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T.E. Computer Engineering
(Course-2019)
AS PER THE CURRICULUM OF

SAVITRIBAI PHULE PUNE UNIVERSITY

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Exam Seat No: T191164230

Academic Year: 2022-23

VISION

To build a strong research and learning environment producing globally competent professionals and innovators who will contribute to the betterment of the society

MISSION

- To create and sustain an academic environment conducive to the highest level of research and teaching.
- To provide state-of-the-art laboratories which will be up to date with the new developments in the area of computer engineering?
- To organize competitive event, industry interactions and global collaborations in view of providing a nurturing environment for students to prepare for a successful career and the ability to tackle lifelong challenges in global industrial needs.
- To educate students to be socially and ethically responsible citizens in view of national and global development.

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CERTIFICATE

This is to certify that Mr. **Minhaj Ahmed Ansari Faheem Ahmed**. of Class ***TE Computer*** Seat No. ***T191164230*** Has completed all the practical work in the subject ***Cloud Computing Lab*** satisfactorily in the ***Department of Computer Engineering*** as prescribed by Savitribai Phule Pune University, in the academic year **2022 – 23.**

Staff In-charge **Head of the Department** **Principal**

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3	Creating an Application in SalesForce.com using Apex programming Language.			
4	Design and develop custom Application (Mini Project) using Salesforce Cloud.			

Experiment No.:01

Title:

Case study on Microsoft azure to learn about Microsoft Azure is a cloud computing platform and infrastructure, created by Microsoft, for building, deploying and managing applications and services through a global network of Microsoft-managed data centers.

Theory:

1. INTRODUCTION

Azure is Microsoft's cloud platform, just like Google has it's Google Cloud and Amazon has its Amazon Web Service or AWS. Generally, it is a platform through which we can use Microsoft's resource. For example, to set up a huge server, we will require huge investment, effort, physical space and so on. In such situations, Microsoft Azure comes to our rescue. It will provide us with virtual machines, fast processing of data, analytical and monitoring tools and so on to make our work simpler. The pricing of Azure is also simpler and cost-effective. Popularly termed as "Pay As You Go", which means how much you use, pay only for that.

Microsoft Azure is a cloud computing platform that provides a wide variety of services you can use without buying and provisioning your own hardware. With Azure, businesses can easily implement the three cloud service models and gain unlimited access to storage, network, and application services allowing them to focus on building great solutions without the need to worry about how the physical infrastructure is assembled.

Microsoft unveiled Windows Azure in early October 2008 but it went to live after February 2010. Later in 2014, Microsoft changed its name from Windows Azure to Microsoft Azure. Azure provided a service platform for .NET services, SQL Services, and many Live Services. Many people were still very skeptical about "the cloud". As an industry, we were entering a brave new world with many possibilities. Microsoft Azure is getting bigger and better in coming days. More tools and more functionality are getting added. It has two releases as of now. Its famous version **Microsoft Azure v1** and later **Microsoft Azure v2**. Microsoft Azurev1 was more like JSON script driven then the new version v2, which has interactive UI for simplification and easy learning. Microsoft Azure v2 is still in the preview version.

2. Types of Azure Clouds

There are mainly three types of clouds in Microsoft Azure are:

1. PAAS
2. SAAS
3. IASS

2.1 Azure as IaaS

IaaS (Infrastructure as a Service) is the foundational cloud platform layer. This Azure service is used by IT administrators for processing, storage, networks or any other fundamental computer operations. It is one of the Azure topics to learn that allows users to run arbitrary software.

Advantages:

- It offers efficient design time portability
- It is advisable for the application which needs complete control
- IaaS offers quick transition of services to clouds
- The apparent benefit of IaaS is that it frees you from the concerns of setting up many physical or virtual machines.
- Helps you to access, monitor and manage datacenters

Disadvantages of IaaS:

- Plenty of security risks from unpatched servers
- Some companies have defined processes for testing and updating on-premise server's vulnerabilities. This cannot be done with Azure.

