Salesforce

Salesforce (Admin)

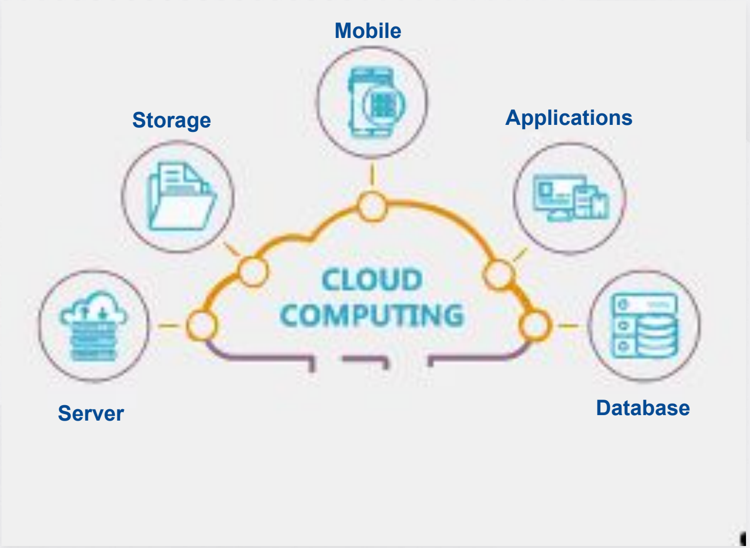
Agenda:

- Introduction to Cloud Computing, CRM, and Salesforce
- Introduction to Objects, Fields and Records
- Custom & Standard Objects
- Fields and their data types
- Create Object Relationships

Salesforce (Admin)

Learning Objectives: After this session you will be able to:

- Understand the concept of CRM
- Understand the importance of Salesforce
- Understand the concepts of Objects, Fields and Records
- Differentiate between standard objects and custom objects
- List the types of custom fields an object can have

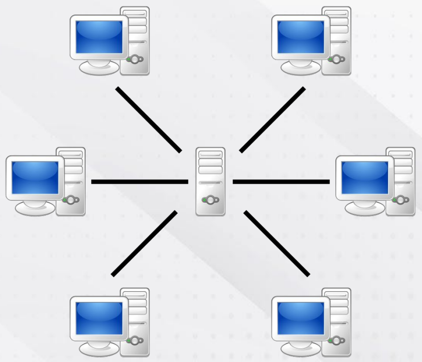


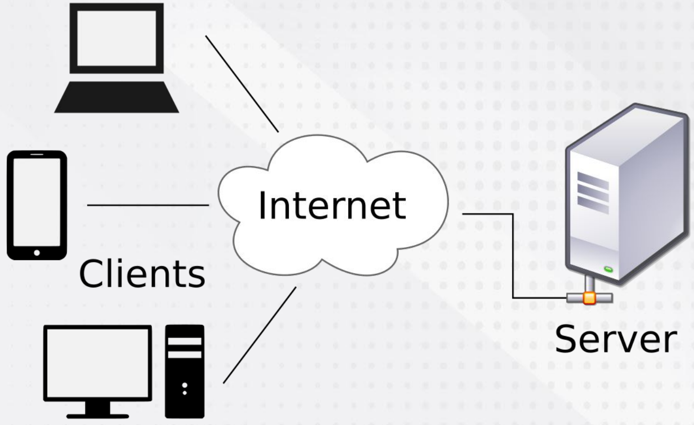
Cloud Computing

Client Server Architecture

Architecture of a computer network in which many clients (remote processors) request and receive services from a centralized server (host computer).

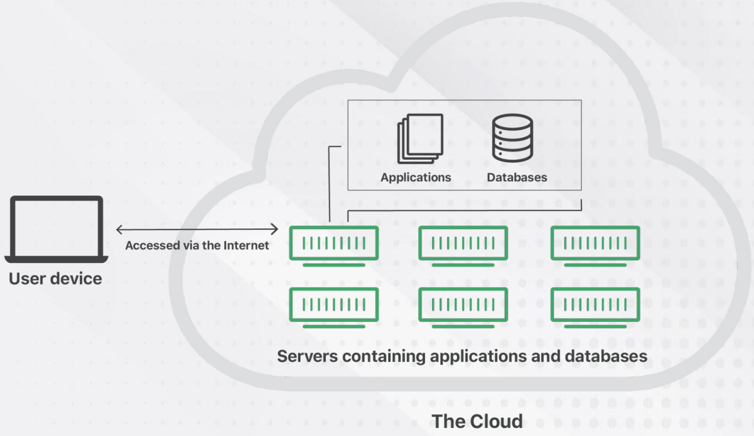
<u>Examples:</u> Email, network printing, and the World Wide Web.





