4 Schedule

Below is a draft schedule for the first two weeks, namely developing hardware and software separately. If successful in these two weeks, we will then combine the two systems together and test it in the last two weeks. Our lab location is **ROOM302, 7A-7D**.

4.1 Week-1 & Week-2

4.1.1 Hardware System

Table 1: Task allocation for hardware system in the first two weeks

	Compulsory Task	Optional Task
Brissenden, Jack	T0, T1, T2	T4(not-yet-decided)
Guo, Jiajun		
Canning, Charles Thomas	T3	T0, T1, T2

Task-0: pre-work [EASY]

1. collect & check the components.
2. prepare cables for linking.

Task-1: single IMU [EASY]

Table 2: Time-schedule for T1-"single IMU"

Early-finish-date	Thursday Evening of W1
Late-finish-date	Friday Evening of W1

1. construct one circuit with only one IMU, excluding IIC multiplexer.
2. initialize the IMU (if not) !
3. fetch data from this single IMU and then convert them into roll/yaw/pitch (if needed), output them in the terminal.

Figure 4: Output format for T1

Task-2: multiple IMUs [Half-difficult]

1. construct the circuit including the IIC multiplexer, namyly multiple IMUs.

Table 3: Time-schedule for T2-"multiple IMUs"

Early-finish-date	Friday Evening of W1
Late-finish-date	Monday Morning of W2

2. initialize the IMUs (if not)!

3. fetch data from those IMUs and then convert them into roll/yaw/pitch (if needed), output them in terminal with their corresponding IMUs' index.

```
IMU-1
    ROLL:
    YAW:
    PITCH:
IMU-2
    ROLL:
    YAW:
    PITCH:
IMU-3
    ROLL:
    YAW:
    PITCH:
...
```

Figure 5: Output format for T2

TASK-3: communicate with PC using Berkeley Socket [Difficult] [Primary-Plan]

Table 4: Time-schedule for T3-"Berkeley Socket"

Early-start-date	Thursday of W1
Late-start-date	Friday of W1
Early-finish-date	Wednesday of W2
Late-finish-date	Monday of W3

1. Board Type: Arduino-WIFI-Rev2.

2. support sending HTTP-POST request.

TASK-4: communicate with PC using USART [Half-difficult] [Backup-Plan for TASK-3]

Table 5: Time-schedule for T4-"USART"

Start-date	not-yet-decided
End-date	not-yet-decided

1. Board Type: Arduino-Nano.

2. support USART transmitting.

4.1.2 Software System

Table 6: Task allocation for software system in the first two weeks

	Compulsory Task	Optional Task
Shen, Yixiao	T1, T2	T3(not-yet-decided)
Zhou, Qi	T1, T2	T3(not-yet-decided)

TASK-1: build a simple socket server using C++ on LinuxOS. [EASY] [Half-completed]

1. support responding HTTP-GET request. [Bug: missing of MIME Type]
2. support forward one message from one client(Arduino) to another client(browser). [Wait for Hardware-TASK-3]
3. support responding HTTP-POST request. [Wait for Hardware-TASK-3]

TASK-2: build a simple displaying engineer using three.js on Web, namely HTML&CSS&JS.

Table 7: Time-schedule for T2-"displaying engineer"

Early-finish-date	Monday morning of W2
Late-finish-date	Friday of W2

1. bind joints model with their corresponding IMUs. [Difficult] [Need more discussion] need more discussions here.
2. support input from server. [Interface defined]

TASK-3: support serial port communication. [Half-Difficult] [Backup-Plan for Hardware-TASK-3]

Table 8: Time-schedule for T3-"serial port"

Start-date	not-yet-decided
Finish-date	not-yet-decided