

# **Sales Force Automation**

A project report submitted in partial fulfilment of the requirement for degree of

**BACHELOR OF TECHNOLOGY**

In

**COMPUTER SCIENCE & ENGINEERING**

By

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# **RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES**

(A.P. Government Act 18 of 2008)

RGUKT-RK Valley

Vempalli , Kadapa, Andhrapradesh-516330, India

## **CERTIFICATE OF EXAMINATION**

This is to certify that we have examined the thesis entitled **Sales Force Automation**, submitted by **S.Veda Prakash(R170865)** here by accord my approval of it as a study carried out and presented in a manner required for its acceptance in partial fulfilment for the award of Bachelor of Technology degree for which it has been submitted. This approval does not necessarily endorse or accept every statement made, opinion expressed or conclusions drawn, as recorded in this thesis. It only signifies the acceptance of this thesis for the purpose for which it has been submitted.

**EXAMINER**



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Vempalli, Kadapa, Andhrapradesh-516330.

## **CERTIFICATE OF PROJECT COMPLETION**

This is to certify that I have examined the thesis entitled submitted by **S.Veda Prakash (R170865)** under our guidance and supervision for the partial fulfillment for the degree of Bachelor of Technology in Computer Science and Engineering during the academic session September 2022 – April 2023 at RGUKT-RK Valley. To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any university or institute for the award of any degree or diploma.

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**Head of the Department**

**Mr.N.Satyanandaram,**  
HOD Of CSE,  
RGUKT, RK Valley.

## **Declaration**

I S.Veda Prakash hereby declare that this report entitled “**Sales Force Automation Software Development**” submitted by me under the guidance and supervision of **B. Lingamurthy**. I also declare that it has not been submitted previously in part or in full to this University or other institution.

**Date** 06-05-2023

**Place:** RK Valley

**S.Veda Prakash**

**R170865**



Sunday, 30 April 2023

**TO WHOMSOEVER IT MAY CONCERN**

This is to certify that **Simgam Vedaprakash**, has done his internship with **Adjoint Technologies Private Limited** during the period **10 October 2022 to 30 April 2023**. His place of work was **Hyderabad**.

During the period, he worked on Frontend technologies like **Angular** and contributed to development of modules in **Sales Force Automation Software Development** project.

During the course of internship, **Vedaprakash** has shown great amount of responsibility, sincerity and a genuine willingness to learn and zeal to take on challenging assignment.

We wish him all the very best for future endeavours.

With regards,



**Vamshidhar Mangu, Managing Director**

**Adjoint Technologies Private Limited,**

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500081 Email ID: [vamshi@adjoint.in](mailto:vamshi@adjoint.in), Contact No: +91 8130 666 566 .

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At the outset, I would like to thank **Rajiv Gandhi University of Knowledge and Technologies** and **Adjoint Technologies**, for providing all the necessary resources for the successful completion of my course work.

**With Sincere Regards**

**S.Veda Prakash,**

**R170865.**

## **Abstract**

cloud-based Sales Force Application stack (Android Application and Web Portal).

Websites place a key role in development of an organisation. This project is to provide a website for organisation to simplify their works in terms of time and efforts. A good Interface design will provide better user experience. Through this website client can perform his desired actions easily and effectively.

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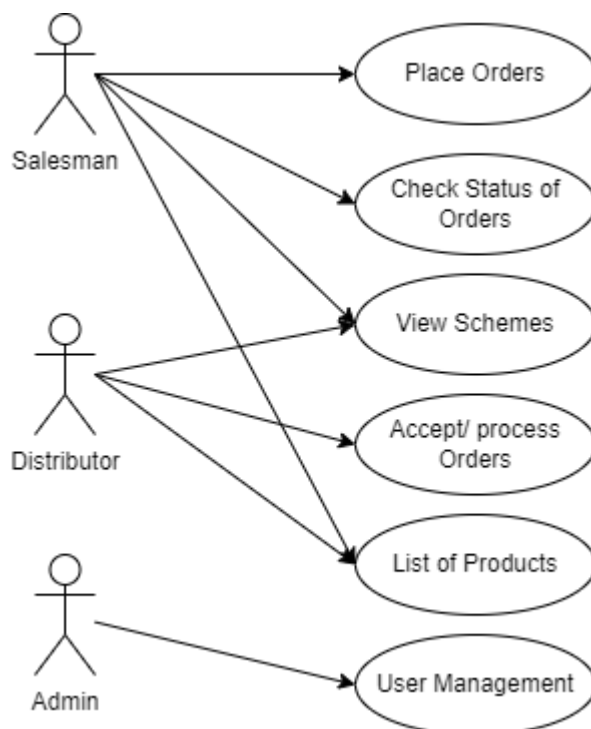
## 1. Introduction