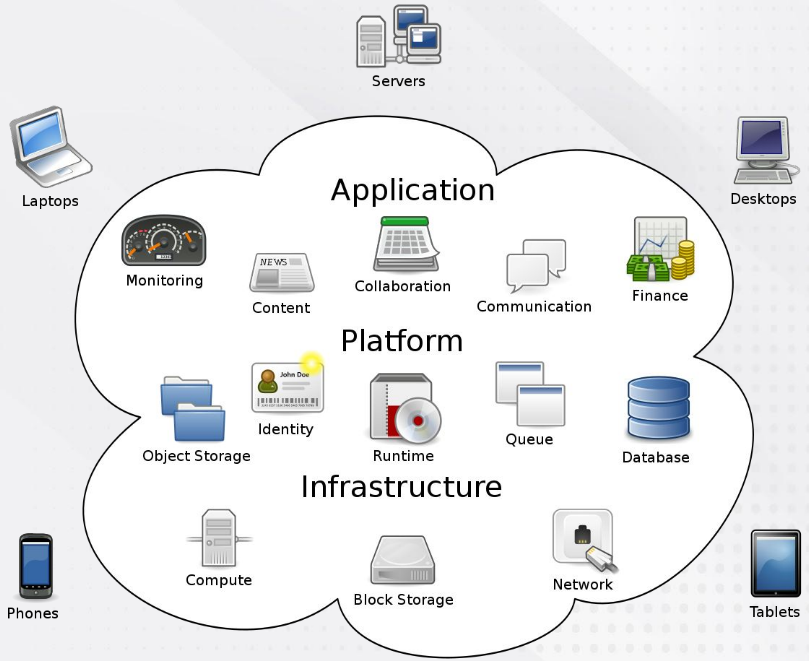
Cloud Computing

Cloud computing means storing and accessing data and programs over the internet instead of your computer's hard drive.



Cloud Computing

The term "Cloud" is combination of computer system resources, especially Databases, Softwares and computing power.



Difference

- Cloud computing is also a client-server based model.
- In a traditional client-server system, both hardware and software, are based and maintained in-house.
- Cloud-based storage is off-site in an infrastructure maintained by a third-party vendor and is accessible via the Internet.

Need of Cloud Computing

Criteria	On Premise Server	Cloud Computing
Scalability	Higher Pay, Less Scalability	Pay as you go. Scale up -> Pay more Scale down -> Pay less
On-site space	Allot huge space for Server	No server space required
Cost	Costly software required	No need to purchase software
Experts for Server	Appoint a team for server management	No expert required for maintenance
Data Security	Poor data security	Better data security

Need of Cloud Computing

Criteria	On Premise Server	Cloud Computing
Flexibility	Lack of flexibility	High flexibility, switching from one cloud to another is allowed
Software Updates	No automatic updates	Automatic software updates
Data Access	Data can not be accessed remotely	Data can be accessed/shared anywhere over internet
Implementation Time	Takes longer implementation time	Rapid implementation

Cloud Computing Models

- Cloud Computing Models
  - Deployment Models
  - Service Models

Deployment Models

Deployment Models

- Public Cloud
- Private Cloud
- Community Cloud
- Hybrid Cloud

Public Cloud

The cloud infrastructure is made available to the general public over the internet and is owned by a cloud provider.

Public cloud providers: AWS, Microsoft Azure, IBM’s Blue Cloud and Sun Cloud

Benefits of Public Cloud

- **Minimal Investment** - As a pay-per-use service, there is no large upfront cost and is ideal for businesses who need quick access to resources
- **No Hardware Setup** - The cloud service providers fully fund the entire Infrastructure
- **No Infrastructure Management** - This does not require an in-house team to utilize the public cloud.

Private Cloud

The cloud infrastructure is exclusively operated by a single organization. It can be managed by the organization or a third party and may exist on-premise or off-premise.

Private cloud providers: AWS, VMware

Benefits of Private Cloud

- **Data Privacy** - It is ideal for storing corporate data where only authorized personnel gets access
- **Security** - Segmentation of resources within the same Infrastructure can help with better access and higher levels of security.
- **Supports Legacy Systems** - This model supports legacy systems that cannot access the public cloud.

Community Cloud

Server belongs to the service provider and accessed by several organizations with similar background remotely.

IBM Smart Cloud,

Google Apps for Government,

Microsoft Government Community Cloud, etc.

