

Organizational Hierarchical Management (SalesForce)

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**DEPARTMENT OF INFORMATION TECHNOLOGY
AHMEDABAD
MAY 2017**

Organizational Hierarchical Management

(SalesForce)

Major Project

Submitted in partial fulfilment of the requirements

For the degree of

Bachelors of Technology in Information Technology

By

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DEPARTMENT OF INFORMATION TECHNOLOGY
AHMEDABAD
MAY 2017

CERTIFICATE

This is to certify that the Major Project entitled “Organizational Hierarchical Management” submitted by Ayushi Patel (13BIT035) and Vidhi Sharma (13BIT053), towards the partial fulfillment of the requirements for the degree of Bachelors of Technology in Information Technology of Nirma University Institute of Technology, Ahmedabad is the record of work carried out by them under my supervision and guidance. In my opinion, the submitted work has reached a level required for being accepted for examination. The results embodied in this major project, to the best of my knowledge, haven’t been submitted to any other university or institution for award of any degree or diploma.

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At the last Finally, we would like to thanks all those who directly and indirectly supported and helped us in completing Major Project Report in time.

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ABSTRACT

A project organization is a structure that facilitates the coordination and implementation of project activities. Its main reason is to create an environment that fosters interactions among the team members with a minimum amount of disruptions, overlaps and conflict. One of the important decisions of project management is the form of organizational structure that will be used for the project.

Each project has its unique characteristics and the design of an organizational structure should consider the organisational environment, the project characteristics in which it will operate, and the level of authority the project manager is given. A project structure can take on various forms with each form having its own advantages and disadvantages.

One of the main objectives of the structure is to reduce uncertainty and confusion that typically occurs at the project initiation phase. The structure defines the relationships among members of the project management and the relationships with the external environment. The structure defines the authority by means of a graphical illustration called an organization chart.

A properly designed project organization chart is essential to projectsuccess. An organization chart shows where each person is placed in the project structure. An organization chart is drawn in pyramid form where individuals located closer to the top of the pyramid have more authority and responsibility than members located toward the bottom. It is the relative locations of the individuals on the organization chart that specifies the working relationships, and the lines connecting the boxes designate formal supervision and lines of communication between the individuals.

Creating the project structure is only a part of organizing the project; it is the actual implementation and application that takes the most effort. The project organization chart establishes the formal relationships among project manager, the project team members, the development organization, the project, beneficiaries and other project stakeholders. This organization must facilitate an effective interaction and integration among all the major project participants and achieve open and effective communication among them.

The project creates a project structure that will meet the various project needs at different phases of the project. The structure cannot be designed too rigid or too lose, since the project organization's purpose is to facilitate the interaction of people to achieve the project ultimate goals within the specified constraints of scope, schedule, budget and quality. The objective in designing a project structure is to provide a formal environment that the project manager can use to influence team members to do their

best in completing their assignment and duties. The structure needs to be designed to help develop collaboration among individual team members; all in a cost effective way with a minimum of duplication of effort and overlaps.

The organization chart has a limited functionality; it only shows the hierarchical relationship among the team members but does not shows how the project organization will work, it is for that reason that the design should consider factors that will facilitate the operation of the structure; these include communications, information flows, coordination and collaboration among its members.

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Chapter 1

Introduction

This chapter contain basic information about the project and company. Its also includes project profile. A project organization is a structure that facilitates the coordination and implementation of project activities. Hierarchical organization structure with each node is an organization unit (title,description) field. This approach has helped to make Sales Cloud the world's number 1 CRM system

1.1 About The Company

1.1.1 Introduction of the company

Aruvio offers innovative and integrated cloud based applications that improve the efficiency and consistency of corporate governance, risk management, regulatory compliance, and 3rd party (GRC) management processes. Mid-tier pharmaceutical, medical device manufacturers, healthcare service providers, insurers, financial services, information technology, and Hi-tech manufacturers & service providers use Aruvio to automate and streamline risk, compliance, SOP, policy, training, corrective and preventive actions tracking, vendor risk management, anti-bribery risk management, and audit programs across their enterprise. Built upon force.com (by Salesforce) our applications provide enterprise-class scalability, reliability, extensibility, security, and mobility, at a fraction of the costs of legacy solutions.

1.1.2 Quality policy

Aruvio Inc. provides organizations with enterprise scale, easy-to-use and cost-effective governance, risk, and compliance (GRC) solutions with support for more than 900 compliance regulations, frameworks, and standards.

1.2 The System- SalesForce

1.2.1 Definition of System

Organizational Role Hierarchy

Hierarchical organization structure with each node is an organization unit (title,description) field

1.2.2 Purpose And Objective

To Build hierarchical organization structure with each node is an organization unit (title, description) field.

Provide UI to visualize and build the org structure; maybe drag and drop to move an org unit from one parent to another parentEasy/Efficient way to get list of all ancestors of a node. Plan is to utilize it in future to map organization structure in Aruvio and provide attaching an asset/assessment to one or more org units for risk/compliance aggregation at org unit level

1.2.3 Introduction About The Technology Used

Salesforce began with the vision of reinventing Customer Relationship Management (CRM). Since then we've changed the way enterprise software is delivered and used, changing the industry forever. All Salesforce products run entirely in the cloud so there's no expensive setup costs, no maintenance and your employees can work from any device with an internet connection – smartphone, tablet or laptop.

It makes CRM easy to use for small businesses and large scale enterprises. This approach has helped to make Sales Cloud the world's number 1 CRM system. But Salesforce doesn't start and end with CRM for Sales and Marketing. Our platform enables you to manage all interactions with your customers and prospects, so your organisation can grow and succeed. That's why we call it the Customer Success Platform.



1.1 SalsForce Basic Diagram

SalesForce connects to the customers in a whole new way. Build more meaningful and lasting relationships - better understand their needs, identify new opportunities to help, address any problems faster and deploy customer focused apps lightning fast. With a single view of every customer interaction you can sell, service and market like never before.



Get more leads, close more deals, and do more faster.



Increase customer loyalty, retention, and satisfaction.



Connect 1-to-1 with customers on social, mobile, and more.



Anticipate customer wants based on past behavior.



Monitor and manage your business anytime, from anywhere.