2.2 Azure as PaaS

PaaS is a computing platform which includes an operating system, programming language execution environment, and database or web services. This Azure service is used by developers and application providers.

As its name suggests, this platform is provided to the client to develop and deploy software. It is one of the Azure basic concepts which allow the client to focus on application development instead of worrying about hardware and infrastructure. It also takes care of operating systems, networking and server's issues.

Advantages:

- The total cost is low as the resources are allocated on demand and servers are automatically added or subtracted.
- Azure is less vulnerable because servers are automatically checked for all known security issues
- The entire process is not visible to the developer, so it does not have a risk of a data breach

Disadvantages:

- Portability issues can occur when you use PaaS services
- There may be different environment at Azure, so the application needs to adapt accordingly.

2.3 Azure as SaaS

SaaS (Software as a Service) is software which is centrally hosted and managed. It is a single version of the application is used for all customers. You can scale out to multiple instances. This helps you to ensure the best performance in all locations. The software is licensed through a monthly or annual subscription. MS Exchange, Office, Dynamics are offered as a SaaS.

3. Microsoft Azure Components

i. Compute

It offers computing operations like app hosting, development, and deployment in Azure Platform. It has the following components:

- Virtual Machine: Allows you to deploy any language, workload in any operating system

- Virtual Machine Scale Sets: Allows you to create thousands of similar virtual machines in minutes
- Azure Container Service: Create a container hosting solution which is optimized for Azure. You scale and arrange applications using Kube, DC/OS, Swarm or Docker
- Azure Container Registry: This service store and manage container images across all types of Azure deployments
- Functions: Let's you write code regardless of infrastructure and provisioning of servers. In the situation when your functions call rate scales up.
- Batch: Batch processing helps you scale to tens, hundreds or thousands of virtual machines and execute computer pipelines.
- Service Fabric: Simplify micro service-based application development and lifecycle management. It supports Java, PHP, Node.js, Python, and Ruby.

ii. Storage

Azure store is a cloud storage solution for modern applications. It is designed to meet the needs of their customer's demand for scalability. It allows you to store and process hundreds of terabytes of data. It has the following components:

- Blob Storage: Azure Blob storage is a service which stores unstructured data in the cloud as objects/blobs. You can store any type of text or binary data, such as a document, media file, or application installer.
- Queue Storage: It provides cloud messaging between application components. It delivers asynchronous messaging to establish communication between application components.
- File Storage: Using Azure File storage, you can migrate legacy applications. It relies on file shares to Azure quickly and without costly rewrites.
- Table Storage: Azure Table storage stores semi-structured NoSQL data in the cloud. It provides a key/attribute store with a schema-less design

iii. Database

This category includes Database as a Service (DBaaS) which offers SQL and NoSQL tools. It also includes databases like Azure Cosmos DB and Azure Database for PostgreSQL. It has the following components:

- SQL Database: It is a relational database service in the Microsoft cloud based on the market-leading Microsoft SQL Server engine.
- DocumentDB: It is a fully managed NoSQL database service which is It built for fast and predictable performance and ease of development.
- Redis Cache: It is a secure and highly advanced key-value store. It stores data structures like strings, hashes, lists, etc.

iv. Content Delivery Network

Content Delivery Network (CDN) caches static web content at strategically placed locations. This helps you to offer speed for delivering content to users. It has the following components:

- VPN Gateway: VPN Gateway sends encrypted traffic across a public connection.
- Traffic Manager: It helps you to control and allows you to do the distribution of user traffic for services like WebApps, VM, Azure, and cloud services in different Datacenters
- Express Route: Helps you to extend your on-premises networks into the Microsoft cloud over a dedicated private connection to Microsoft Azure, Office 365, and CRM Online.

v. Security + Identify services

It provides capabilities to identify and respond to cloud security threats. It also helps you to manage encryption keys and other sensitive assets. It has the following components:

- Key Vault: Azure Key Vault allows you to safeguard cryptographic keys and helps you to create secrets used by cloud applications and services.
- Azure Active Directory: Azure Active Directory and identity management service. This includes multi-factor authentication, device registration, etc.

