RAME Tutorial

Using this tutorial will allow you to run RAME on any Android device.

Establish Access Point Connection on RPI
1. Change the RPI password and enable RPI configurations
   - Open Preferences > Raspberry Pi Configuration > Change Password
   - Open Preferences > Raspberry Pi Configuration > Interfaces > Enable (everything)

2. Follow this tutorial to setup the access point:
   https://www.raspberrypi.org/documentation/configuration/wireless/access-point.md

3. Test the access point
   a. Run these commands to enable the access point. **DO THIS EVERY TIME YOU REBOOT THE RPI**
      
      sudo systemctl start hostapd
      sudo systemctl start dnsmasq

   a. Connect to the Access Point via WIFI connection
      
      select ssid and enter ssid password

   b. SSH to the RPI from another device:
      
      ssh pi@raspberrypi.local
      
      Password = password

Establish API Server Connection on RPI
1. Install Python 3.x.x and Git
2. Set up the virtual environment that manages the project dependencies.

   # create the directory to store Python virtual environment
   mkdir virtualenv

   # create the virtual environment
   python -m venv ./virtualenv/rame_virtual

   # enable the virtual environment
   source ./virtualenv/rame_virtual/bin/activate

3. Setup the repository on the RPI

   # create a new directory to store github repo
   cd ~/Desktop
   mkdir github
   mkdir rame
   git clone https://github.com/huesmiles49/rame.git

4. Install backend dependencies

   cd github/rame/server/microservice
   pip install -r requirements.txt
5. To run MongoDB and API server, open 2 terminals and run these commands
   # Terminal 1: connect to mongodb
   mongod --port 27018

   # Terminal 2: run api server
   cd Desktop/github/rame/server/microservice/src
   python app.py

Establish Client-side Connection on Android device
1. Install Termux on an Android device from Google Play Store:

   ![Termux Icon]

   2. Open Termux, and run these commands (# means comment):
      # check which directory you are in
      pwd

      # install Node and Git (internet required)
      pkg install nodejs
      pkg install git

      # navigate to home directory and create a new directory to store github repo
      cd home
      mkdir github
      git clone https://github.com/huesmiles49/rame.git

      # navigate to repo and install the project dependencies
      cd github/rame
      npm install

      # navigate to server directory
      cd server

      # connect to access point, then run the app
      node server.js

3. Open the browser from the Android device
4. Go to: **localhost:3000**