A. Components of SalesForce

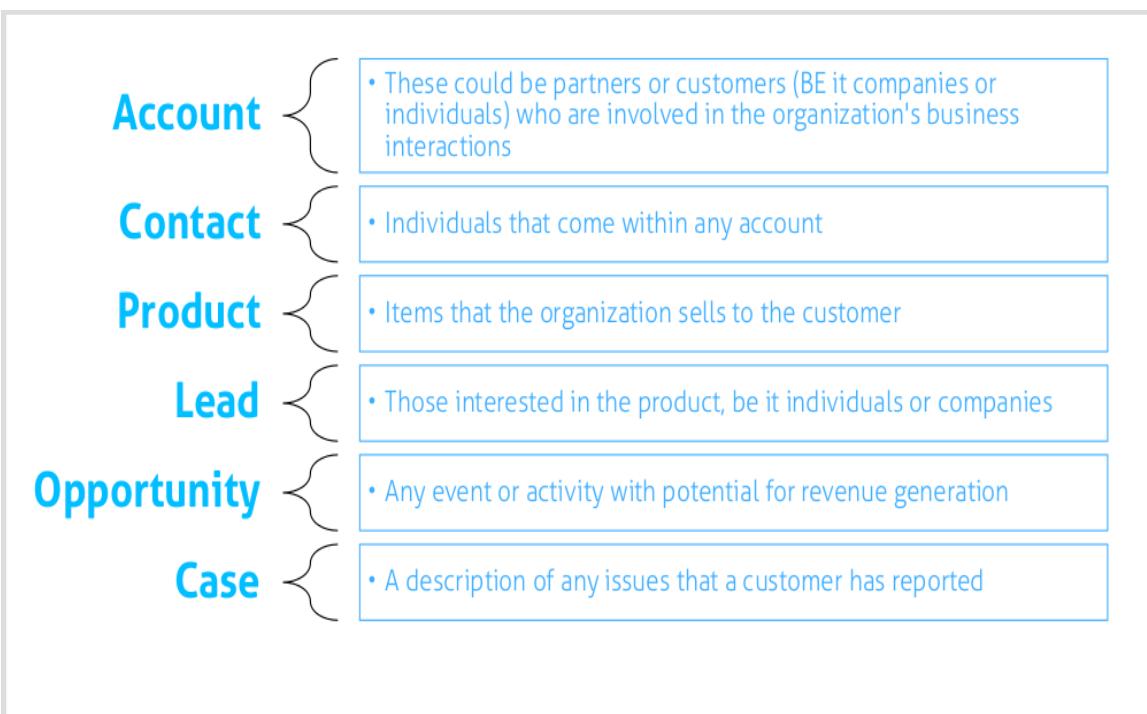
Declarative	
User Interface	Create forms and page layouts using drag-and-drop tools in the Page Layout editor.
Lightning Process Builder	Create rules that take time-dependent actions and automate multi-step processes using Workflows. Automate the processes your organization uses to approve Salesforce records using Approvals.
Schema Builder	Customize objects and create relationships between them using drag-and-drop tools in Schema Builder.
Reports and Dashboards	Present data quickly and comprehensively using Report Builder. Show data from source reports as visual components using Dashboards.

1.2 Components of SalesForce

Programmatic	
Apex	Develop with an object-oriented, Java-like programming language that's optimized and tuned for accessing Salesforce database objects.
Visualforce	Define user interface components and construct visual elements using a markup language similar to HTML, thus allowing the user to interact with and modify data from the database.
SOQL	Look at a specific set of data, like all contacts in a geographic region, using Force.com's object database query language, similar in syntax to SQL. SOQL is used in many of the Salesforce APIs.
Lightning Components	Develop dynamic web apps for mobile and desktop devices, using a modern, component-based UI framework.

1.3 Components of SalesForce

B. Standard Objects Used in SalesForce



1.4 Standard Objects Used in SalesForce

The standard objects in Salesforce (cont.)

Solution	• The resolution of a customer problem. Salesforce's solution knowledge base is the collection of all such solutions
Forecast	• Estimation of the organization's quarterly revenue
Report	• Analysis of the standard or custom objects' data
Dashboard	• Representation of reports as a set of graphical data or charts
Activity	• All the organization's tasks as well as calendar events within the Activity object
Campaign	• All marketing projects, for example- mass emailing

1.5 Standard Objects Used in SalesForce

C. SalesForce CRM Benefits

- Low cost, low risk cloud based solution software service to buy.
- Complete solution includes feature-rich solution for marketing, sales, service, partner management and community management.
- Fast result because it drain resources on high value, low cost and focus on innovation

1.2.4 Proposed System

Role Hierarchies

The first way that we can share access to records is by defining a role hierarchy. Similar to an org chart, a role hierarchy represents a level of data access that a user or group of users needs. Users assigned to roles near the top of the hierarchy (normally the CEO, executives, and other management) get to access the data of all the users who fall directly below them in the hierarchy. The role hierarchy enables these behaviors:

A manager will always have access to the same data as his or her employees,

regardless of the org-wide default settings. For custom objects, you can override this behavior by deselecting the Grant Access Using Hierarchies checkbox. However, we want our role hierarchy to apply to all of our custom objects, so leave the checkboxes selected.

Users who tend to need access to the same types of records can be grouped together—we'll use these groups later when we talk about sharing rules.

To illustrate, let's take a look at a portion of the role hierarchy for Universal Containers: The complete system is to be integrated in SalesForce Lighting.

1.2.4.1 SalesForce Lighting

The Lightning Component framework is a UI framework for developing dynamic web apps for mobile and desktop devices. It's a modern framework for building single-page applications engineered for growth.

The framework supports partitioned multi-tier component development that bridges the client and server. It uses JavaScript on the client side and Apex on the server side.

Lightning includes the Lightning Component Framework and some exciting tools for developers. Lightning makes it easier to build responsive applications for any device.

Lightning includes these technologies:

Lightning components give you a client-server framework that accelerates development, as well as app performance, and is ideal for use with the Salesforce mobile app and Salesforce Lightning Experience. The Lightning App Builder empowers you to build apps visually, without code, quicker than ever before using off-the-shelf and custom-built Lightning components. You can make your Lightning components available in the Lightning App Builder so administrators can build custom user interfaces without code. The benefits include an out-of-the-box set of components, event-driven architecture, and framework optimized for performance.