### 1.1. Purpose of this Document

This document is the detailed report of work done by me in the galaxy project through the first semester of the academic year 2022-23.

### 1.2 Diagrams

- Usecase Diagram



### 1.3 Organization Profile

Adjoint Technologies is a new age Sales Force Automation CRM company that is creating simple solutions to complex sales problems. They provide simplified digital solutions to field sales teams in the retail sector. Optimisation of sales process and integration of multiple features in a single interface can be achieved using our sustainable solutions. Their digital ready products are customizable, friendly & versatile to suit each organization's needs and enable easy communication among internal and external stakeholders, thereby increasing productivity. They have a team with in-depth knowledge of the sector and good experience in dealing with sales related issues. This helps them understand the sales point of view and enables us to strive to make our products better. They believe in making sales easy by making the process of sales simple.

## **2. Overall Description**

### **2.1 Product Perspective**

The Product is used to maintain the sales of any organization. They can easily add new salesman. salesman can able to order products for the stores in his/her circle. Stores can also be maintained easily.

### **2.2 Product Functions**

- Orders Details
- Salesman Details
- Stores Details
- Schemes
- Product Details
- Distributor details
- Reports

### **2.3 Operating Environment**

- **Development environments**

A development environment is where most of the technical programming takes place and is used by developers to build applications and write their code, from platform-specific native apps to progressive web apps and cross-platform apps.

Visual Studio Code and PyCharm is mainly used environment for Development.

- **Staging environments**

Staging Environment refers to the environment where the testing of the developed project will be done. For frontend, the testing will be done using the browser and any errors can be shown in console of the browser.

- **Production environments**

When the development team, product owners, and end-users have thoroughly tested the product in the staging environment, the web app is pushed to the production environment. Amazon Web Services (AWS) is used as the production environment.

## **2.4 User Characteristics**

- **Salesman**

A person whose job is to sell the products in each territory (group of stores). Salesman orders the products required to the stores through this portal.

- **Distributor**

Distributor is an agent who supplies products or goods to the stores. Distributor supply products based on request from the salesman.

- **Users**

Admins, Salesman, and Distributors are the main users of this Web Portal/ Android Application

## **3. Detailed Functional Requirements**

- **Salesman**

- Can able to order products
- Can check the status of the placed orders

- **Distributors**

- Can accept the orders from Salesman
- Can process the orders

- **Schemes**
  - Offer details of products
  - Add/Update Schemes
  - Remove Schemes
- **Products**
  - List of Products and their Prices

## 4. System Requirements

### 4.1 Software Requirements

The Software Requirements of the project are

- **Frontend Development**
  1. Angular Framework
  2. Ionic Framework
  3. Angular Materials
  4. Materialize CSS
- **Backend Development**
  1. Django Framework
- **Databases**
  1. MySQL (AWS RDS)
  2. Redis (For Cache Manager)
- **Cloud Infrastructure**
  1. AWS EC2
  2. AWS RDS
  3. AWS Redis
  4. AWS Route 53
- **Project Building**
  1. Jenkins
- **Version Control**
  1. Bit Bucket
- **Testing**
  - Protractor Testing

#### 1. Angular Framework

Angular is a popular JavaScript framework for building web applications. It provides a powerful set of tools for creating dynamic user interfaces, handling user input, and managing application state. Here are 10 key features of Angular that may be useful for your project:

