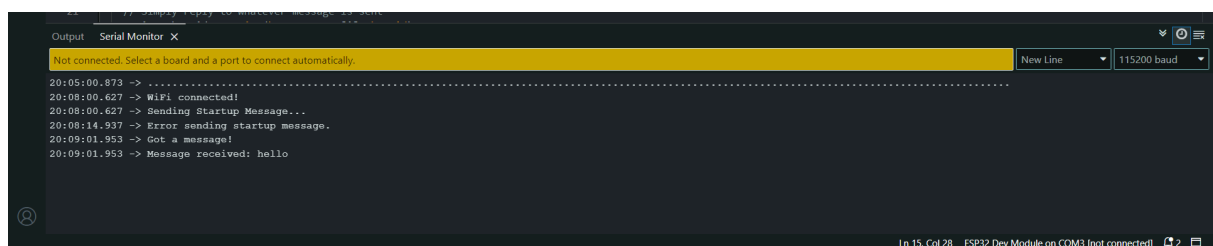
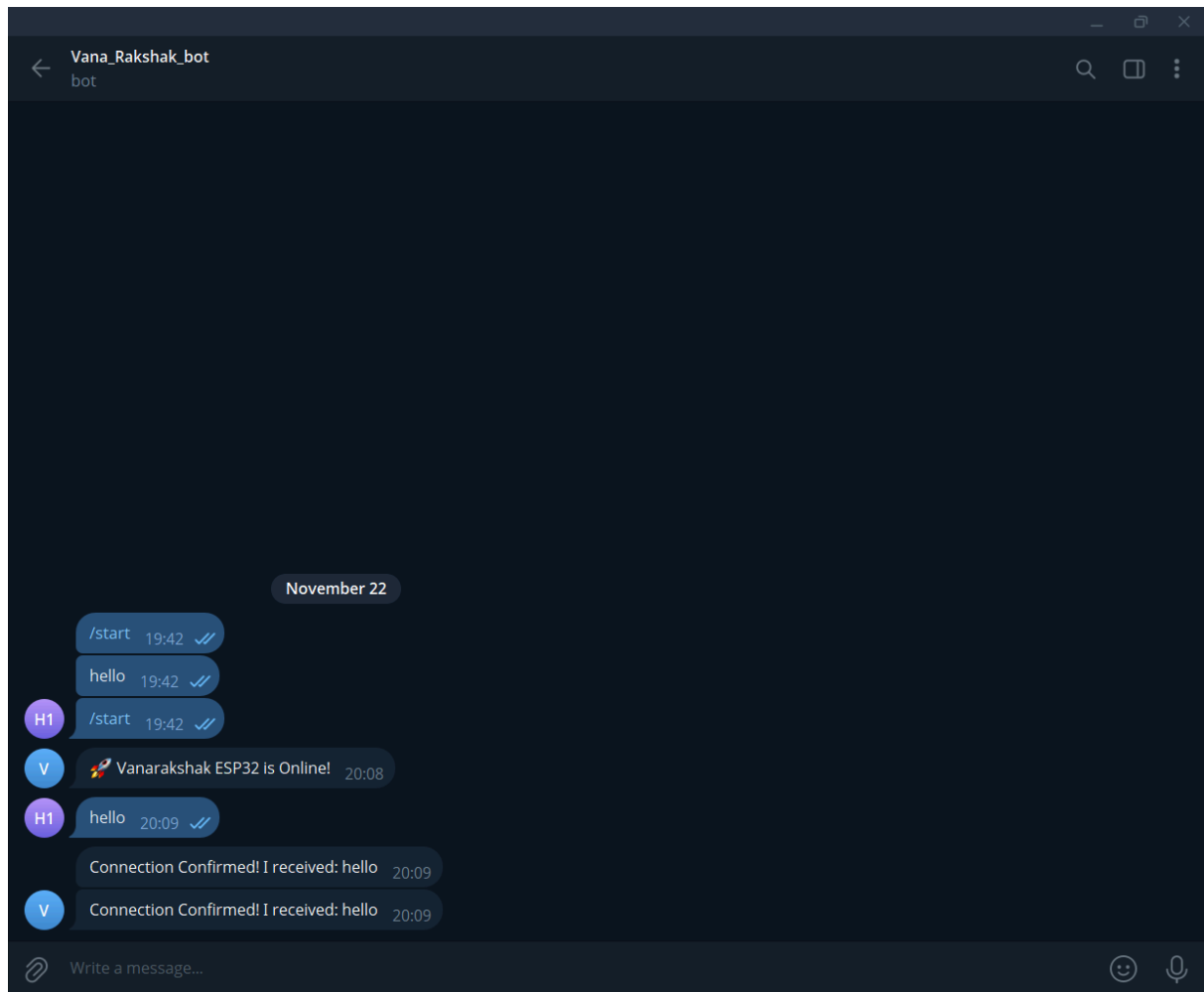