Open Source Aura Framework

The Lightning Component framework is built on the open source Aura framework. The Aura framework enables you to build apps completely independent of your data in Salesforce.

Components

Components are the self-contained and reusable units of an app. They represent a reusable section of the UI, and can range in granularity from a single line of text to an entire app.

Events

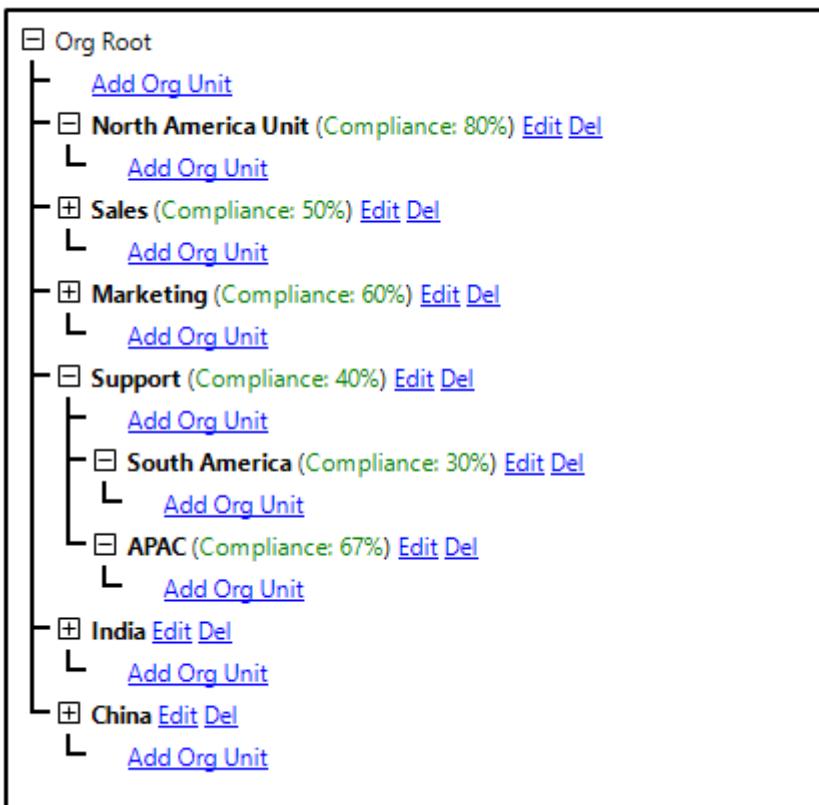
Event-driven programming is used in many languages and frameworks, such as

JavaScript and Java Swing. The idea is that you write handlers that respond to interface events as they occur. The Developer Console provides tools for developing your components and applications.

1.3 Project Profile

1.3.1 Project Title - Organizational Hierarchy Management

Hierarchical organization structure with each node is an organization unit (title, description) field



1.6 Organizational Hierarchy Management

1.3.2 Scope of the Project

Users at any role level can view, edit, and report on all data that's owned by or shared with users below them in the role hierarchy, unless your Salesforce org's sharing model for an object specifies otherwise. Specifically, in the Organization-Wide Defaults related list, you can disable the **Grant Access Using Hierarchies** option for a custom object. When disabled, only the record owner and users who are granted access by the

organization-wide defaults receive access to the object's records.

Roles determine user access to cases, contacts, and opportunities, regardless of who owns those records. The access level is specified on the Role Edit page. For example, you can set the contact access so that users in a role can edit all contacts associated with accounts that they own, regardless of who owns the contacts. And you can set the opportunity access so that users in a role can edit all opportunities associated with accounts that they own, regardless of who owns the opportunities.

After you share a folder with a role, it's visible only to users in that role, not to superior roles in the hierarchy.

1.3.3 Salient Features of the project

Each role in the hierarchy will just represent a level of data access that a user or group of users needs.

Users who tend to need access to the same types of records can be grouped together—we'll use these groups later when we talk about sharing rules.

1.3.4 Project Team

Ms Ayushi Patel (13BIT035)

Ms Vidhi Sharma (13BIT053)

Project Guide: Ms Nupur Modi

Mr Sagar Thorias

Chapter 2

System Analysis

This chapter says about system analysis. It contains technical feasibility and requirements analysis. Financial and Economical feasibility helps decision-makers determine the positive economic benefits to the organization that the proposed system will provide, and helps quantify them. The system made is capable of automatically updating itself with the release of new version of Salesforce.

2.1 Feasibility Study

2.1.1 Operational feasibility

- Reliability

The System provides complete access control. Depending on the organization's sharing settings, roles can control the level of visibility that users have into the organization's data. Users at any given role level can insert, view, edit, and report on all data owned by or shared with users below them in the role hierarchy, unless your organization's sharing model for an object specifies otherwise.

We will even specify whether users have access to the data owned by or shared with their respective subordinates in the hierarchy. For example, the role hierarchy automatically grants record access to users above the record owner in the hierarchy.

- Maintainability

The system made is capable of automatically updating itself with the release of new version of Salesforce.

- Supportability

Supported Browsers for Salesforce Classic

Salesforce Classic is supported with Microsoft® Internet Explorer® version 9, 10, and 11, Apple® Safari® version 8.x, 9.x, and 10.x on macOS, and Microsoft Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. There are some limitations.

Supported Browsers for Lightning Experience

Lightning Experience is supported with Apple® Safari® version 9.x and 10.x on Mac OS X, and Microsoft® Edge for Windows® 10. The most recent stable versions of Mozilla® Firefox® and Google Chrome™ are also supported. Microsoft® Internet Explorer® version 11 is retiring beginning in Summer '16. If you're using Microsoft® Internet Explorer® versions 9–10, you're redirected to Salesforce Classic. There are some limitations.

2.1.2 Technical feasibility

Hardware and the software requirements of the proposed system are completely minimal only a laptop and internet connection is required to complete the Project. Therefore no such technical infeasibility was faced.

2.1.3 Financial and Economical feasibility

The System helps organizations assess the viability, cost, and benefits associated with projects before financial resources are allocated. It also serves as an independent project assessment, and enhances project credibility, as a result. It helps decision-makers determine the positive economic benefits to the organization that the proposed system will provide, and helps quantify them. This assessment typically involves a cost/benefits analysis of the project.