- Azure AD B2C: Azure AD B2C is a cloud identity management solution for your consumer-facing web and mobile applications. It allows you to scales hundreds of millions of consumer identities.

vi. Enterprise Integration Services:

- Service Bus: Service Bus is an information delivery service which works on the third-party communication system.
- SQL Server Stretch Database: This service helps you migrates any cold data securely and transparently to the Microsoft Azure cloud
- Azure AD Domain Services: It offers managed domain services like domain join, group policy, LDAP, etc. This authentication which is compatible with Windows Server Active Directory.
- Multi-Factor Authentication: Azure Multi-Factor Authentication (MFA) is two-step verification. It helps you to access data and applications to offers a simple sign-in process.

vii. Monitoring + Management Services

These services allow easy management of Azure deployment.

- Azure Resource Manager: It makes it easy for you to manage and visualize resource in your app. You can even control who is your organization can act on the resources.
- Automation: Microsoft Azure Automation is a way to automate the manual, long-running, error-free, and constantly repeated tasks. These tasks are commonly performed in a cloud and enterprise environment.

viii. Azure Networking

- Virtual Network: Perform Network isolation and segmentation. It offers filter and Route network traffic.
- Load Balancer: Offers high availability and network performance of any application. Load balance information Internet traffic to Virtual machines.

- Application Gateway: It is a dedicated virtual appliance that offers an Application Delivery Controller (ADC) as a service.
- Azure DNS: Azure DNS hosting service offers name resolution using Microsoft Azure infrastructure.

ix. Web and Mobile Services:

- Web Apps: Web Apps allows you to build and host websites in the programming language of your choice without the need to manage its infrastructure.
- Mobile Apps: Mobile Apps Service offers a highly scalable, globally available mobile app development platform for users.
- API Apps: API apps make it easier to develop, host and consume APIs in the cloud and on-premises.
- Logic Apps: Logic Apps helps you to simplify and implement scalable integrations

x. Workflows in the cloud

It provides a visual designer to create and automate your process as a series of steps known as a workflow

- Notification Hubs: Azure Notification Hubs offers an easy-to-use, multi-platform, scaled-out push engine
- Event Hubs: Azure Event Hubs is data streaming platform which can manage millions of events per second. Data sent to an event hub can be transformed and stored using any real-time analytics offers batching/storage adapters.
- Azure Search: It is a cloud search-as-a-service solution which offers server and infrastructure management. It offers ready-to-use service that you can populate with your data. This can be used to add search to your web or mobile application.

4. Application of Azure:

Now in this Azure for beginner's tutorial, we will learn the applications of Azure.

Microsoft Azure is used in a broad spectrum of applications like:

- Infrastructure Services
- Mobile Apps
- Web Applications
- Cloud Services
- Storage, Backup, and Recovery
- Data Management
- Media Services

5. A) Advantages of Azure

Now in this MS Azure tutorial, we will cover the advantages of Azure.

Here, are the advantages of using Azure:

- Azure infrastructure will cost-effectively enhance your business continuity strategy
- It allows you to access the application without buying a license for the individual machine
- Windows Azure offers the best solution for your data needs, from SQL database to blobs to tables
- Offers scalability, flexibility, and cost-effectiveness
- Helps you to maintain consistency across clouds with familiar tools and resources
- Allows you to extend data center with a consistent management toolset and familiar development and identity solutions.
- You can deploy premium virtual machines in minutes which also include Linux and Windows servers
- Helps you to scale your IT resources up and down based on your needs
- You are not required to run the high-powered and high-priced computer to run cloud computing's web-based applications.
- You will not require processing power or hard disk space if you are using Azure
- Cloud computing offers virtually limitless storage
- If your personal computer or laptop crashes, all your data is still out there in the cloud, and it is still accessible

- Sharing documents leads directly to better collaboration
- If you change your device your computers, applications and documents follow you through the cloud

B) Disadvantages of Azure

- Cloud computing is not possible if you can't connect to the Internet
- Azure is a web-based application which requires a lot of bandwidth to download, as do large documents
- Web-based applications can sometimes be slower compared to accessing a similar software program on your desktop PC.

