

**Submission Deadline: September 03, 2020****Full Marks – 20****No assignment submitted after the scheduled deadline will be evaluated.****Select a project of your choice from the list given below****1. Cloud based Career Guidance System**

A Career Guidance System where students can see various career opportunities, the system shows various fields available after 12th, for graduation and also fields available after graduation. It also lists various colleges available where students can search colleges by their courses. Since the system needs to provide service to a large number of students it needs a cloud infrastructure. Next the system allows users to give a test. It is actually a series of tests of various general questions. After test completion a score is calculated for each test. Based on those results the system manipulates and calculates the best career for that user. This result is then emailed to that user. The system also consists of an admin module. The admin can login to the system and enter colleges along with their specifications. The system also includes an ebooks page. Here user may click to read career guidance ebooks in their browser. It allows for robust and enhanced experience by handling a huge number of visitors with efficiency.

**2. Railway Tracking and Arrival Time Prediction System**

It has happened so many times that you have been waiting on railway station for someone to arrive and you don't have any exact information about train timing and other stuff. So here we present to you a project on Railway Tracking and Arrival Time Prediction. Using this system user's can get the information about train timing, and is it on time or not, and other information. In this, system will track the train timing at what time train departed from a particular station and pass these timing details to other station's system where it will display the timing according to train departed from previous station. If system will find any delay in train due to signal it will automatically update the train timing in next station and will be displayed to viewers.

In this system there is an admin module, who enters the detail about trains and its timing and these details will be passed through internet server and is fetched by the system on other stations, and there is other system that shows train information to the viewers on platform. Second system will get all the information of all trains but will automatically select the data that refers to particular station and shows that information on screen. For example if an admin at Mumbai station enter information about Delhi station Chennai station system will not be effected, but Delhi Station system will show the information about train. This system works like – when train is departed late from a station, admin will enter details about departure and its time, and this information goes in real time on internet server and retrieved on other system through internet server and shows the details on screen. Station masters on every station have a login wherein they may update train arrival time at their station when it arrives. This second System is installed on various locations on station for viewers to view the information. Admin will add information like train departed from station, expected arrival at destination, delay in the train schedule, etc. This project publishes real-time train schedule events to subscribing multiple client applications.

**3. Public Photography Contest with Live Voting**

We usually come across areas where a photographer can show his skills and win some award, but it was not properly portrayed. Using our System Admin / can conduct contest based on a topic. Admin can choose the winner by 2 ways, No of Like on Photograph, Or Admin can directly select the winner. Admin can remotely view the images through, and select for best one, Photographer can register them self to this, so that they get notification of the completion (By Mail or SMS), Photographer's will be notified One week before the contest, If entries exceed the required, admin will first select top images and then users will vote for best one, One User will be allowed to vote for 3 photos only, Winner of the contest will be notified by (Mail or SMS), The role of admin is to check that images belong to that photographer only, and he has not taken it from other sources.

### **PROBLEM: E-R MODELING**

In the System described above, identify the entities and the relationships between those entities along with the entity attributes, primary keys, foreign keys and related constraints. Hence model the system using an E-R diagram. Use MS-Visio to build the E-R model. (Depending on the model you design, you shall be implementing an automation for this system, in your subsequent assignments.)

However, you are advised not to be limited only by the features specified above, but to survey various similar systems, their regular activities and requirements and develop your own model for a globally acceptable system.