2.1.4 Handling Infeasible Work

Implementing Drag and Drop functionality in the Organization Tree Screen is difficult.

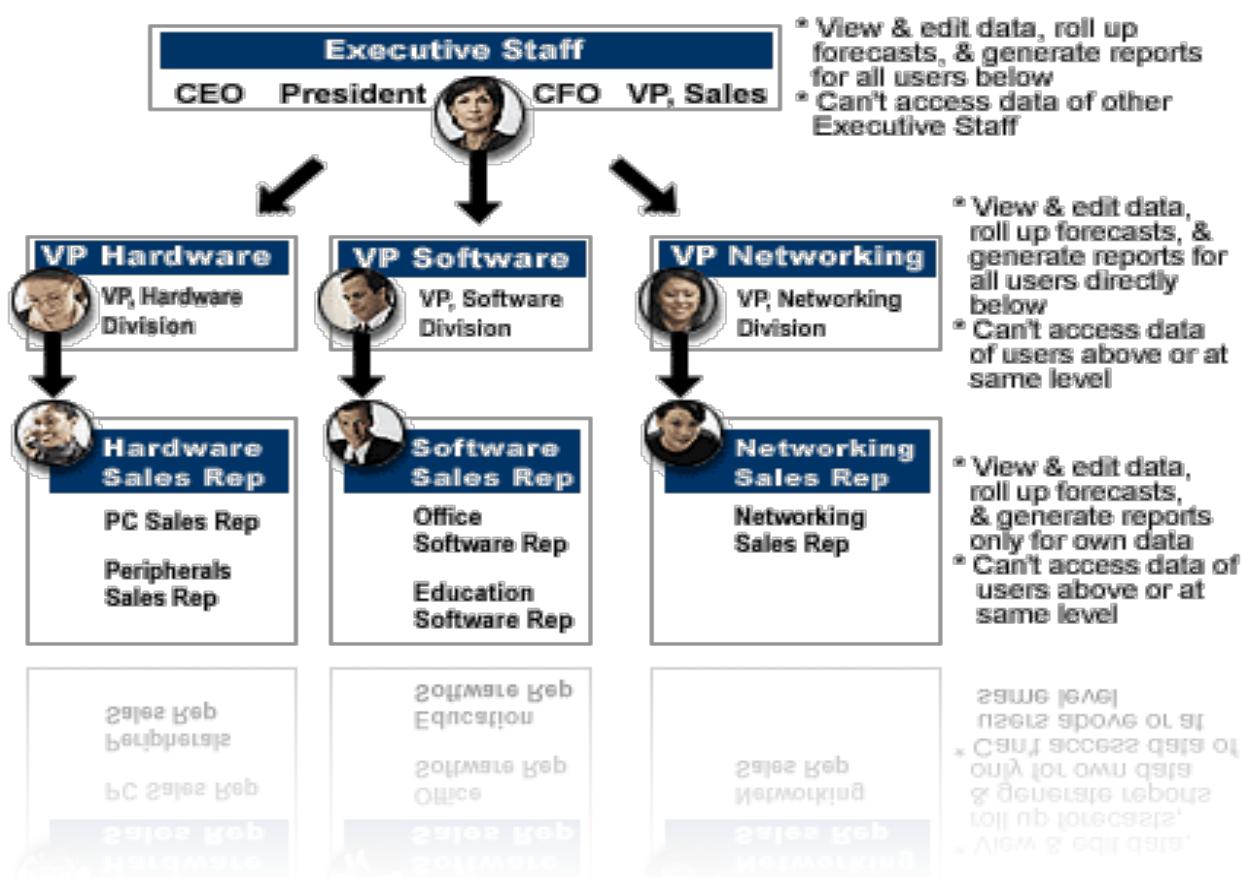
2.2 Requirement Analysis

Different methods of Facts Finding Technique are:

- Interview.
- Questionnaire.
- Record Review.
- Observation.

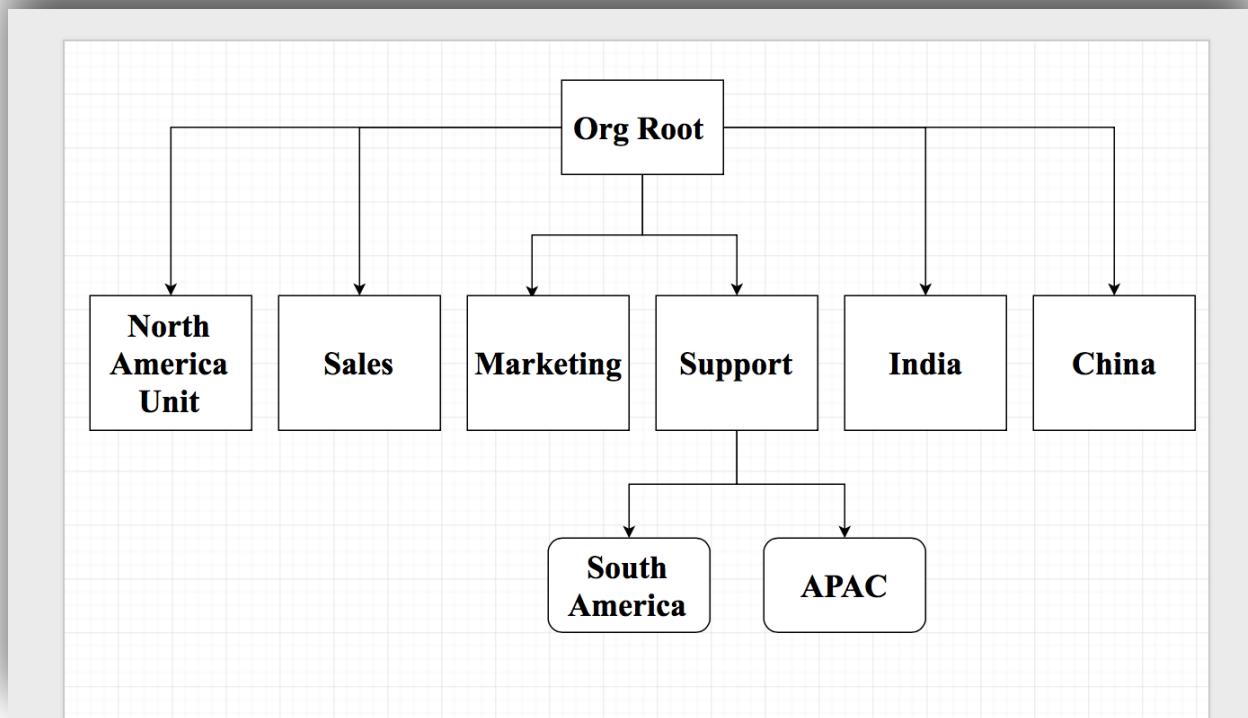
But for our project only Record review and Observation methods were needed to be used.