6. CONCLUSION

Azure is a cloud computing platform which was launched by Microsoft in February 2010. There are mainly three types of clouds in Microsoft Azure: 1) PAAS 2) SAAS 3) IASS IaaS (Infrastructure as a Service) is the foundational cloud platform layer. PaaS is a computing platform which includes an operating system, programming language execution environment, database or web services. SaaS (Software as a Service) is software which is centrally hosted and managed.

Important applications of Microsoft Azure are: Infrastructure Services, Mobile Apps, Web Applications, Cloud Services, Storage, Backup, and Recovery, Data Management, and Media Services. The biggest advantage of Microsoft Azure infrastructure is that it will cost-effectively enhance your business continuity strategy. Web-based applications like Azure can sometimes be slower compared to accessing a similar software program on your de

Experiment No.:02

Title:

Assignment to install and configure Google App Engine

Theory:

Google App Engine is a web application hosting service. By "web application," we mean an application or service accessed over the Web, usually with a web browser: storefronts with shopping carts, social networking sites, multiplayer games, mobile applications, survey applications, project management, collaboration, publishing, and all the other things we're discovering are good uses for the Web. App Engine can serve traditional website content too, such as documents and images, but the environment is especially designed for real-time dynamic applications. Of course, a web browser is merely one kind of client: web application infrastructure is well suited to mobile applications, as well.

In particular, Google App Engine is designed to host applications with many simultaneous users. When an application can serve many simultaneous users without degrading performance, we say it scales. Applications written for App Engine scale automatically. As more people use the application, App Engine allocates more resources for the application and manages the use of those resources. The application itself does not need to know anything about the resources it is using.

The app engine is a Cloud-based platform, is quite comprehensive and combines infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS). The app engine supports the delivery, testing and development of software on demand in a Cloud computing environment that supports millions of users and is highly scalable.

The company extends its platform and infrastructure to the Cloud through its app engine. It presents the platform to those who want to develop SaaS solutions at competitive costs. If you are a business SME or enterprise which owns any web-based application that needs to be scaled without any compromise on the performance then Google App Engine is agood fit. Companies like Best Buy and Khan Academy have chosen Google App Engine for their apps.

Google App Engine:

It is a platform-as-a-service (PaaS) Cloud computing platform that is fully managed and uses inbuilt services to run your apps. You can start development almost instantly after downloading the software development kit (SDK).

As soon as you have signed up for a Cloud account, you can build your app:

- ✓ With the template/HTML package in Go
- ✓ With Jinja2 and webapp2 in Python
- ✓ With Cloud SQL in PHP
- ✓ With Maven in Java

Generally Available Features

These are covered by the depreciation policy and the service-level agreement of the app engine. Any changes made to such a feature are backward-compatible and implementation of such a feature is usually stable. These include data storage, retrieval, and search; communications; process management; computation; app configuration and management.

- ✓ Data storage, retrieval, and search include features such as HRD migration tool, Google Cloud SQL, logs, datastore, dedicated Memcache, blobstore, Memcache and search.
- ✓ Communications include features such as XMPP. channel, URL fetch, mail, and Google Cloud Endpoints.
- ✓ Process management includes features like scheduled tasks and task queue
- ✓ Computation includes images.
- ✓ App management and configuration cover app identity, users, capabilities, traffic splitting, modules, SSL for custom domains, modules, remote access, and multitenancy.

Advantages of Google App Engine:

✓ Infrastructure for Security

Around the world, the Internet infrastructure that Google has is probably the most secure. There is rarely any type of unauthorized access till date as the application data and code are stored in highly secure servers.

- ✓ **Scalability**

  For any app's success, this is among the deciding factors. Google creates its own apps using GFS, Big Table and other such technologies, which are available to you when you utilize the Google app engine to create apps. Regardless of the amount of data or number of users that your app stores, the app engine can meet your needs by scaling up or down as required.

