else!

Look at everyone else's work and ask how it went for them.

5 Reflect

Please **fill in the reaction form** once for each person:



ourkidscode.ie/reaction

Discuss with everyone in the room what you felt and what could you do in future.

Did you have fun?

Learn anything? More confident?

Think you and your family might like to do more?

6 Plan

At the end of every MeetUp, families plan the next one by choosing a project to work on and deciding who will do which tasks to organise it.

Make some notes here.

You will find these useful documents on our website:

- Running a MeetUp
- MeetUp Checklist
- Being a positive club
- Forming a family team
- Choosing Projects
- Choosing a Warm Up



ourkidscode.ie/run-a-club/



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