2.3 Context Diagram



2.1 Context Diagram

2.4 Analysis Diagram



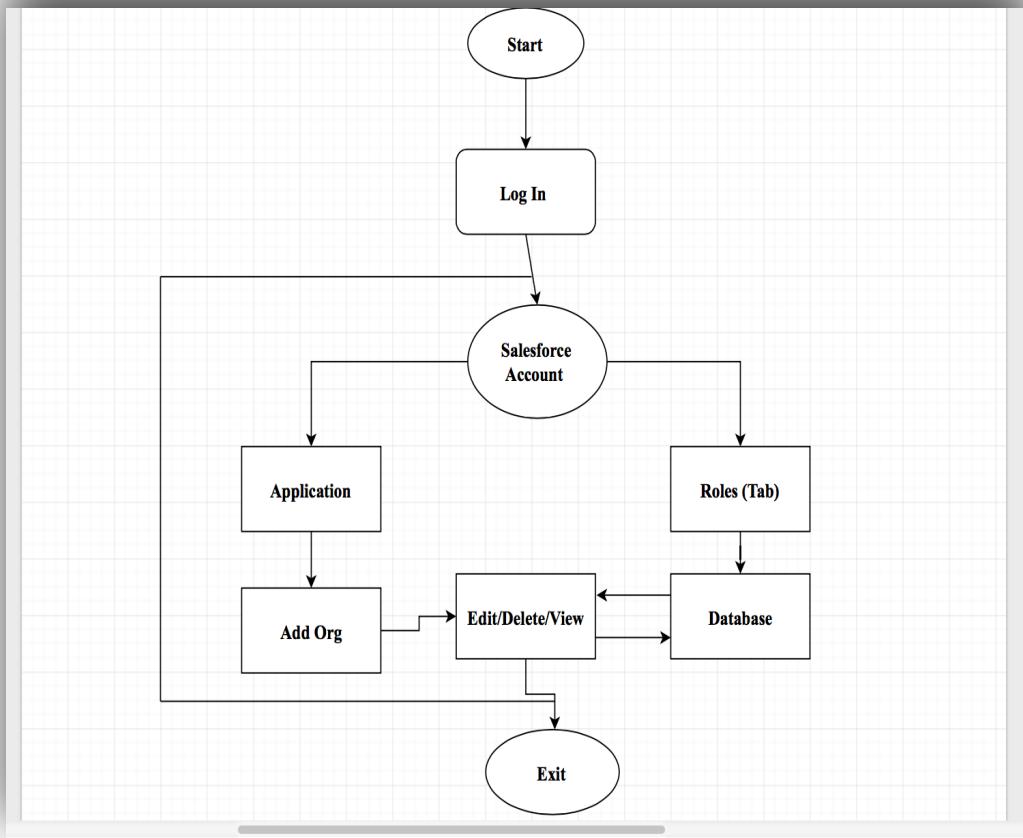
2.2 Analysis Diagram

Chapter 3

System Design

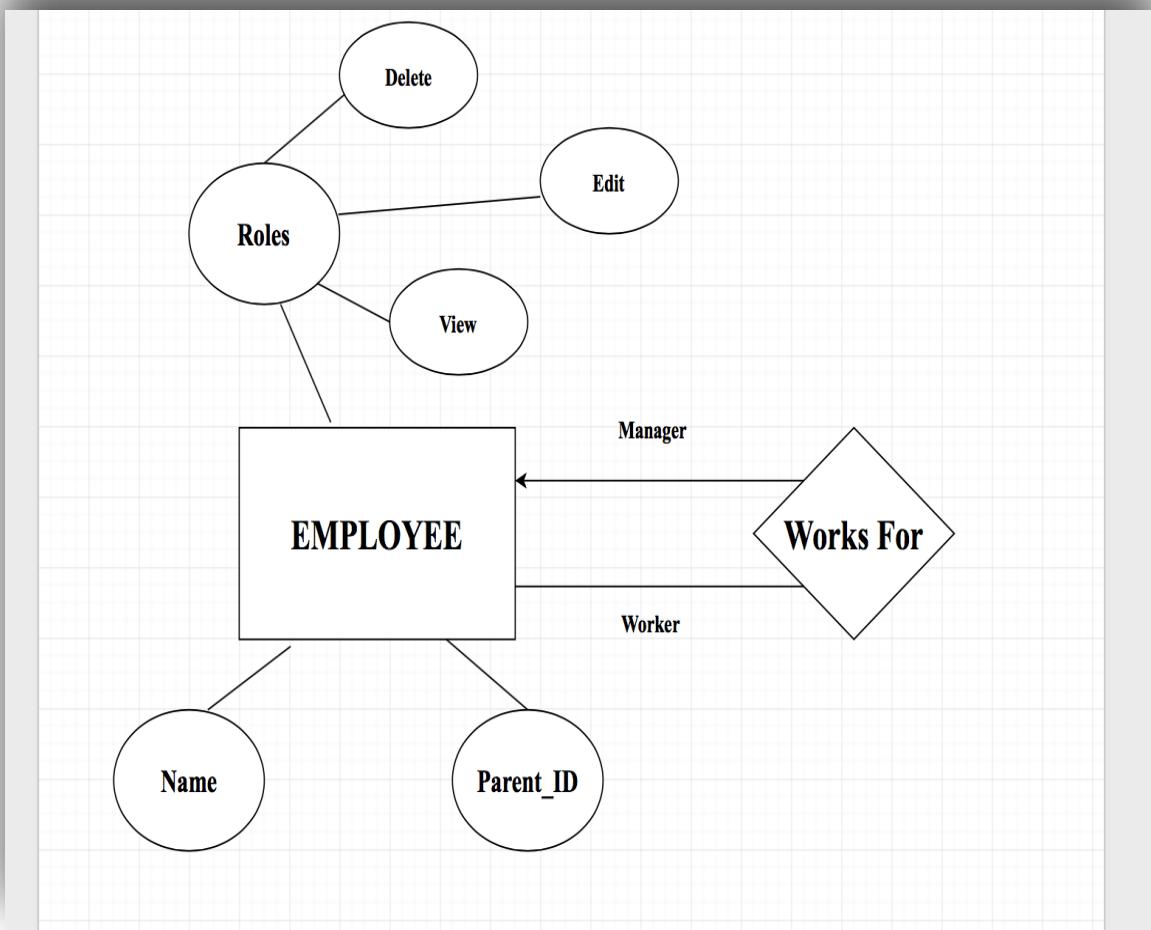
This chapter contain different types of flow charts. A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modelling its process aspects. An entity relationship diagram (ERD) show the relationships of entity sets stored in a database. Data dictionary is the textual description of data objects and their inter-relationships. It is commonly used in confirming data requirements and for database developers to create and maintain a database system. A data dictionary describes the physical attributes of a data element

