#### Pune Institute of Computer Technology

**Dhankawadi, Pune – 411043.**

**Department of Information Technology**

# List of Lab Assignments(AY 2020-21)

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| **Subject** | **:** | Computer Laboratory-X (414467) | **Class** | : | B.E (IT) SEM-II |
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| N0 | Problem Statement |
| **PART A-PART A-Basic Assignments** | |
| **1.** | Android development environment. Installing and setting up the environment. Hello world application. Running the emulator. Inserting debug messages. |
| **2.** | Android UI Design: Design a User Interface using pre-built UI components such as structured layout objects, UI controls and special interfaces such as dialogs, notifications, and menus. Also make this UI attractive using Android graphics platform OpenGL. |
| **3.** | Android-database Connectivity: Create a SQLite Database for an Android Application and perform CRUD (Create, Read, Update and Delete) database operations. |
| **PART B-Assignments on Advanced Technology** | |
| **4.** | Develop a Smart Light System (Light that automatically switched on in evening and gets off in morning) using open source Hardware platform like Arduino and some sensors (Light dependent resistor) and actuator (An LED) |
| **5.** | Design and Develop a GUI for FAN regulator that uses Android platform. |
| **6.** | Develop an Android based FAN regulator using open source Hardware platform like NodeMcu and actuator (a SERVO Motor). |
| **7.** | Wireless Network: Develop an app for a rolling display program of news on computer display. The input strings are supplied by the mobile phone/ by another computer connected through wireless networks. |
| **PART C-Advanced Topic with Mini Project** | |
| **8.** | Android and Machine Learning: Healthcare System  fetching data from android and analysis using machine Learning.(Healthcare,Agricultural or smart city) |
| **9.** | Case Study: Evolution of cellular networks all the way up to 7G. |
| **10** | App or web based Mini project on recent trends in Ubiquitous computing.(Like Smart City,Health, Agricultural etc.) |

**Ms.Rachna R.Chhajed Dr. A.M.Bagade**

**Subject Coordinator HoD IT**