

**TP – 19/20**

**A Project Report On**

# **EV Charging – Infrastructure and Customer Management System**

**(By SEMESTER-IX of V Year M.Sc. (2019-20))**

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# 1. Introduction

## 1.1 Existing System

- EV charging stations mainly focuses on searching and booking of charging slots. Though, it is newly developing concept in market, there is no more technical solutions are available in the market for managing the infrastructure and customer. The existing system doesn't provide the solution to a particular charging station to promote and manage charging station.

## 1.2 Proposed system

- Admin (Charging Station Provider) can manage the whole charging station infrastructure including chargers and connectors. Admin can also manage customers on the basis of customer group and related discounts, service requests and feedback. Admin can also manage static page content of website using content management system. Admin can perform price settings.
- Customer will be able to see nearby active charging station information along with chargers and connectors. Customer will also be able to make a service request of any type and can give feedback of service. Customer will be able to calculate estimated price of charging and electric vehicle using price calculator feature.

## 1.3 Project Definition

- A web-based solution with comprehensive access control to facilitate management of all aspects of charging infrastructure and customer relations. The solution is aiming to provide simple and effective way to manage Electric Vehicle (EV) Infrastructure and Customer Management & support for EV charging system provider.

## **2. Objectives**

- This system provides a solution for charging station provider to manage their customers and promote their charging stations.
- The system will also provide the purpose to estimate the price of charging an electric vehicle.
- This system will help the customer to request for the services as well.
- The time of customer will be saved.
- Managing customer and infrastructure becomes easy for charging station provider.

## **3. Tools and Technology**

### **3.1 Tools/Platform**

- IIS Server (Microsoft)
- Visual Studio 2017 Community
- Visual Studio Code
- Browser (Chrome/Explorer/Firefox)

### **3.2 Technology**

- C#
- ASP .Net MVC
- Web API
- MS Server 2017
- HTML5
- CSS3
- Bootstrap
- JavaScript
- jQuery3.4.1

## **4. Minimum Hardware and Software Requirement Specification**

### **4.1 Client Side**

#### **A. Software Requirements**

- OS: Windows 7 or above
- Web-browser: Chrome/Explorer/Mozilla Firefox

#### **B. Hardware Requirements**

- Processor: 2GHz
- RAM: 512GB
- Hard Disk: 2GB free space

### **4.2 Server Side**

#### **A. Software Requirements**

- OS: Windows 7 above
- IDE: Visual Studio Community 2017
- MS Server 2017
- Web-browser: Chrome/Explorer/Mozilla Firefox

#### **B. Hardware Requirements**

- Processor: 3GHz
- RAM: 4GB
- Hard Disk: 15GB free space

## **5. Future Scope**

- Customer will be able to book appropriate charging slot and will also be able to do an online payment.
- Customer will do a chat with admin.
- Customer will be able to rate the service.
- Price Calculator parameters will be extended.
- Customer Group actions will be extended.

## **6. Limitations**

- Customers must have an internet connection to use this system.
- User needs to allow to access location of his/her own to use get the nearby charging station.
- User must obtain a valid username and password to use this system. If a user is not permitted then he/she must not be able to use the functionality of the system.
- Our system provides services in particular cities.