3.1 System Flow



3.1 System Flow

3.2 Entity Relationship Diagram



3.2 Entity Relationship Diagram

3.3 Data Dictionary

Data_Dictionary					
Field_Name	Data Type	Data Format	Field Size	Description	Example
Roles Name	Text	XXXXXXXX	100	Main Role Name	Sales
Parent	Text	XXXXXXXX	50	Who is a Parent of Current Role	Aruvio (Aruvio is a parent of Sales)
Name	Text	XXXXXXXX	50	Specific Name	Samir

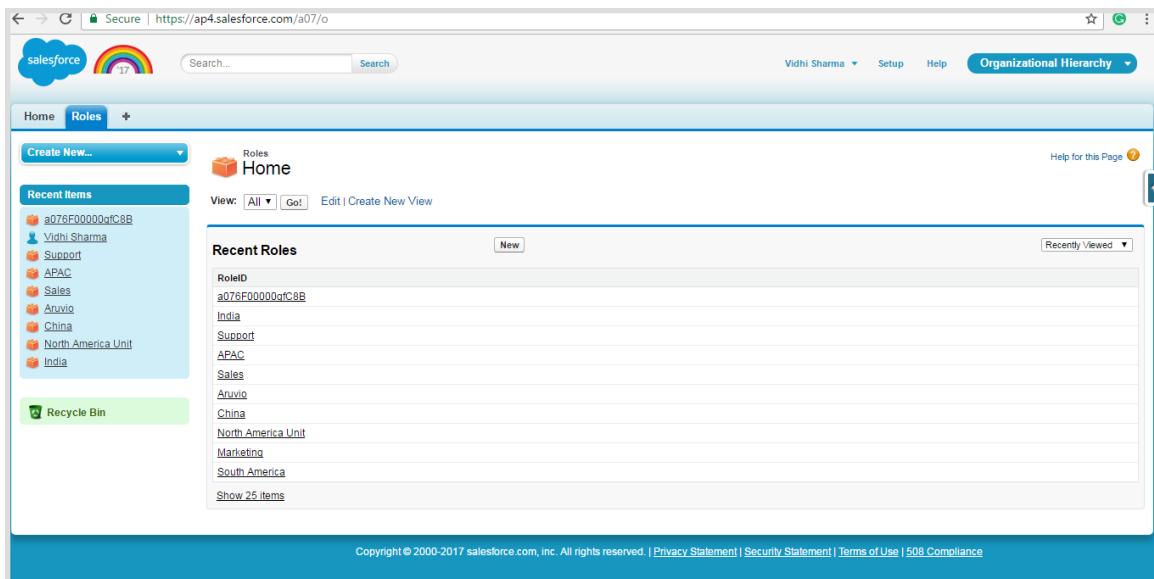
3.3 Data Dictionary

Chapter 4

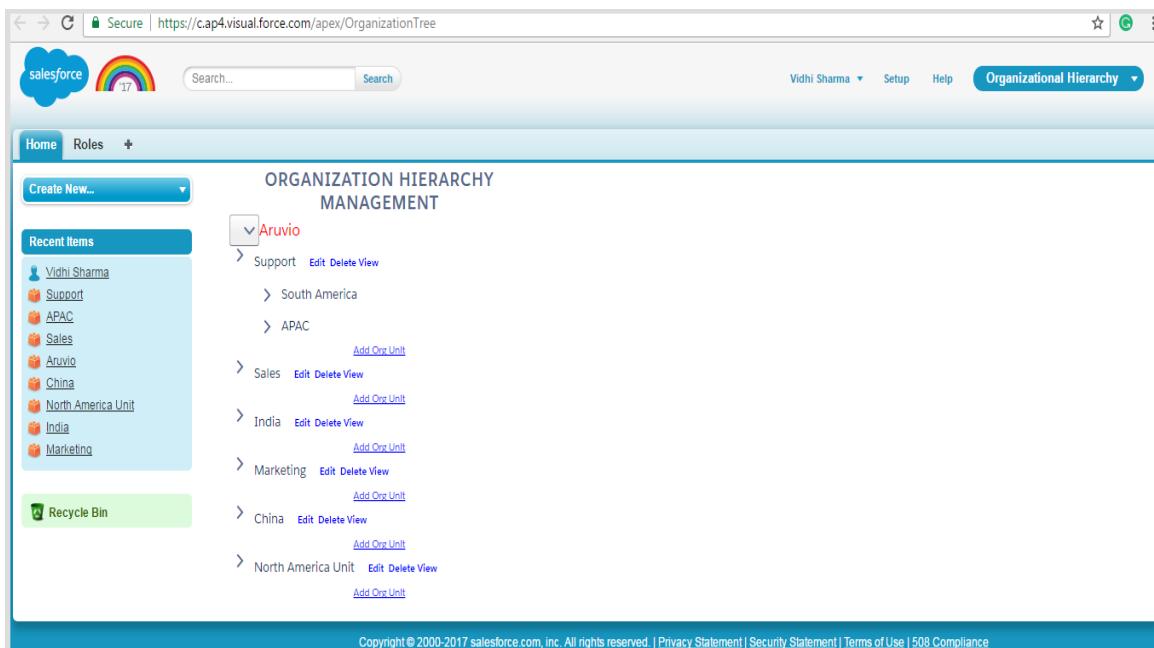
User Manual

Here screenshots of project and example application have been attached.

