ASSIGNMENT NUMBER: A2

TITLE Study of different operating systems for Raspberry-Pi /Beagle board.

PROBLEM STATEMENT /DEFINITION Study of different operating systems for Raspberry-Pi /Beagle board. Understanding the process of OS installation on Raspberry-Pi /Beagle board

OBJECTIVE

☐To Understand the different operating system for raspberry-pi/ Beagle board.

☐ To Understand the process of installation on raspberry-pi

S/W PACKAGES AND HARDWARE APPARATUS USED Raspberry-Pi /Beagle board. PC with the configuration as Latest Version of 64-bit Operating Systems, Open Source Fedora-GHz. 8 G.B. RAM, 500 G.B. HDD, 15"Color Monitor, Keyboard, Mouse.

Aim: Study of different operating systems for Raspberry-Pi /Beagle board. Understanding the process of OS installation on Raspberry-Pi /Beagle board

Pre-requisite:

Basic knowledge of Raspberry-pi/Beagle board and OS installation.

Learning Objectives:

☐ To understand & implement the process of OS installation on Raspberry-Pi /Beagle board.

Learning Outcomes:

The students will be able to

☐ Install different operating system on Raspberry-pi

Theory:

Different operating systems for Raspberry-Pi :

1. Raspbian

2. Ubuntu MATE

3. Snappy Ubuntu

4. Pidora

5. Linutop

6. SARPi

7. Arch Linux ARM

8. Gentoo Linux

9. FreeBSD

10. Kali Linux

11. RISC OS Pi

Raspbian:

Installing Raspbian on the Raspberry Pi is pretty straightforward. We'll be downloading Raspbian and writing the disc image to a microSD card, then booting the Raspberry Pi to that microSD card. For this project, you'll need a microSD card (go with at least 8 GB), a computer with a slot for it, and, of course, a Raspberry Pi and basic peripherals (a mouse, keyboard, screen, and power source). This isn't the only method for installing Raspbian (more on that in a moment), but it's a useful technique to learn because it can also be used to install so many other operating systems on the Raspberry Pi. Once you know how to write a disc image to a microSD card, you open up a lot of options for fun Raspberry Pi projects' 1: Download Raspbian

I promised to show you how to install Raspbian on the Raspberry Pi, so it's about time that we got started! First things first: hop onto your computer (Mac and PC are both fine) and download the Raspbian disc image. You can find the latest version of Raspbian https://www.raspberrypi.org/downloads/raspbian/ Give yourself some time for this, especially if you plan to use the traditional download option rather than the torrent. It can easily take a half hour or more to download.

Step 2: Unzip the file

The Raspbian disc image is compressed, so you'll need to unzip it. The file uses the ZIP64 format, so depending on how current your built-in utilities are, you need to use certain programs to unzip it. If you have any trouble, try these programs recommended by the Raspberry Pi Foundation:

☐ Windows users, you'll want 7-Zip.

☐ Mac users, The Unarchiver is your best bet.

☐ Linux users will use the appropriately named Unzip. Step 3: Write the disc image to your microSD card.

Next, pop your microSD card into your computer and write the disc image to it. You'll need a specific program to do this:

☐ Windows users, your answer is Win32 Disk Imager.

☐ Mac users, you can use the disk utility that's already on your machine.

☐ Linux people, Etcher – which also works on Mac and Windows – is what the Raspberry Pi Foundation recommends.

The process of actually writing the image will be slightly different across these programs, but it's pretty self-explanatory no matter what you're using. Each of these programs will have you select the destination (make sure you've picked your microSD card!) and the disc image (the unzipped Raspbian file). Choose, double-check, and then hit the button to write.

Step 4: Put the microSD card in your Pi and boot up

Once the disc image has been written to the microSD card, you‟re ready to go! Put that sucker into your Rasberry Pi, plug in the peripherals and power source, and enjoy. The current edition to Raspbian will boot directly to the desktop. Your default credentials are username pi and password raspberry

Different operating systems for Beagle board:

1 Linux based

☐ 1.1 Android

☐ 1.2 Angstrom

☐ 1.3 Debian

☐ 1.4 Fedora

☐ 1.5 ArchLinux

☐ 1.6 Buildroot

☐ 1.7 Gentoo

☐ 1.8 Nerves Erlang/OTP

☐ 1.9 Sabayon

☐ 1.10 Ubuntu

☐ 1.11 Yocto

2 . Other / non-Linux

☐ 2.1 MINIX 3

☐ 2.2 Windows Embedded Compact 7

☐ 2.3 Windows CE 6.0

☐ 2.4 Windows Embedded Compact 2013

Debian:

Conclusion: Hence the experiment was successfully.