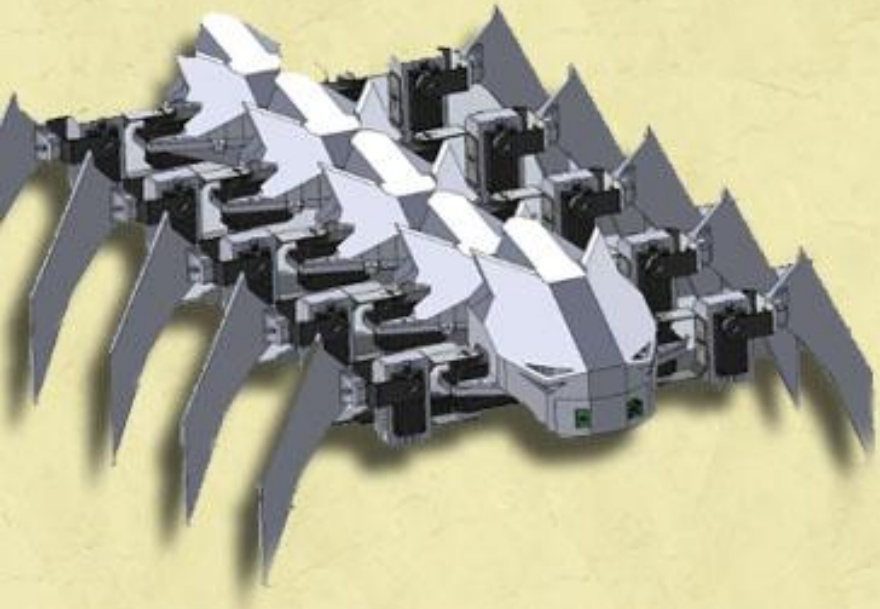
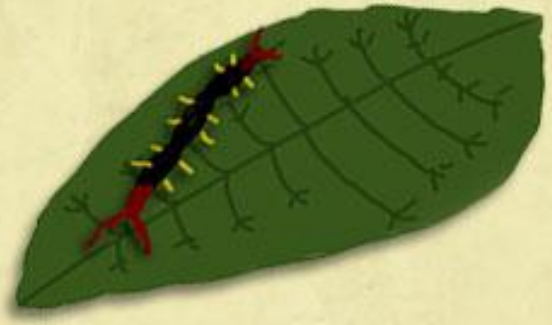
Myriapod Robot -Mobile Application