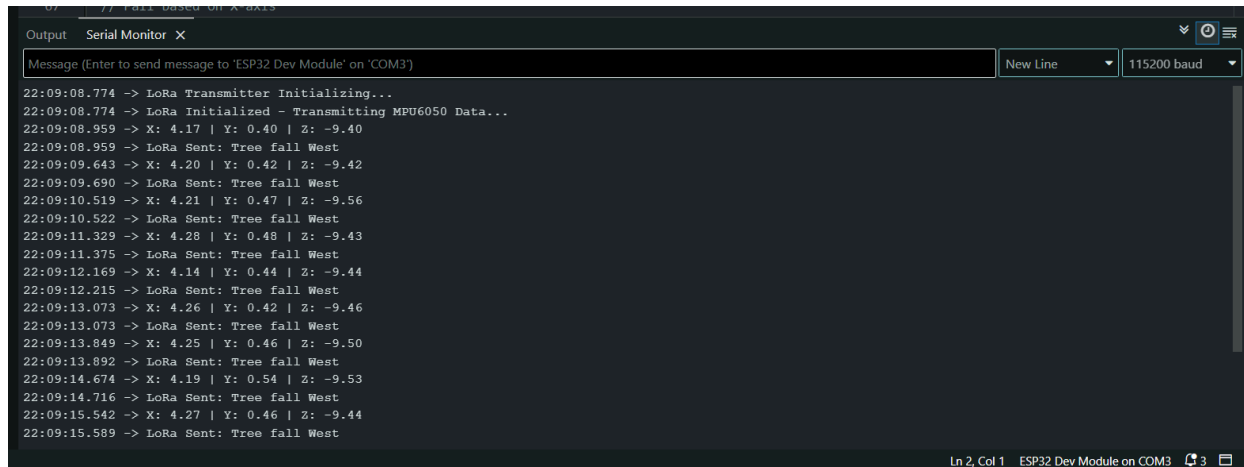


