**Project Title: Management Project**

**Project Proposal**

**Project Members:**

1. Sahil Jangra – CO16348
2. Saksham Gupta – CO16349
3. Vivsvaan Sharma – Co16362

**Project Guide:** Dr. Amit Chhabra

**Introduction**

The purpose is to design a software which will contain several modules to provide services like user authentication, profile and data storage etc. The management system can be used independently to implement general management of sub or main systems or used as a modular ERP system where we can easily add or remove modules. It would be a less complicated system then a full scale ERP but at the same time would be highly scalable and robust thus ensuring use in almost every management domain.

**Technical Details**

To implement this project, we will be using different technologies for front-end and back-end. The first option we came up with for creating backend of our application/software was NodeJs. It is an open-source, cross-platform JavaScript run-time environment that executes JavaScript code outside of a browser. But Nodejs is not recommended if it is to be used along with Machine Learning or data analysis. The library support and documentation for Machine Learning is way better in Python than in Node. The python libraries are written to utilize the GPU in more optimized way. So another option was Django. It is an python-based open-source back-end web framework. A web framework is a set of components that helps in developing websites/webapps faster. Using Django, we will be creating the back-end of our application/software.

Secondly, for front-end the competition was in between react and angular. React is a JavaScript library for building user interfaces. It is maintained by Facebook and a community of individual developers and companies. React is optimal for fetching rapidly changing data that needs to be recorded. AngularJS is a JavaScript-based open-source front-end web framework written in typescript, mainly maintained by Google and by a community of individuals.

Angular and React have many similarities and many differences. One of them is that Angular is a full-fledged MVC framework and React is merely a JavaScript Library (just the view). Angular is considered a framework because it offers strong opinions as to how the application should be structured. It also has much more functionality “out-of-the-box”. We do not need to decide which routing libraries to use or other such considerations – we can just start coding. However, a drawback is that we have less flexibility, we must use what Angular provides us with.

React, on the other hand, provides much more freedom. It only provides the “view” in MVC (Model, View, Controller) – we need to solve the M and C on our own. Due to this, we can choose any of our own libraries as we see fit. We will end up using many independent, fast-moving libraries. Because of this, we will need to take care of the corresponding updates and migrations by ourself.