

### Import

```
from microbit import *
```

```
import random
```

```
import music
```

```
import radio
```

You *always* need to have the `from microbit import *` line at the start of your program

If you use `random`, `music` or `radio` in your program you need to remember to also import them at the top of your program as well

### General

```
sleep(1000)
```

```
temp = temperature()
```

```
time = running_time()
```

**sleep** tells the Microbit to stop doing anything for as long as you tell it

**temperature** gets the current temperature

**running\_time** gets the amount of time since the Microbit started running the program

### Buttons

```
if button_a.is_pressed():
    display.show(Image.HAPPY)
if button_b.is_pressed():
    display.show(Image.SAD)
```

Show a happy face if button A is being pressed or show a sad face if button B is being pressed.

### Random

```
import random
```

```
randrange(1, 10)
```

```
random.choice(things)
```

**randrange** picks a random number in the range

**random.choice** picks a random thing out of a list of things

### Display

```
display.clear()
```

```
display.show(Image.DUCK)
```

```
display.show(customImage)
```

```
display.scroll("Hello World!")
```

```
display.set_pixel(0, 0, 9)
```

```
display.show(IMAGE.shift_up(1))
```

### Radio

```
import radio
```

```
radio.on()
```

```
message = radio.receive()
```

```
radio.send("Hello World!")
```

```
radio.config(channel=20)
```

When you have more than 1 Microbit, you can send and receive messages using the radio.

If there are other Microbits using the radio around you, make sure that you are using a different channel number (using `radio.config`) so that you aren't accidentally receiving their messages

### Gestures

```
gesture == "up"
```

```
gesture == "down"
```

```
gesture == "left"
```

```
gesture == "right"
```

```
gesture == "face up"
```

```
gesture == "face down"
```

```
gesture == "shake"
```

### Speech

```
import speech
```

```
speech.say("Hello World")
```

### Music

```
import music
```

```
music.play(music.BIRTHDAY, wait=False, loop=True)
```

```
music.stop()
```

```
tune = ['C4:4', 'D4:4', 'A4:4']
```

```
music.play(tune)
```

Setting `wait=False` tells the Microbit to play the music and keep going with the rest of the program, otherwise it will wait until the music is done

Setting `loop=True`, will keep looping the music over and over instead of just playing once



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### Music

music.DADADADUM

music.ENTERTAINER

music.PRELUDE

music.ODE

music.NYAN

music.RINGTONE

music.FUNK

music.BLUES

music.BIRTHDAY

music.WEDDING

music.FUNERAL

music.PUNCHLINE

music.PYTHON

music.BADDY

music.CHASE

music.BA\_DING

music.WAWAWAWAA

music.JUMP\_UP

music.JUMP\_DOWN

music.POWER\_UP

music.POWER\_DOWN

### Accelerometer

```
gesture =  
accelerometer.current_gesture()  
if gesture == " sha ke":  
    dis pla y.s how (Im -  
age.SAD)
```

This code checks what the current gesture is that is happening to the Microbit and shows a sad face if it is a shake



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