**Shri Ramdeobaba College of Engineering and Management, Nagpur**

**Department of Electronics and Communication**

**Project Diary [2022-23]**

**Semester: VII Semester**

**Section: A/B**

**Project Title: Point of Care Device for Measurement and Analysis of Vital Parameters**

**Group Number: 2**

**Project Guide: Dr. Mridula Korde**

**Project Students:**

* **Huzefa Essaji (B-41) \*\* [Group Leader]**
* **Parth Bhalerao (A-65)**
* **Vivek Kaushik (B-82)**
* **Chandrakant Mohadikar (B-104)**

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| **Meeting No.** | **Date** | **Points discussed in the meeting** | **Remarks by Guide (Task allotted etc.)** | **Roll Number of students present in the meeting** |
| **1** | **18/07/2022** | **Literature Review** | **Satisfied from our survey and asked us to document it for later requirements.** | **65A, 41B, 82B, B104** |
| **2** | **21/07/2022** | **ESP32 based prototype working** | **Gave us suggestions regarding to our prototype and asked us to work on prototype design.** | **65A, 41B, 82B, B104** |
| **3** | **8/08/2022** | **Working on algorithm for ECG to Heart rate** | **Asked us to explore several Github repositories and IEEE papers for optimum algorithm survey** | **65A, 41B, 82B, B104** |
| **4** | **18/08/2022** | **Working on Camera Module** | **Introduced the need for camera module and minimizing the time delay to upload images to cloud.** | **65A, 41B, 82B, B104** |
| **5** | **25/08/2022** | **Need for Hardware Upgrade and process flow and UI Design.** | **Explanation of hardware and work related to preparation of website and UI to post data.** | **65A, 41B, 82B, B104** |
| **6** | **5/09/2022** | **I2C and temperature module interface working along with STM32** | **Briefed us I2C protocol and instructed to go through the data-sheet of STM32 and Maxim and related tutorials.** | **65A, 41B, 82B, B104** |
| **7** | **8/09/2022** | **I2C Debugging with Logic Analyzer** | **Troubleshooting timing mis-match between master and slave device.** | **65A, 41B, 82B, B104** |
| **8** | **12/09/2022** | **SPI communication with Max86178** | **Briefed us SPI protocol and instructed to go through the data-sheet of STM32 and Maxim and related tutorials.** | **65A, 41B, 82B, B104** |
| **9** | **15/09/2022** | **SPI Debugging with Logic Analyzer and working on Machine Learning.** | **Troubleshooting PLL for scaling down clock frequency.** | **65A, 41B, 82B, B104** |
| **10** | **22/09/2022** | **Plotting PPG values from Maxim sensor** | **Update on transferring the collected samples from FIFO via UART to Bluetooth module.** | **65A, 41B, 82B, B104** |
| **11** | **4/10/2022** | **Visited Hospitals for collecting data.** | **Discussion about required format of ECG.** | **65A, 41B, 82B, B104** |

**Guide: Dr. Mridula Korde**