Features

- **Component-based architecture:** Angular follows a component-based architecture, where each component represents a distinct part of the application. This makes it easy to break up complex applications into smaller, more manageable pieces.
- **Two-way data binding:** Angular's two-way data binding allows for seamless communication between the model and the view. This means that changes in the model automatically update the view, and changes in the view automatically update the model.
- **Dependency injection:** Angular's dependency injection system makes it easy to manage dependencies and promote modular code. This helps keep your code organized and maintainable.
- **Reactive programming:** Angular uses RxJS, a library for reactive programming, to handle asynchronous events and data streams. This makes it easy to handle complex user interactions and manage data flow.
- **Routing:** Angular's built-in router makes it easy to manage navigation between different parts of the application. This includes support for lazy loading, guards, and other advanced features.
- **Forms:** Angular provides a powerful set of tools for working with forms, including support for template-driven and reactive forms, validation, and error handling.
- **Testing:** Angular includes built-in support for testing, including unit tests, integration tests, and end-to-end tests. This makes it easy to ensure that your application is working correctly and to catch bugs before they make it to production.
- **Internationalization:** Angular includes support for internationalization (i18n), making it easy to build applications that support multiple languages and regions.
- **Accessibility:** Angular is designed with accessibility in mind, making it easy to create applications that are accessible to all users.
- **Performance:** Angular includes a number of optimizations to ensure that your application is fast and responsive, including Ahead-of-Time (AOT) compilation, lazy loading, and change detection.

## **2.Ionic Framework**

- Ionic is a popular open-source framework for building hybrid mobile applications using web technologies such as HTML, CSS, and JavaScript. It provides a comprehensive set of tools for building

high-quality, cross-platform apps that run on both iOS and Android devices.

- One of the key features of Ionic is its extensive library of pre-built UI components, which allows developers to create attractive and responsive interfaces quickly and easily. Ionic also includes support for Cordova plugins, which allows access to native device features such as the camera, geolocation, and contacts.
- Ionic is built on top of Angular, a popular JavaScript framework, which provides a powerful set of tools for building dynamic web applications. This means that developers can use the same programming language and tools to build both web and mobile applications, making it easier to share code between projects and to maintain consistency across platforms.
- In addition, Ionic provides several tools for testing, debugging, and deploying applications, including a live reload feature that allows developers to see changes to the application in real-time as they make updates to the code.
- Overall, Ionic is a powerful and flexible framework that allows developers to build high-quality mobile applications quickly and efficiently using web technologies.

### **3. Angular Material**

- Angular Material is a UI component library for Angular that provides a set of pre-built UI components that follow the Material Design guidelines. Material Design is a design language developed by Google that emphasizes clean and modern design, with a focus on usability and accessibility.
- Angular Material includes a wide range of UI components, including buttons, forms, cards, toolbars, and more, that are designed to be easy to use and customize. All of the components are built using Angular and provide a consistent and reliable interface across different devices and platforms.
- In addition to the pre-built components, Angular Material also includes a set of tools for theming and customization, allowing developers to easily change the look and feel of their applications to match their brand or design requirements. Angular Material follows a modular architecture, allowing developers to include only

the components they need in their applications, which helps to keep the application size small and improves performance.

- Overall, Angular Material is a powerful and flexible library that provides a set of pre-built UI components that can help developers to build high-quality and modern web applications using Angular. It enables developers to create applications that look and feel great, are easy to use and navigate, and provide an optimal user experience.

#### **4.Materialize CSS**

- Materialize CSS is a modern front-end development framework that is designed to help developers create responsive, mobile-first web applications quickly and easily. It is built using Google's Material Design guidelines, which emphasize clean and modern design, with a focus on usability and accessibility.
- Materialize CSS includes a wide range of pre-built UI components, including buttons, forms, cards, navigation bars, and more, that are designed to be easy to use and customize. All of the components are built using CSS, JavaScript, and HTML, and provide a consistent and reliable interface across different devices and platforms.
- In addition to the pre-built components, Materialize CSS also includes a set of tools for theming and customization, allowing developers to easily change the look and feel of their applications to match their brand or design requirements. Materialize CSS follows a modular architecture, allowing developers to include only the components they need in their applications, which helps to keep the application size small and improves performance.
- Overall, Materialize CSS is a powerful and flexible framework that provides a set of pre-built UI components that can help developers to build high-quality and modern web applications quickly and efficiently. It enables developers to create applications that look and feel great, are easy to use and navigate, and provide an optimal user experience.