Establishing a WiFi client to a Telegram bot for one-way transmission through an established API key:



Successfully tested LoRa (Long Range) communication stack hardware module transmission and reception through ESP32, indicating the orientation of MPU6050 to accuracy.

## Transmitter



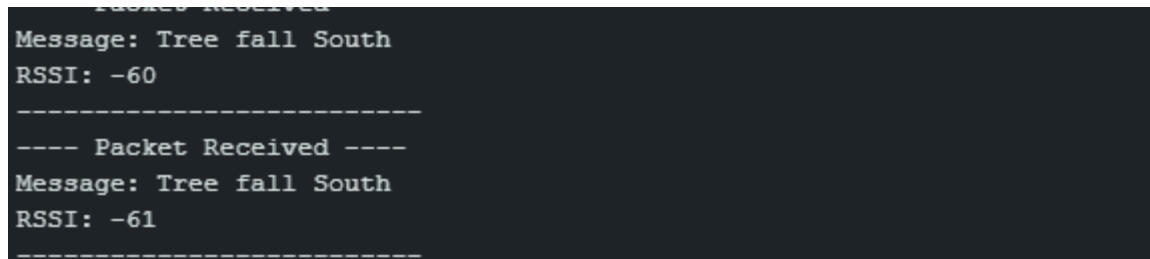
The screenshot shows a serial monitor window titled "Output Serial Monitor X". The message input field contains "Message (Enter to send message to 'ESP32 Dev Module' on 'COM3')". The baud rate is set to "115200 baud". The log displays the following messages:

```
22:09:08.774 -> LoRa Transmitter Initializing...
22:09:08.774 -> LoRa Initialized - Transmitting MPU6050 Data...
22:09:08.959 -> X: 4.17 | Y: 0.40 | Z: -9.40
22:09:08.959 -> LoRa Sent: Tree fall West
22:09:09.643 -> X: 4.20 | Y: 0.42 | Z: -9.42
22:09:09.690 -> LoRa Sent: Tree fall West
22:09:10.519 -> X: 4.21 | Y: 0.47 | Z: -9.56
22:09:10.522 -> LoRa Sent: Tree fall West
22:09:11.329 -> X: 4.28 | Y: 0.48 | Z: -9.43
22:09:11.375 -> LoRa Sent: Tree fall West
22:09:12.169 -> X: 4.14 | Y: 0.44 | Z: -9.44
22:09:12.215 -> LoRa Sent: Tree fall West
22:09:13.073 -> X: 4.26 | Y: 0.42 | Z: -9.46
22:09:13.073 -> LoRa Sent: Tree fall West
22:09:13.849 -> X: 4.25 | Y: 0.46 | Z: -9.50
22:09:13.892 -> LoRa Sent: Tree fall West
22:09:14.674 -> X: 4.19 | Y: 0.54 | Z: -9.53
22:09:14.716 -> LoRa Sent: Tree fall West
22:09:15.542 -> X: 4.27 | Y: 0.46 | Z: -9.44
22:09:15.589 -> LoRa Sent: Tree fall West
```

The status bar at the bottom indicates "Ln 2, Col 1 ESP32 Dev Module on COM3".

## Receiver from base position

### i) Indicating tree orientation in the south direction

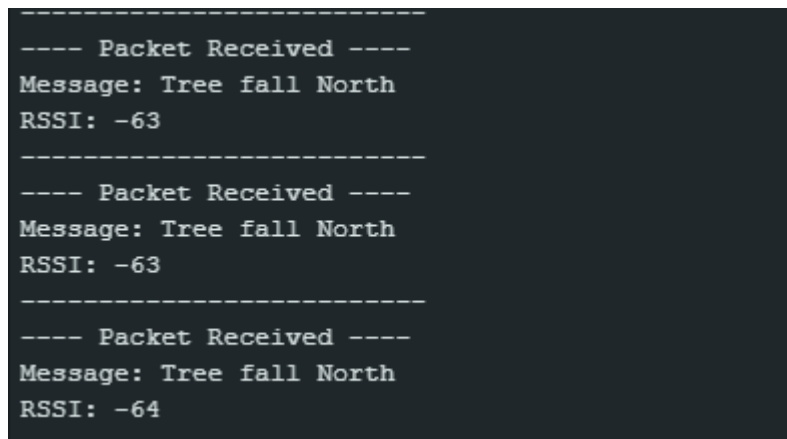


The screenshot shows a serial monitor window with the following received messages:

```
-----
Message: Tree fall South
RSSI: -60
-----

----- Packet Received -----
Message: Tree fall South
RSSI: -61
-----
```

### ii) North Direction Orientation



The screenshot shows a serial monitor window with the following received messages:

```
-----
Message: Tree fall North
RSSI: -63
-----

----- Packet Received -----
Message: Tree fall North
RSSI: -63
-----

----- Packet Received -----
Message: Tree fall North
RSSI: -64
-----
```

### iii) East Direction Orientation

```
----- Packet Received -----  
Message: Tree fall East  
RSSI: -65  
-----  
----- Packet Received -----  
Message: Tree fall East  
RSSI: -65  
-----  
----- Packet Received -----  
Message: Tree fall East  
RSSI: -64
```

### iv) West Direction Orientation

```
----- Packet Received -----  
Message: Tree fall West  
RSSI: -63  
-----  
----- Packet Received -----  
Message: Tree fall West  
RSSI: -63  
-----  
----- Packet Received -----  
Message: Tree fall West  
RSSI: -63
```

### v) No Direction= No Event ( Base Orientation)

```
----- Packet Received -----  
Message: No Event  
RSSI: -66  
-----  
----- Packet Received -----  
Message: No Event  
RSSI: -68
```

## Fusion designs