Benefits of Community Cloud

- **Smaller Investment - A community cloud is much cheaper than the private & public cloud and provides great performance**
- **Setup Benefits - The protocols and configuration of a community cloud must align with industry standards, allowing customers to work much more efficiently.**

Hybrid Cloud

It consists of functionalities of both public and private cloud.

For example federal agencies use private cloud for sensitive information while public cloud to share information with general public.

Benefits of Hybrid Cloud

- **Cost-Effectiveness** - The overall cost of a hybrid solution decreases since it majorly uses the public cloud to store data.
- **Security** - Since data is properly segmented, the chances of data theft from attackers are significantly reduced.
- **Flexibility** - With higher levels of flexibility, businesses can create custom solutions that fit their exact requirements.

Service Models

Service Models

- Infrastructure as a Service - IaaS
- Platform as a Service - PaaS
- Software as a Service - SaaS
- Functions as a Service - FaaS

IaaS - Infrastructure as a Service

IaaS is also known as Hardware as a Service (HaaS).

It is a computing infrastructure managed over the internet. The main advantage of using IaaS is that it helps users to avoid the cost and complexity of purchasing and managing the physical servers.

Example: DigitalOcean, Linode, Amazon Web Services (AWS), Microsoft Azure, Google Compute Engine (GCE), Rackspace, and Cisco Metacloud.

PaaS - Platform as a Service

Platform as a Service (PaaS) provides a runtime environment.

It allows programmers to easily create, test, run, and deploy web applications. You can purchase these applications from a cloud service provider on a pay-as-per use basis and access them using the Internet connection.

PaaS includes infrastructure (servers, storage, and networking) and platform (middleware, development tools, database management systems, business intelligence, and more) to support the web application life cycle.

Example: Google colab

SaaS - Software as a Service

SaaS is also known as "On-Demand Software". These services are available to end-users over the internet so, the end-users do not need to install any software on their devices to access these services.

FaaS - Functions as a Service

- Function as a service (FaaS) is a cloud computing model that enables cloud customers to develop applications and deploy functionalities and only be charged when the functionality executes.
- FaaS is often used to deploy microservices and may also be referred to as serverless computing.

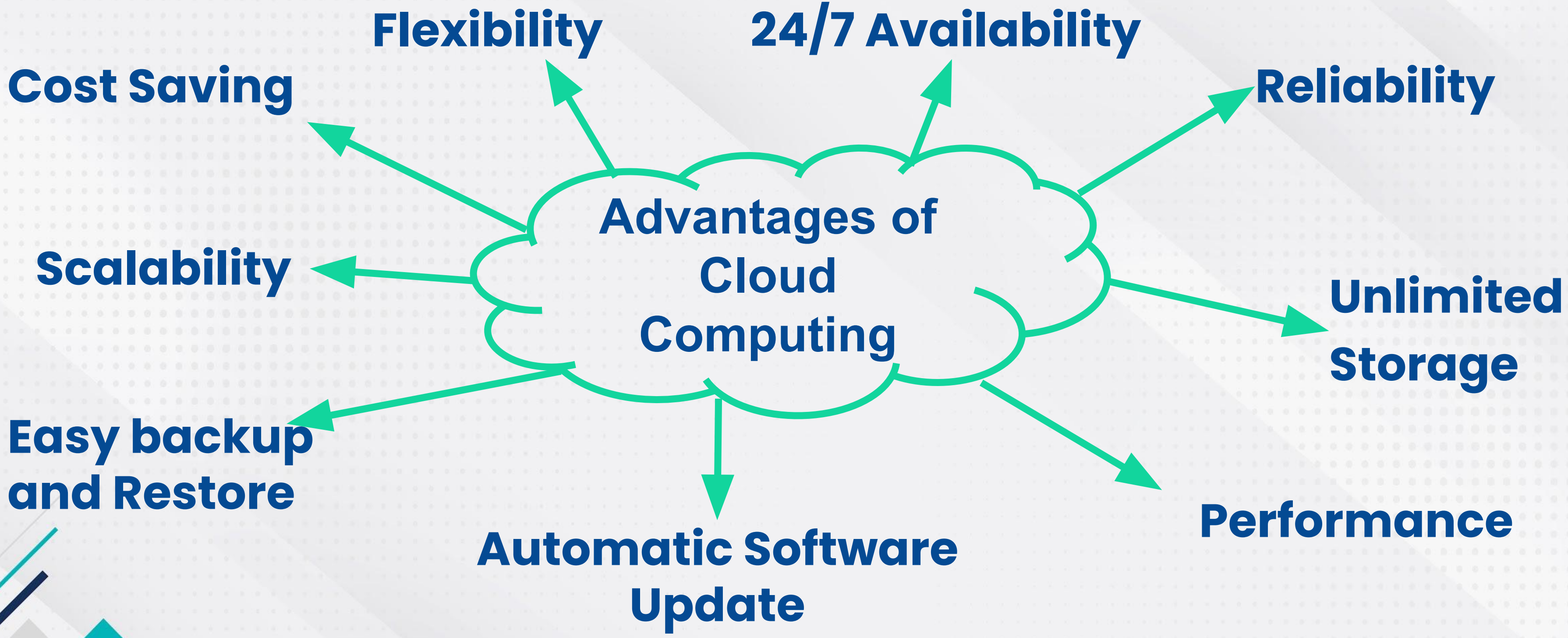
  Examples are IBM Cloud Functions, Google Cloud Functions, Amazon’s AWS Lambda.