- ✓ **Performance and Reliability**

  Google is among the leaders worldwide among global brands. So, when you discuss performance and reliability you have to keep that in mind. In the past 15 years, the company has created new benchmarks based on its services' and products' performance. The app engine provides the same reliability and performance as any other Google product.

- ✓ **Cost Savings**

  You don't have to hire engineers to manage your servers or to do that yourself. You can invest the money saved into other parts of your business.

- ✓ **Platform Independence**

  You can move all your data to another environment without any difficulty as there is not many dependencies on the app engine platform.

Conclusion:

Therefore, we learn that the google app engine is nothing but the Cloud-based platform, is quite comprehensive and combines infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS).

Experiment No.:03

Title:

Creating an Application in SalesForce.com using Apex programmingLanguage

Theory:

Apex is a proprietary language developed by the Salesforce.com. As per the official definition, Apex is a strongly typed, object-oriented programming language that allows developers to execute the flow and transaction control statements on the Force.com platform server in conjunction with calls to the Force.com API.

It has a Java-like syntax and acts like database stored procedures. It enables the developers to add business logic to most system events, including button clicks, related record updates, and Visual force **pages. Apex** code can be initiated by Web service requests and from triggers on objects. Apex is included in Performance Edition, Unlimited Edition, Enterprise Edition,

and Developer Edition.

Featuresof Apexasa Language

Let us now discuss the features of Apex as a Language –

- Integrated

  Apex has built in support for DML operations like INSERT, UPDATE, DELETE and also DML Exception handling. It has support for inline SOQL and SOSL query handling which returns the set of sObject records. We will study the sObject, SOQL, SOSL in detail in future chapters.

- Java like syntax and easy to use

  Apex is easy to use as it uses the syntax like Java. For example, variable declaration, loop syntax and conditional statements.

- Strongly Integrated With Data

  Apex is data focused and designed to execute multiple queries and DML statements together. It issues multiple transaction statements on Database.

- Strongly Typed

  Apex is a strongly typed language. It uses direct reference to schema objects like sObject and any invalid reference quickly fails if it is deleted or if is of wrong data type.

- Multitenant Environment

  Apex runs in a multitenant environment. Consequently, the Apex runtime engine is designed to guard closely against runaway code, preventing it from monopolizing shared resources. Any code that violates limits fails with easy-to-understand error messages.

- Upgrades Automatically

  Apex is upgraded as part of Salesforce releases. We don't have to upgrade it manually.

- Easy Testing

Apex provides built-in support for unit test creation and execution, including test results that indicate how much code is covered, and which parts of your code can be more efficient.

When Should Developer Choose Apex?

Apex should be used when we are not able to implement the complex business functionality using the pre-built and existing out of the box functionalities. Below are the cases where we need to use apex over Salesforce configuration.