#### **5.Protractor Testing**

- Protractor is an end-to-end testing framework for Angular and AngularJS applications. It is built on top of WebDriverJS, which is a JavaScript implementation of the Selenium WebDriver API.

Protractor is designed to simulate user interactions with a web application and to test its functionality and performance.

- Protractor is specifically designed for testing Angular and AngularJS applications, which makes it an ideal choice for developers who are building web applications using these frameworks. It includes a wide range of features that make it easy to write and run tests, including support for asynchronous operations, automatic waiting for elements to appear on the page, and support for Angular-specific features such as data binding and dependency injection.
- Protractor also includes several tools for debugging and troubleshooting tests, including a browser-based debugging tool that allows developers to step through their code and inspect the state of the application at each step. It also includes support for running tests in parallel, which can help to speed up the testing process and improve efficiency.
- Overall, Protractor is a powerful and flexible testing framework that is specifically designed for Angular and AngularJS applications. It provides developers with a wide range of tools and features for writing and running tests, and helps to ensure that web applications are robust, reliable, and performant.

## **6.Amazon Web Services**

- Amazon Web Services (AWS) is a comprehensive cloud computing platform that provides a wide range of services for building, deploying, and managing web applications and services. AWS is owned and operated by Amazon, and provides a scalable and reliable infrastructure for running applications and services in the cloud.
- AWS provides a wide range of services, including compute, storage, database, networking, security, analytics, and machine learning, among others. These services are provided on a pay-as-you-go basis, which means that developers only pay for the resources they use, and can easily scale up or down as needed.
- AWS provides a number of benefits for developers and organizations, including:
  - Scalability: AWS provides a highly scalable infrastructure that can easily accommodate changes in traffic and demand, allowing applications to scale up or down as needed.



- Reliability: AWS provides a highly reliable infrastructure that is designed to minimize downtime and ensure that applications are always available.
- Security: AWS provides a secure infrastructure that is designed to protect applications and data from unauthorized access and other security threats.
- Flexibility: AWS provides a wide range of services and tools that are designed to support a wide range of use cases and development environments.

Overall, AWS is a powerful and comprehensive cloud computing platform that provides developers and organizations with the tools and services they need to build and manage web applications and services in the cloud.

#### **4.2 Hardware Requirements**

Works on Mobile or Laptop which is having a browser. The Device should be able to run JavaScript. JavaScript should be enabled to use the website.

#### **4.3 User Requirements**

User Should have a device that can run JavaScript applications. It is recommended to have a camera to the device to upload some photos of outlets.

#### **4.4 Input and Output Requirements**

For Text Input it is advised to use any keyboard. For pictorial inputs it is advised to having any camera. For output it should have some display and a browser.

### **5. Non-Functional Requirements**

Following Non-Functional Requirements will be there in the insurance to the internet:

- Secure access to Student's and Warden confidential data.
- 24X7 availability.
- Better component design to get better performance at peak time.

- Flexible service-based architecture will be highly desirable for future extension.

Non-Functional Requirements define system properties and constraints. Various other Non-Functional Requirements are:

- **Accessibility**
- **Availability**
- **Portability**
- **Recoverability**
- **Reliability**
- **Security**
- **Expandability**
- **Maintainability**

### **My Learning throughout the Internship**

1. **JavaScript – 1 Week**
2. **Materialize CSS – 2 Days**
3. **TypeScript – 1 Week**
4. **Angular Course – 8 Weeks**
5. **Tasks**
  - a. **Created 2 Components in a Module**
  - b. **Created a Login Page using Materialize CSS**
  - c. **Created Login Page using Angular, Ionic and Firebase**

### **Login Component**

Login

Email ID\*

Password\*

Submit

Reset

Don't have an Account? [Signup](#)

Signup Component

Sign Up

Email ID\*

Username\*

Password\*

Submit

Reset

Already Have an Account [Login](#)

## Login With Incorrect Credentials

Login

Email ID\*

Password\*

Submit

Reset

Don't have an Account? [Signup](#)

Password is Incorrect

