

Deployment_readme

Introduction:

Purpose:

The purpose of this deployment guide is to deliver SmartDB as a product to its users. The steps necessary to deploy the “SmartDB” product and make it operational are as follows.

2. Prerequisites:

Deployment of this project requires these

- Single Entry/Exit Point
- 24x7 Electric supply
- High Speed Internet Connectivity
- SmartDB Kit
- Android SmartPhone (minimum android platform : MarshMallow)

The following steps must be followed to deploy the application:

- **SmartDB Kit Setup :**

Kit includes Raspberry Pi 2 Model B, breadboard, jumper cables, led, push button, Wifi-Adapter, USB Webcam (Logitech), Door Prototype, Ethernet Cable, Power Supply.

1. Firstly we would need to integrate the circuit connection on Raspberry Pi pinout and breadboard using jumper cable

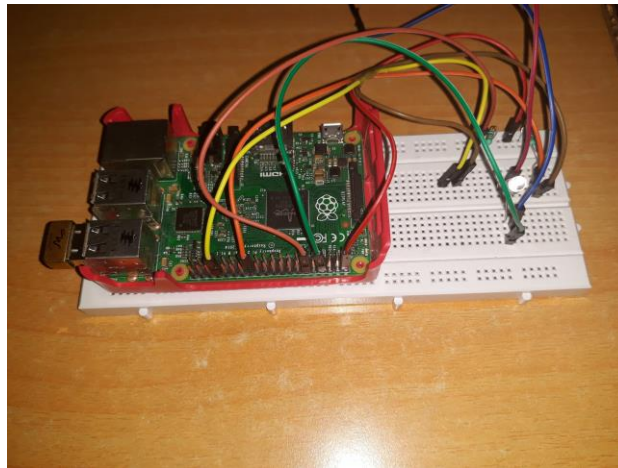


Fig: Circuit Connection

2. Attach peripherals such as Camera Module and Wifi Adapter on Pi.
3. Connect Door Prototype motor terminals on breadboard .
4. Provide power supply to Pi.
5. Follow the youtube video given in the below link:
<https://youtu.be/Atw4Oxuss80>
6. OR Connect Pi to an external display using HDMI Cable and use USB Mouse Keyboard to do similar steps.

7. Install the required dependencies from the installation report and copy the code from smartdb_pi_code/smartdb in the home directory.
8. Follow the instructions for running the system from installation_readme.

Setting up the Virtual Machine:

1. Create a virtual machine using VirtualBox or VMWare Virtualization Software with the latest Ubuntu image.
2. Install the required dependencies from the installation report and copy the code from SmartDb_VMfacenet_code/facenet in the home directory.
3. Upload the training images of family members into the images folder in the smartdb folder.
4. Follow the instructions for running the system from installation_readme.

Setting up Android App:

1. After importing project in Android Studio, Admin among the members will install the app by running the android code from studio.
2. Once app is installed on Admin android phone :
 - 2.1 Login to app by google sign-in/email.
 - 2.2 Admin can add members from Add Member Tab. Once added, email would be send to the added member requesting to download the app.
 - 2.3 User will download the app and thus will become member of SmartDB application.
3. In case of any queries, contact the SmartDB Team:

NOTE: If using Raspberry Pi 3 instead of Raspberry Pi 2, we recommend a better approach of using Android Things Platform to run on Pi3 which will allow better integration of tensorflow, firebase and mainly can easily integrate various hardware devices. It also has higher CPU Clock Memory and most importantly it is based on 64-bit Architecture and hence allowing our facial recognition algorithm to work on Pi3 itself.

Helpful Link:

- <https://developer.android.com/things/get-started/index.html#hardware>
- <https://www.hackster.io/Salmanfarisvp/getting-started-in-android-things-with-raspberry-pi-6a980e>

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