# Smart-Building Report

Simon Remington

January 25, 2019

# Contents

# 1 Introduction

This is the report to for Smart Building Project. It covers the procedures I have taken so far

# 2 Setting-up Raspberry Pi

## 2.1 Obtaining the Raspberry Pi Operating System

The RPI image can be obtained from:
https://www.raspberrypi.org/downloads/raspbian/
The image is: Raspbian Stretch Lite, a minimal image based on Debian Stretch. The lite image is for a headless install. All communication to the RPI is made via ssh.
Version: November 2018
Release date: 2018-11-13
Kernel version: 4.14
Download and unpack the image.
I have used both Windows and Linux Debian to create the bootable operating system so that I get a greater knowledge and understanding of completing the flash process.

## 2.2 Windows flashing

Check the hash, SHA-256 of the image.
Use Windows built-in certUtil -hashfile Path/To/File/file.img SHA256 to compute the hash.
Insert SD card into Windows 10 machine.
Use Etcher to flash image, obtained from:
$https://www.balena.io/etcher/$
Download Etcher and install.
Using Etcher, select source (Path to .img), Destination (SD card) Flash the card. Dismount then remount SD card. Donot repair the card when asked to by Windows. CMD into the card then create an empty file named ssh with no extension.
At the prompt> type nul > ssh
This will give secure shell access. Info can be found at:
$https://www.raspberrypi.org/documentation/configuration/wireless/headless.md$
$https://manpages.debian.org/stretch/wpasupplicant/wpa_supplicant.conf.5.en.html/$

## 2.3 Linux flashing

now go to debian machine

# 3 New Paragraph

well hello there

# 4 this is section

## 4.1 this is sub