## Lesson 1 – Activity Sheet

## Getting Started

Navigate to [https://makecode.microbit.org](https://makecode.microbit.org/) and use MakeCode to make equivalent programmes to the Python code below. You may recognise some these programmes!

## Success Criteria

## In the table below, look at the Python examples and work out the blocks equivalent

## Pro-tip

## Look for the key words like ‘while’ and look for them in MakeCode. Most of these are fairly easy to find in MakeCode.

## 

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| **Python code** | **Blocks equivalent** |
| from microbit import \*  while True:  if button\_a.is\_pressed():  display.show(Image.HAPPY)  elif button\_b.is\_pressed():  display.show(Image.SAD)  else: display.show(Image.YES)  display.clear() |  |
| from microbit import \*  while True:  display.scroll('I love micro:bit')  display.show(Image.HEART)  sleep(2000) |  |
| from microbit import \*  pattern1 = Image(“09090:”  “90909:”  “09090:”  “90909:”  “09090”)  display.show(pattern1) |  |
| from microbit import \*  my\_str = (“Hello”)  my\_int = 35  display.show(my\_int) |  |
| from microbit import \*  pattern1 = Image(“09090:”  “90909:”  “09090:”  “90909:”  “09090”)  pattern2 = Image(“09090:”  “90509:”  “05050:”  “90509:”  “09090”)  pattern3 = Image(“05050:”  “50905:”  “09090:”  “50905:”  “05050”)  pattern4 = Image(“90909:”  “09090:”  “90909:”  “09090:”  “90909”)  all\_patterns = [pattern1, pattern2, pattern3, pattern4]  display.show(all\_patterns, delay=200) |  |
| from microbit import \*  my\_list = [“35” , 35 , 3.142]  display.scroll(my\_list) |  |

## Stretch Tasks

## What does the following python make?

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| from microbit import \*  import random  while True:  if button\_a.is\_pressed():  int1 = random.randint(0,10)  int2 = random.randint(0,10)  display.scroll(int1)  display.scroll(“x”)  display.scroll(int2)  display.scroll(“= ?”)  elif button\_b.is\_pressed():  display.scroll(int1\*int2)  else:  display.show(“<-Q A->”)  display.clear() |  |

## Final Thoughts

In this lesson you have started to take the first steps into using Python to programme a micro:bit. Whilst these examples may seem complicated, you have done all of these things before using blocks and so now you just ned to get confident with doing the same thing but using Python. Python can do much more than MakeCode and whilst it may seem daunting at first you will soon appreciate the power it gives you to achieve your coding goals.