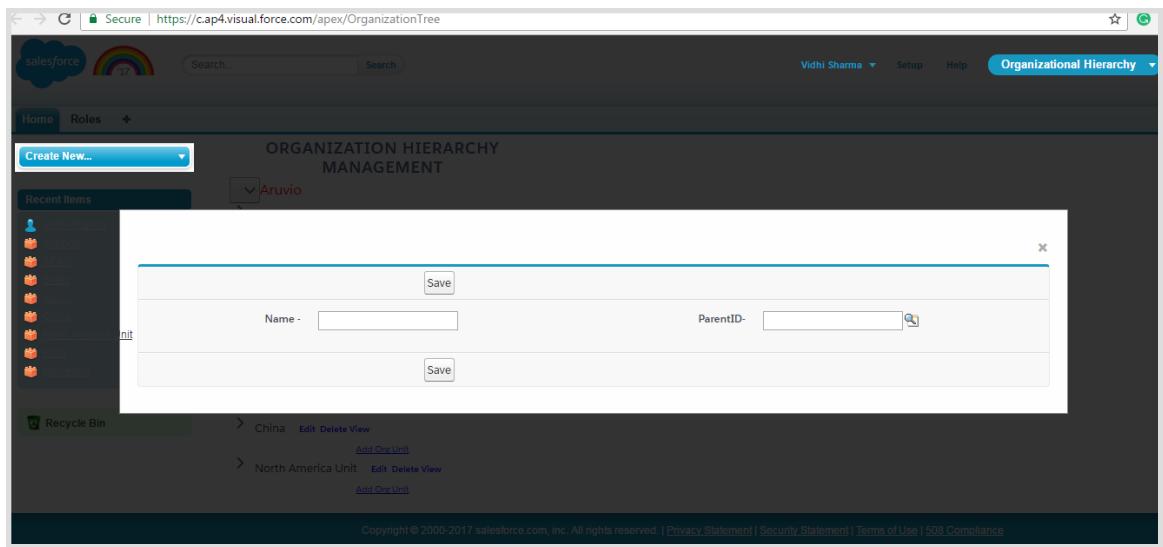
4.1 Screenshots



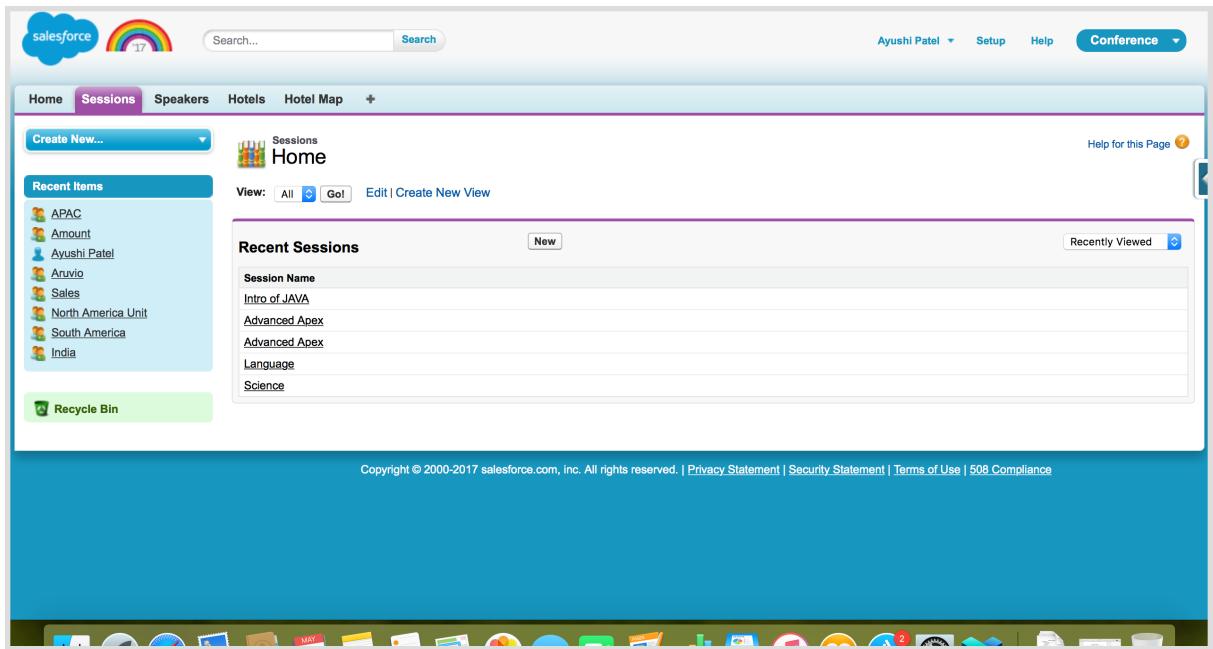
4.1 Org(Database)



4.2 1st Screen appearing after the client login(having access control)



4.3 Pop up obtained on pressing the add link



4.4 Example application - Sessions (Database)

Session Detail

Session Name	Intro of JAVA	Edit	Delete	Clone
Session Date	1/31/2017			
Description	Nice			
Level	Beginner			
Created By	Ayushi Patel, 1/30/2017 2:15 AM	Last Modified By	Ayushi Patel, 1/30/2017 2:15 AM	

Session Speakers

Action	Speaker Number	First Name	Last Name
Del	SP-00002	Vidhi	Sharma

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4.5 Sessions (Individual Detail)