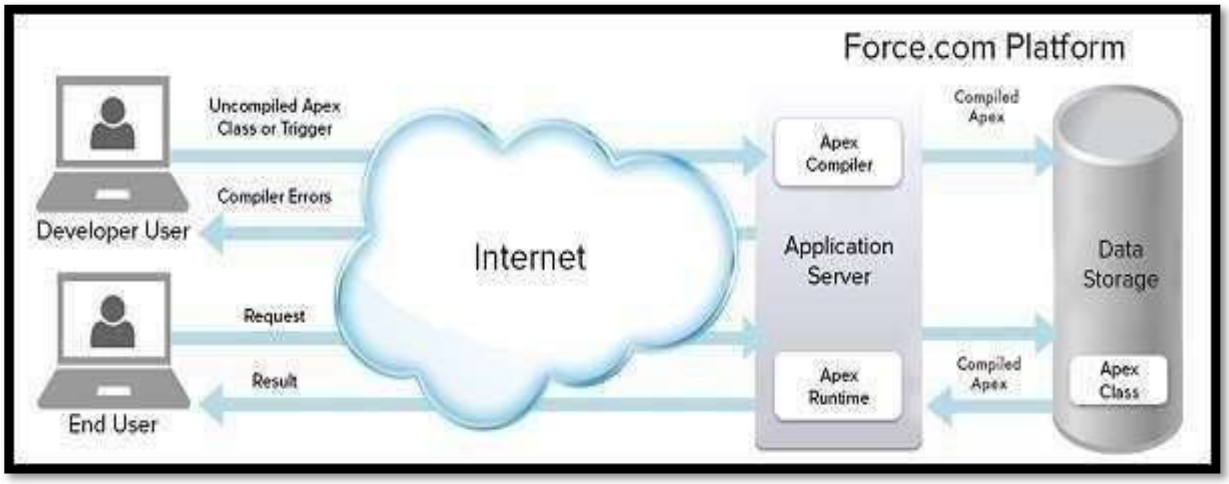
Apex Applications

We can use Apex when we want to −

- Create Web services with integrating other systems.
- Create email services for email blast or email setup.
- Perform complex validation over multiple objects at the same time and also custom validation implementation.
- Create complex business processes that are not supported by existing workflow functionality or flows.
- Create custom transactional logic (logic that occurs over the entire transaction, not just with a single record or object) like using the Database methods for updating the records.
- Perform some logic when a record is modified or modify the related object's record when there is some event which has caused the trigger to fire.

Working Structure of Apex

As shown in the diagram below (Reference: Salesforce Developer Documentation), Apex runs entirely on demand Force.com Platform



Flow ofActions

There are two sequence of actions when the developer saves the code and when an end user performs some action which invokes the Apex code as shown below −

Developer Action

When a developer writes and saves Apex code to the platform, the platform application server first compiles the code into a set of instructions that can be understood by the Apex runtime interpreter, and then saves those instructions as metadata.

End User Action

When an end-user triggers the execution of Apex, by clicking a button or accessing a Visualforce page, the platform application server retrieves the compiled instructions from the metadata and sends them through the runtime interpreter before returning the result. The end user observes no differences in execution time as compared to the standard application platform request.

Since Apex is the proprietary language of Salesforce.com, it does not support some features which a general programming language does. Following are a few features which Apex does not support −

- It cannot show the elements in User Interface.
- You cannot change the standard SFDC provided functionality and also it is not possible to prevent the standard functionality execution.
- You cannot change the standard SFDC provided functionality and also it is not possible to prevent the standard functionality execution.
- Creating multiple threads is also not possible as we can do it in other languages.

UnderstandingtheApexSyntax

Apex code typically contains many things that we might be familiar with from other programming languages.

Variable Declaration

As strongly typed language, you must declare every variable with data type in Apex. As seen in the code below (screenshot below), lstAcc is declared with data type as List of Accounts.

SOQL Query

This will be used to fetch the data from Salesforce database. The query shown in screenshot below is fetching data from Account object.

Loop Statement

This loop statement is used for iterating over a list or iterating over a piece of code for a specified number of times. In the code shown in the screenshot below, iteration will be same as the number of records we have.

Flow Control Statement

The If statement is used for flow control in this code. Based on certain condition, it is decided whether to go for execution or to stop the execution of the particular piece of code. For example, in the code shown below, it is checking whether the list is empty or it contains records.

DML Statement

Performs the records insert, update, upsert, delete operation on the records in database. For example, the code given below helps in updating Accounts with new field value.

Apex Code Development Tools

In all the editions, we can use any of the following three tools to develop the code −

- Force.com Developer Console
- Force.com IDE
- Code Editor in the Salesforce User Interface

Conclusion:

In this experiment we will learn about apex programming, different features and applications of apex programming language, also by using apex programming languages we canalso creating an application in salesforce.com.

Experiment No.:04

Title:

Design and develop custom Application (Mini Project) using SalesforceCloud.

