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| C:\Users\CHAYAPATHI-CPN\Desktop\download.png  **Department of Information Science and Engineering** |
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| **WEEKLY PROGRESS REPORT** | | | | | |
| **Batch No** | | **Batch-5** | | | |
| **Guide** | |  | | | |
| **Project Title** | | **IOT based wireless smart board** | | | |
| **Progress Report No** | | **1** | | | |
| **Date of Submission** | | **26 Oct 2018** | | | |
| **Date** | | **From: 15 Oct 2018** | | | **To:25 Oct 2018** |
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| **Sl. No.** | **Student Name** | | **USN** | **Signature with date** | |
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Progress:

* We have found some online portals like **Dataplicity**, **Captive portal** to access Raspberry-pi. These portals are needed to give straightforward terminal access to devices on remote cellular, satellite and fixed line networks.
* **Dataplicity** is essentially a VPN for you Raspberry-Pi. It not only lets you connect to your Pi remotely but you can also can “wormhole” a web server through the system, allowing you to run a mini website from the comfort of your computer**.**
* **Captive portal** is a screen that will be shown initially to anyone who connects to your **WiFi Access Point**. Before they can be utilizing the WiFi connection, they will need to complete an action, until then the captive portal will continually greet them. You can display whatever you want on the captive portal so that it can be highly useful if you are going to lay out some ground rules to using your WiFi Access Point
* Referred to relevant videos related to installation of Raspberry Pi :
* **First boot**
* Plug-in your keyboard, mouse and monitor cables.
* Plug the USB power cable into your Pi.
* Your Raspberry Pi will boot, and a window will appear with a list of different OS that you can install.
* Raspbian will then run through its installation process.
* When the installed process has completed, the Raspberry Pi configuration menu will load. Here you are able to set the time and date for your region, enable a Raspberry Pi camera board, or even create users.
* We started learning python concepts like python libraries and functions through videos and books. The python libraries include:
* **Requests** -It used to make **Http/1.1** calls and parse responses using python. This means you don’t have to manually add query strings to URLs, or form- encode your POST data.
* **NumPy** – It is a fundamental package for scientific computing. It is a python extension module. It provides fast and efficient operations on arrays of homogeneous data. NumPy extends python into a high-level language for manipulating numerical data similar to **MATLAB**.
* **Pandas** – It is used for data analysis. Pandas is an open source, **BSD** licensed library providing high performance, easy to use data structures and data analysis tools for the python programming language.
* We bought the “**Tenda N301**” router for the project as needed.
* Supported protocols- IEEE 802.11n/g/b
* Frequency-2.4GHz
* Speed-300Mbps
* Antennae Capacity- 5 dBi
* Encryption- WPA2-PSK
* We found that we need to have a separate OS for Raspberry Pi i.e. **Raspbian**. It is a Debian based primary computer operating system for the family of Raspberry Pi single board computers.
* This Raspbian OS belongs to a family of **Unix-Like**. The package manager being “**dpkg**”.
* The default user interfaces are **PIXEL**, **LXDE**.
* Raspbian uses PIXEL, Pi Improved **Xwindows** Environment, Lightweight as its main desktop environment as of the latest update.
* It is composed of a modified LXDE desktop environment and the **Openbox**.

Work schedule and expected result for the next week:

* We are looking forward to buy Raspberry Pi at the best price in the following week.
* Decide on one of the best portals to access Raspberry Pi among above listed portals.
* Know the whole process that how to install Raspbian OS on Raspberry Pi.

References:

* [www.raspbian.org](http://www.raspbian.org)
* [www.python.org](http://www.python.org)
* [www.raspberrypi.org](http://www.raspberrypi.org)
* [www.dataplicity.com](http://www.dataplicity.com)
* <https://www.youtube.com/watch?v=6E9n71zeETE>
* <https://www.youtube.com/watch?v=9rE_XLX-z60>

Guide Project Coordinator HOD-ISE

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