Recent Speakers

Speaker Number
SP-00006
SP-00005
SP-00002
SP-00004
SP-00003
SP-00001

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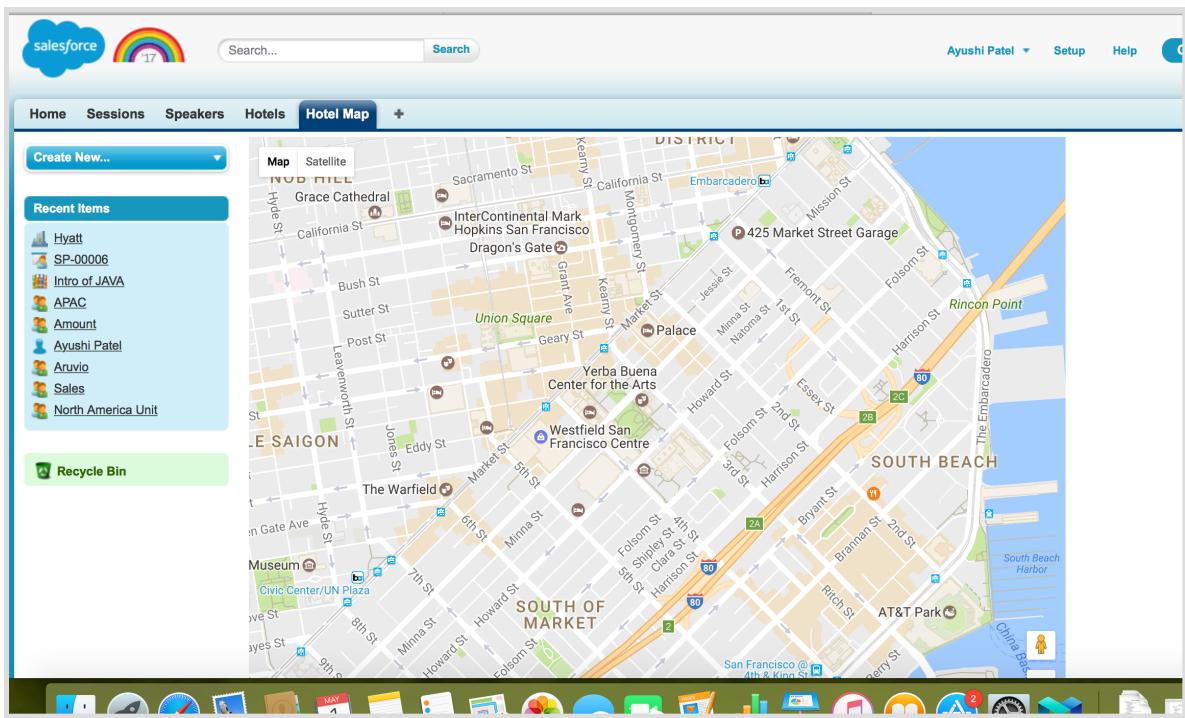
4.6 Example application - Speakers (Database)

The screenshot shows the Salesforce interface for managing speakers. The top navigation bar includes links for Home, Sessions, Speakers (which is the active tab), Hotels, Hotel Map, and a Create New... button. A sidebar on the left lists recent items such as SP-00006, Intro of JAVA, APAC, Amount, Ayushi Patel, Aruvio, Sales, North America Unit, and South America. The main content area displays the 'Speaker Detail' for SP-00006, showing fields for Speaker Number (SP-00006), First Name, Last Name, Email, Bio, Picture Path, and Creation Date (Ayushi Patel, 3/3/2017 1:11 AM). Buttons for Edit, Delete, and Clone are available. The 'Session Speakers' section below shows no records. The bottom of the screen features a decorative footer bar with various icons.

4.7 Speakers (Individual Detail)

The screenshot shows the Salesforce interface for managing hotels. The top navigation bar includes links for Home, Sessions, Speakers, Hotels (which is the active tab), Hotel Map, and a Create New... button. A sidebar on the left lists recent items such as SP-00006, Intro of JAVA, APAC, Amount, Ayushi Patel, Aruvio, Sales, North America Unit, and South America. The main content area displays the 'Home' section for Hotels, showing a 'Recent Hotels' list with entries for Hyatt, Hilton Union Square, and Marriott Marquis. A 'New' button is available to add a new hotel. The bottom of the screen features a decorative footer bar with various icons.

4.8 Example application - Hotels (Database)



4.9 Application of Map

4.2 Tool Used

The project contains HTML, CSS, JavaScript as a language in Visual Force page.

Apex language is used in SalesForce. It is like JAVA code.

Chapter 5

Testing

Unit testing was carried out in the following way

Automate Quality Assurance in the Cloud

Salesforce plays a critical role in how many leading companies do business. This cloud-based application is extensible, highly configurable, and frequently integrated with numerous other applications.

TEST SALESFORCE THE WAY YOU USE IT

Worksoft's software for automated functional testing is designed to validate your customized Salesforce.com functionality and its integration with your other enterprise apps like Oracle and SAP. In today's landscape environment, it's not just about testing individual apps, it's about the unique, complex business processes that support your company's strategy. Worksoft ensures your end-to-end Salesforce business processes still work when technology changes.

Whether you're using Salesforce to manage leads and territories, track opportunities and orders, or maintain customer information, adopting Worksoft test automation allows organizations to validate that critical processes are executed with the highest quality. Reliable quality assurance across these processes means companies can accelerate IT projects, improve staff efficiency, and avoid business disruption.

AUTOMATE SALESFORCE TEST COVERAGE

Tackle the change that comes with cloud apps. Companies using cloud-based applications face new risks as cloud apps are updated frequently. With apps like Salesforce, an organization has less control over the timing of software changes and where those software changes occur. The window to manage changes in the cloud - and across the enterprise - can be very short. Testing changes and their impact on business processes is even more critical than for on premise – because updates and upgrades happen on someone else's schedule! Worksoft test automation software ensures that your business processes continue to work as designed, every day, across every app and technology.

Chapter 6

Future Work

A project organization is a structure that facilitates the coordination and implementation of project activities. Its main reason is to create an environment that fosters interactions among the team members with a minimum amount of disruptions, overlaps and conflict. One of the important decisions of project management is the form of organizational structure that will be used for the project.

The organization chart has a limited functionality; it only shows the hierarchical relationship among the team members but does not show how the project organization will work, it is for that reason that the design should consider factors that will facilitate the operation of the structure; these include communications, information flows, coordination and collaboration among its members.

Plan is to utilise it in future to map organization structure in Aruvio and provide attaching an asset/assessment to one or more org units for risk/compliance aggregation at org unit level.

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