Theory:

Salesforce.com Inc. is an American cloud-based software company headquartered in San Francisco, California. Though the bulk of its revenue comes from a customer relationship management (CRM) product, Salesforce also sells a complementary suite of enterprise applications focused on customer service, marketing automation, analytics and application development.

Salesforce is the primary enterprise offering within the Salesforce platform. It provides companies with an interface for case management and task management, and a system for automatically routing and escalating important events. The Salesforce customer portal provides customers the ability to track their own cases, includes a social networking plug-in that enables the user to join the conversation about their company on social networking websites, provides analytical tools and other services including email alert, Google search, and access to customers' entitlement and contracts.

Lightning Platform

Lightning Platform (also known as Force.com) is a platform as a service (PaaS) that allows developers to create add-on applications that integrate into the main Salesforce.com application. These third-party applications are hosted on Salesforce.com's infrastructure.

Force.com applications are built using declarative tools, backed by Lightning and Apex(a proprietary Java-like programming language for Force.com) and Lightning and Visual force (a frame work that includes an XML syntax typically used to generate HTML). The Force.com platform typically receives three complete releases a year. As the platform is provided as a service to its developers, every single development instance also receives all these updates.

Community Cloud

Community Cloud provides Salesforce customers the ability to create online web

properties for external collaboration, customer service, channel sales, and other custom portals in their instance of Salesforce. Tightly integrated to Sales Cloud, Service Cloud, and App Cloud, Community Cloud can be quickly customized to provide a wide variety of web properties.

Salesforce Sales Cloud

Salesforce Sales Cloud is a customer relationship management (CRM) platform designed to support sales, marketing and customer support in both business-to-business (B2B) and business-to-customer (B2C) contexts. Sales Cloud is a fully customizable productthat brings all the customer information together in an integrated platform that incorporates marketing, lead generation, sales, customer service and business analytics and provides access to thousands of applications through the AppExchange. The platform is provide das Software as a Service (SaaS) for browser-based access; a mobile app is also available. A real- time social feed for collaboration allows users to share information or ask questions of the user community.Salesforce.com offers five versions of Sales Cloud on a per-user, per month basis, from lowest to highest: Group, Professional, Enterprise, Unlimited and Performance. The company offers three levels of support contracts: Standard Success Plan, Premier Success Plan and Premier+ Success Plan.

Create Custom Apps for Salesforce Classic

Create custom apps to give your Salesforce Classic users' access to everything they need all in one place.

If you're new to custom apps, we recommend using Lightning Platform quick start to create an app. With this tool, you can generate a basic working app in just one step.

If you've already created the objects, tabs, and fields you need for your app, follow these steps. With this option, you create an app label and logo, add items to the app, and assign the app to profiles.

1. From Setup, enter Apps in the Quick Find box, then select **Apps**.
2. Click **New**.
3. If the Salesforce console is available, select whether you want to define a custom app

or a Salesforce console.

4. Give the app a name and description.
   An app name can have a maximum of 40 characters, including spaces.
5. Optionally, brand your app by giving it a custom logo.
6. Select which items to include in the app.
7. Optionally, set the default landing tab for your new app using the **Default Landing Tab** drop-down menu below the list of selected tabs. This determines the first tab a user sees when logging into this app.
8. Choose which profiles the app will be visible to.
9. Check the Default box to set the app as that profile's default app, meaning that new users with the profile see this app the first time they log in. Profiles with limits are excluded from this list.
10. Click **Save**

What is the difference between custom application and console application in sales force?

A custom application is a collection of tabs, objects etc that function together to solve a particular problem.

A console application uses a specific Salesforce UI - the console. Console applications are intended to enhance productivity by allowing everything to be done from a single, tabbed, screen**.**

Conclusion: Hence, we design a mini project by using salesforce cloud. creating a custom application using Salesforce Cloud offers numerous benefits to businesses, including improved efficiency, streamlined processes, and better data management. With Salesforce's powerful platform and tools, organizations can build tailored solutions that meet their specific needs and drive business growth. By investing in a custom Salesforce application, companies can stay ahead of the curve and remain competitive in today's market.