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# Discussion:

This exercise is about the structure and the protocol of BLE communication. Central devices scan the surrounding signal and initiate the connection, for example, mobile phones. Peripheral devices advertise themselves and provide services for central devices.
With hw3, I get to really delve into the details of Generic Attribute Profile (GATT). I learned how to acquire the detailed information of a service, its characteristics and the following descriptors. It is worth notice that there are four properties of a characteristic, including read, write, notify and indicate.
In our homework demo, Rpi is the central devices and the BLE Tool App in our smart phone is the peripheral device. At first, BLE Tool App advertises its service and Rpi initiates the BLE connection. Then, Rpi access the service in BLE Tool App and activate the notify property in the target characteristic. After the notify function is activated, any change made to the target characteristic will be detected and BLE Tool App will notify Rpi.

# Rpi Code implementation:

https://github.com/stanthemaker/EmbeddedSystem/tree/main/hw3