Micro:bit Journal

NAME: **Your name goes here!**

# 1. Tutorial Challenges

* Use the snipping tool to ‘**screen grab**’ your code
* **Replace** the images below with your code image.
* **Add text** to explain how the code works and any modifications you made.

## Mini Make 1: Tutorials

### Flashing Heart



Text here …

### Name Tag



Text here …

### Smiley Buttons



Text here …

### Dice



Text here …

### Love Meter



Text here …

### Micro Chat



Text here …

## Mini Make 1: Servo Motor

In your own words**,** explain **how a servo motor works**:



## Mini Make 2: Plug in LED Light

In your own words, explain **how LEDs work**



# Mini Make 3. Magic Eight Ball

Follow the tutorial on the portal to make a [Magic Eight Ball](http://dt.loreto.qld.edu.au/8_II/microbit/2_eight_ball.html)

# Make a Pet Task

Follow the guidelines on the portal to make your own [Digital Pet](http://dt.loreto.qld.edu.au/8_II/microbit/4_pet.html) .

The squares below represent the LED panel on your Micro:bit. Fill in the squares to show what each face will look like and name them. (The first one is done for you)

  **Happy ? ?**

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Use your stylus with Word’s **Draw Tools**, or **Insert Shapes**, to sketch a Pet design:

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List three actions or events your Pet could be made to react to:

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Insert photos of your completed Pet below, make sure you have cropped them:





Insert a snip of your code below and explain how it works:



# Innovation Challenge Task

Design and make a solution to a problem of your own choice. The problem can affect you or someone else. This is your opportunity to demonstrate what you have learnt about coding Micro:bits and making models. You will need to:

* make your own model and write your own code.
* test it and if necessary, make changes
* take photos (and possibly video) of your solution working
* explain how the code works

To help you get started, fill in the planning sections below.

Brainstorm – Three possible Problems to solve:

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Chosen Problem:

What solutions do you already know exist?

Describe how you will try to solve to the problem:

Sketch your idea below - use your stylus or insert shapes to explain your idea for solving the problem.

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Written Notes: Explain in words how your solution will work?

List any Materials or Resources you need to make your solution (e.g. Servo Motor, Sticky Tape, Cardboard, LED etc.)

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Insert photos of your completed Innovation Project here: *(As many as you like)*



Insert a snip of your code and explain how it works:



Text here …

**Reflection**

Talk about one challenge you faced in creating this project? How did you overcome it?

What code did you use that you already knew?

What new code did you create? How did you work it out?

Did anyone help you with this project? Who? How did they help?

Describe one specific thing you are proud of in this project. Why?

If you had more time, what would you do to improve your project?

# Extra Task - Reaction Game

Follow the tutorial available on the portal to make a [Reaction Time Game](http://dt.loreto.qld.edu.au/8_II/microbit/3_game.html)

You will need to:

* Watch the video tutorial
* Make your game board
* Code your Micro:bit
* Test the game out.

If you have time, add code for a second player.

Insert photos of your game board and code below (you can also take a video):



How could you improve this game? How could you modify the code?