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|  | **HASAN KALYONCU UNIVERSITY**  **Computer Engineering Department** **COME 499 Project Proposal Form** |

**Part I. Project Proposer**

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**Part II. Project Information**

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| **Starting Term** | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 2 | 0 | 1 | 9 | / | 2 | 0 | 2 | 0 | |
| **Title of the Project** | Mobile Based Attendance System |
| **Project Description** | |
| In this project, a mobile attendance system will be built to eliminate the time and effort wasted in taking attendances in schools and colleges. It also greatly reduces the amount of paper resources needed in attendance data management.  The system is divided into the following modules:   * **Attendance List Creation:** Teachers, and their courses; along with the list of students who are taking those courses will be added in a database through a web interface. * **Attendance Marking:**  A Teacher would come in class, and will open up the App and select the course. The list of students will be automatically populated. Related to marking the present/ absent of students, multiple ways will be tested to select the best mechanism. For instance, this process can be done automatically through 1) NFC Technology and Fingerprints. However, in case of any problem in the previous mechanisms, the teacher can mark the present/ absent for the students. * **Attendance Storage:** This data is now stored in the faculty mobile phone. Faculty may also view it anytime on their phone. In addition, the attendance will be automatically sent and saved on the server database. * **Student portal:** Students will be able to check their attendance percentage through the app.   Several reports about student attendance will be also available for the head of department and coordinators. In other words, this system automates the attendance system and eliminates the use of paperwork needed for attendance marking and monitoring student attendance. | |
| **Project Justification** | |
| **Novelty** | |
| **New aspects** | Mobile attendance system using multiple technologies such as NFC and Fingerprints |
| **Complexity** | |
| **Challenging problem and issues** | Automating the process of recording the present/ absent of students is a challenging task for developers. In addition, generating multiple reports about student attendance is also a critical issue for the project. |
| **Related computer science fields and subfields** | Database management, Web programming |
| **Tools** | Android or IOS |
| **Risk involved** | |
| **Potential problems and alternative solutions** | The efficiency of the available NFC and Fingerprints in the used mobile might be below the expectations. As an alternative solution, Fingerprint Sensor and/or NFC cards can be used. Another possible solution is to use the Fingerprint Based Biometric and Arduino. |
| **Minimum work required** | 4 MONTHS |