Internet of Things Worksheet 2: Radio

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Introduction

The purpose of this task is to facilitate communication, using morse code, between two Microbit devices. If a cipher is present within the communication more marks are awarded.

I have used the radio protocol in Microbit with the Vigenère Cipher.

Requirements

1. At least two Microbit devices
2. Same number of USB cables (for power) as that of the devices

Installation

Go to https://python.microbit.org/ and copy the code, save as to create a hex file. Or you can use the one I have provided. Move the hex file into the Microbit when it is connected to flash the program.

Operation

If you have more than 2 devices, you can view the messages without encryption by editing the code in that device.

Place the devices together and press button A to transmit the data from that device. Devices in the range on the same channel will pick up on that data, however that data will

be encrypted and they will only see cipher text. A device can act as both transmitter and receiver.

Conclusion

Microbit devices are perfectly capable of radio transmission and as receivers.