Project Report

BSc. Honours in Computing (4th Year)

Software Development Stream

Smart Meeting Space

Project also available on Github:

https://github.com/Virksaabnavjot/Smart-Meeting-Space

Group: I

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I. Background

NSV Smart Meeting Space is an distributed application/system. The project is an reference implementation of devices in a meeting space. For the purpose of this project naming – Laptop, Light, Mobile Phone, Printer, Projector. Where we have a service/server class for each of these devices which publishes themselves when run and the client can discover them and communicate. We have used JSON for data transfer which was done easily with the use of GSON.

Operations Supported by each device in a smart meeting space (meeting rooms) –

Laptop – The device will need to publish its name so it can be recognised, location (which room), battery status, brightness, volume, if its switched on/sleep, charger plugged (could be more but keeping it short).

```
public Laptop(int volume, boolean switchedOn){
    this.deviceName = "Nav's Mackbook Pro";
    this.deviceLocation = "Meeting Room: SCR 3";
    Random random = new Random();
    //generating random number 1-100
    int randomNumber = random.nextInt((100 - 0) + 1) + 0;
    this.batteryStatus = randomNumber;
    this.brightness = randomNumber;
    this.volume = volume;
    this.swichedOn = switchedOn;
    this.chargerPlugged = true;
}
```

Sample constructor of Laptop device.

These are operations a laptop must be supporting and for the purpose of this prototype implementation we will actually have controls for few of the operations and few will be hard coded and same applies for other devices.

Light – The device will publish its name, location(ex. Meeting room 3, power consumption (ex. 40W), current mode (ex. Normal), brightness, switch, and different modes it supports (ex. "Normal","Sunny","Dim","Auto","Dark").

Mobile Phone – The device

II. Objectives

1. Project Problem

Describing the project problem.

2. Project Solution

Describing the project solution includes

III. Implementation

- Explanation of all methods
- screenshot of all terminals proving the application works

References

Conference

[1] Author, “Paper title,” in Conference Name, Year.

Book

[1] Author, Book Title, Publisher, Year.

Journal

[1] Author, “Paper Title,” Journal Name, vol. Volume, Year.

Web site

[1] Author, “Web site,” Year. [Online].