

# Build Documentation

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Our Build Documentation can be found at <https://github.com/amosproj/amos2022ss03-turtlebot-fleet-management/wiki/Build-Documentation>.

*The content below was generated from the wiki. [v\_2022\_07\_26]*

## Fleet Management

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You can run the Fleet Management System with either Python or Docker.

After following these steps, you can access the Fleet Management over [127.0.0.1:8080](#) in your browser.

### 1. Clone Repository

```
git clone https://github.com/amosproj/amos2022ss03-turtlebot-fleet-management
```

and navigate to the fleet management folder

```
cd amos2022ss03-turtlebot-fleet-management/FleetMgmt
```

## Using Python

Requirement: Python3 including pip installed

### 2. Install required Dependencies

```
pip3 install -r requirements.txt
```

### 3. Run the main File

```
python3 main.py
```

## Using Docker

Requirement: Docker installed

### 2. Create and start the Docker Container

```
docker compose up
```

# Turtlebot

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Requirement: Turtlebot with ROS2, [sick\\_lidar\\_localization](#) and [kobuki\\_ros](#) installed.

## 1. Connect to Turtlebot via SSH

```
ssh username@IP
```

(In our case: [sick@192.168.0.10x](#) with x is 1 or 2 based on the turtlebot you want to use)

## 2. Clone Repository

```
git clone https://github.com/amosproj/amos2022ss03-turtlebot-fleet-management
```

## 3. Add / Replace our ROS modules

```
rm -rf dev_ws/src/worker_node
```

```
rm -rf dev_ws/src/mqtt_bridge
```

```
cp -r amos2022ss03-turtlebot-fleet-management/TurtleBot/dev_ws/dev_ws/src/
```

## 4. Build ROS packages

```
cd dev_ws
```

```
colcon build --cmake-args " -DROS_VERSION=2" --event-handlers console_direct+ --symlink-install
```

Wait a few minutes, it's faster on subsequent calls but we wanted to show the complete build process from a clean state.

## 5. Start our ROS node

```
source install/setup.bash
```

```
ros2 launch worker_node amos.launch.py
```

# Tutorial

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A full walkthrough of this documentation can be seen in our [build process video](#).