Assignment 7: Data flow for skip and sweeper devices

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1   Data flow for skip and sweeper devices

The following flow chart describes the data flow for a skip and sweeper device. When the skip presses a button, the following steps are taken:

- Get which button was pressed, and map that to a specific command.

- Create the packet of command info to send to the sweeper.

- Ensure debouncing is in place to prevent multiple packets from being sent, or the wrong packet being sent.

- Broadcast the packet to all sweepers.

- Repeat the Broadcast for redundancy, to ensure the packet gets to all sweepers.

On the sweepers side, the following steps are taken:

- Actively listen for packets from the skip.

- When a packet is received, parse the packet and determine what command was sent.
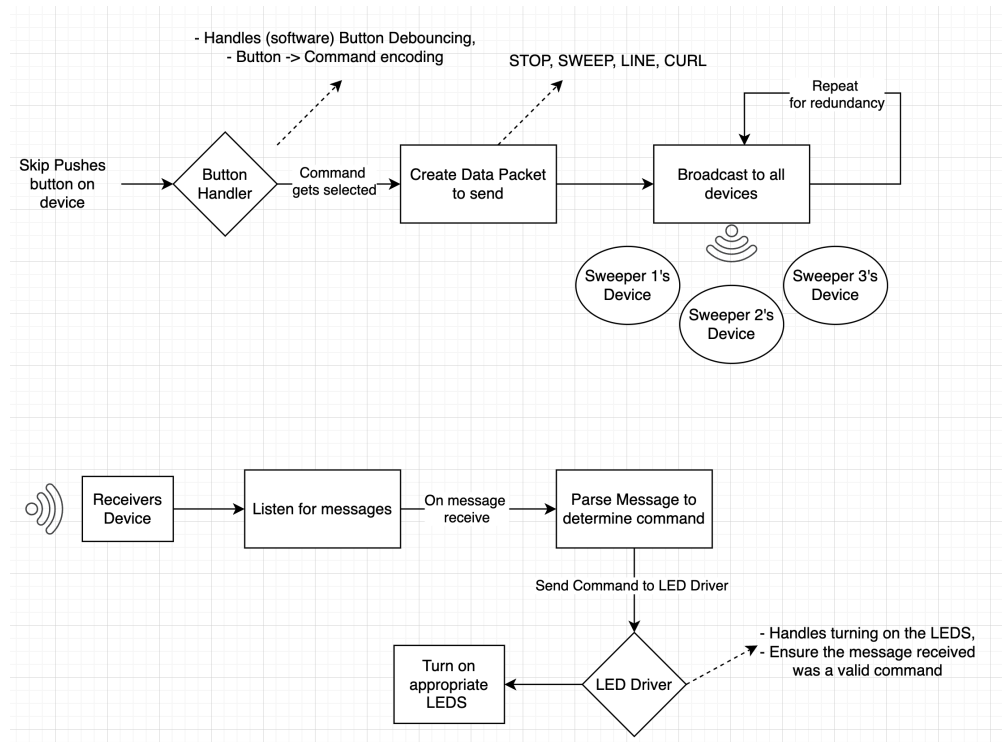
- Execute the command using the LED driver and light up the appropriate LEDs.

Figure 1: Data flow for skip and sweeper devices