Axel Maysonet



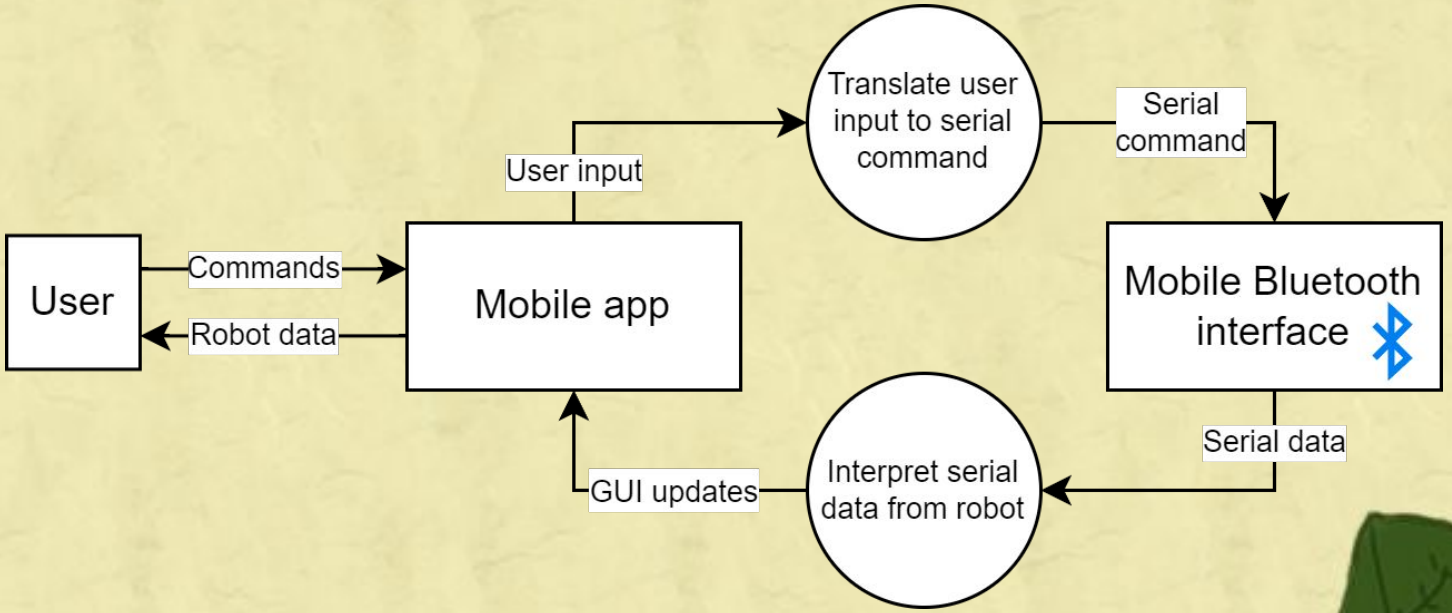
Project Objective

The robotic itself centipede project aims to create a mobile robot platform that addresses the need for affordability, durability, and expandability. By relying on less computational power and offering modularity, the robotic centipede aims to serve various applications while providing reliability and ease of customization.

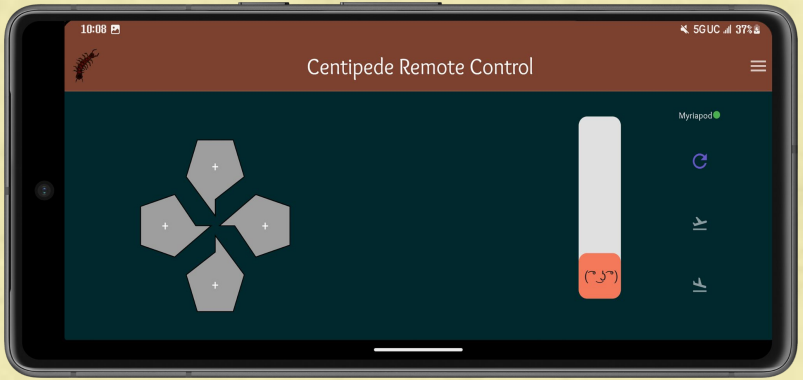
All while being remotely controlled with an app.

(Created using Flutter in Android Studio.)

Mobile App Design - Data Flow Diagram



Mobile App Design - Main Features

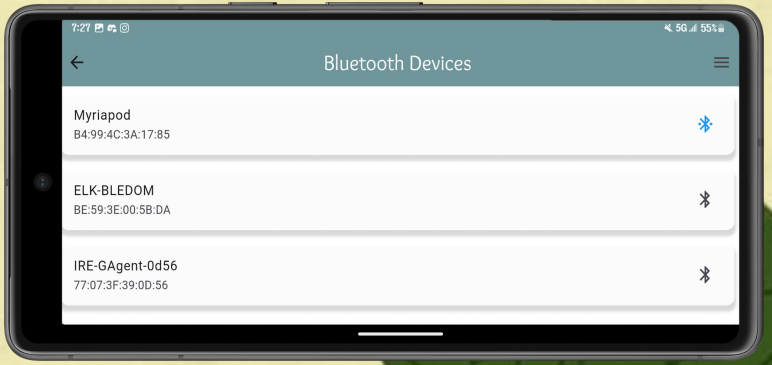


Remote Controller:

- Control the centipede via the D-Pad and Lever functionality.
  - Manage the robot's speed and turning.
- Current device status displayed!

Native Bluetooth Connectivity:

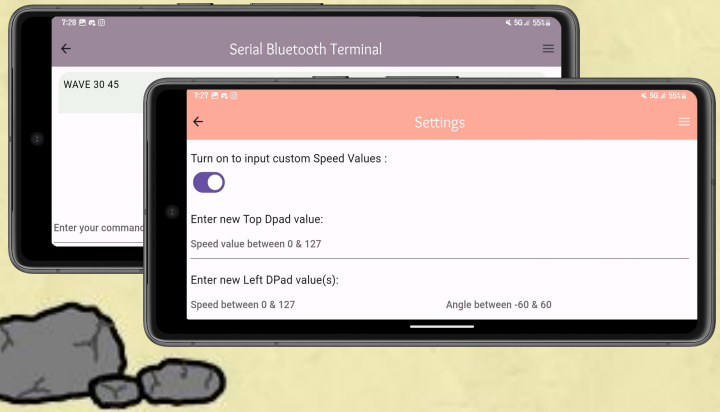
- Connect to any Bluetooth Low Energy Device right in the app.
- Displays the devices you are connected to, and allows you to disconnect.



Mobile App Design - Secondary Features

Command Terminal & Settings:

- Send and receive any commands directly from/to the Bluetooth receiver.
- Adjust settings for DPad values and Lever functionality.
    - Added flexibility.



Data:

- Display peripheral information received from the centipede.
    - Including status and sensor data.
- Has the ability to expand dynamically, according to the amount segments currently connected