**Department of Computer Applications.**

**4th Sem MCA - MINI PROJECT**

**Jan - May 2019**

**Synopsis**

**Project Title**: *Vibhaag* – A college analytics, abstract and session management tool

**Abstract:** An all in one college management Software as A Service (SaaS) built on the MongoDB, Express.js, React.js, Node.js (MERN) stack. The application consists of two components, one being the mobile application for Android and iOS devices that acts as a companion and authentication for this web application. The mobile application is a separate abstract entitled as “*Vigbhaag App*”. Further details of the mobile application are provided in the other abstract. The application helps colleges to keep track of their employees’ participation. It provides customizable options for creating users with role management and secure authentication. Faculties can register their participation using their mobile apps. The application also provides facilities such as daily, weekly, monthly abstracts for every individual along with the ability to customize time tables and sessions.

Key features of *Vibhaag* include:

* Creating and managing college departments, teachers and other faculties
* Custom time table for every batch and its sessions
* Faculties can register their attendance and time taken for a session using mobile apps
* Ability to change the time table and re-allocate faculties as per requirement
* Ability to extract meaningful insights such as daily and weekly abstracts

**Software Requirements:**

* Front End:
  + React.js, Bootstrap
* Back End:
  + Node.js, Express.js, Mongoose.js, Passport.js
* Database:
  + MongoDB
* Deployment and DevOps:
  + Ubuntu Sever 18.04, Git, GitHub, Docker, Kubernetes and Travis CI

**Hardware Requirements:**

* AWS Elastic Cloud Compute instances x3, each of 2 GB RAM, 30 GB SDD
* Kubernetes Engine on the Cloud for container management
* Load Balancer for distributing traffic among containers

**Team Details:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.No** | **SRN** | **NAME** | **Signature** |
| **1** | PES1201702260 | Sudhanva N |  |
| **2** | PES1201702260 | Karthik D |  |
| **3** | PES1201702260 | Harsha K Y |  |

**Guide Name:**

Veena S

**Guide Signature:**