Difference among IaaS, PaaS and SaaS

User managed   Provider managed

On premises	IaaS	PaaS	SaaS
Application	Application	Application	Application
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
Operating system	Operating system	Operating system	Operating system
Virtualization	Virtualization	Virtualization	Virtualization
Networking	Networking	Networking	Networking
Storage	Storage	Storage	Storage
Servers	Servers	Servers	Servers

Advantages of Cloud Computing



Top cloud service providers

amazon web services

SAP

IBM Cloud

Google Cloud

salesforce

Azure

ORACLE CLOUD

vmware

Alibaba Cloud

CRM

- CRM helps businesses manage their relationships with their customers.
- It allows companies to pay attention to their customers and associates.
- This can include buyers, suppliers, service providers, users, and anybody else with whom the company conducts business.

Challenges before CRM

- Unorganized data
- Manually updating address book
- Manual event Scheduling
- No client communication record
- Difficult to manage the to-do task list

Features of CRM

- CRM allows businesses to store, manage, and track customer information.
- It allows us to connect and collaborate with the entire team from a single place or device.
- It can intelligently capture any customer complaint or emails.
- CRM can be extended as per the business requirement.
- CRM increases business profits by providing proper sales and lead management.
- Analytics
- Customer Interaction
- Lead management

Popular CRMs

salesforce

ZOHO CRM

HubSpot

monday.com

ORACLE NETSUITE

pipedrive

freshsales

Microsoft Dynamics

Choose your CRM??

- Why CRM?
- How to choose which CRM is best for your business?

Salesforce

Salesforce

- Salesforce is a cloud computing Software as a Service (SaaS) company that specializes in customer relationship management (CRM).
- It is used for sales, customer service, marketing automation, analytics, and application development.
- Salesforce services allow businesses to use cloud technology to better connect with partners, customers, and potential customers.
- Being for a long year in the market, it provides comprehensive and most innovative CRM solutions.
- It is highly scalable and customizable
- It is able to solve almost all the business requirements.

Key Features of Salesforce

- **Easy Setup:** Salesforce can be quickly set up from scratch in only a few weeks.
- **User-Friendly Interface:** No need for training to get started with it.
- **Highly Customizable:** Companies can easily modify Salesforce features to fit their work.
- **Intelligent Automation:** Salesforce's Intelligent technology automates a variety of business processes, such as Task Assignment and Email Alert Generation.
- **Process builder:** It enables you to create recommendations with only one click.
- **Lead Nurturing:** It aids organizations in increasing revenue while also focusing on recruiting and converting customers.

Key Features of Salesforce

- **Dynamic Dashboards:** It give a holistic view of how well your business is doing based on important metrics like Market Trends and Customer Behavior. It also makes it easy to construct Dashboards and real-time reporting.
- **Multiple Ads:** Businesses can operate numerous Ads Campaigns.
- **Better Collaboration:** People from various teams may interact in real-time.
- **Email Integration:** Calendars and Schedules in Salesforce can be synced with other programs like Microsoft Outlook and Gmail.

Companies using Salesforce

Salesforce Future Scope

- Google made an alliance with Salesforce in November 2017. This alliance made salesforce stronger than before, and it has a chance to utilize google core services for its futuristic expansion.
- Gartner predicted that the deployment rate of Saas will be increased to 80 to 85% by 2025. It shows how CRM is going to play a significant role in the future. The demand for salesforce applications has been growing exponentially.

Salesforce Future Scope

- Fujitsu and Salesforce Japan start collaboration on healthcare solutions for the Japan market.
- In the long run, we can expect the integration of big data and data science with salesforce to satisfy the future needs of the organizations.

Job Roles For Salesforce Professionals

- Salesforce Administrator
- Salesforce Developer
- Salesforce Architect
- Salesforce QA
- Salesforce Consultant
- Salesforce Project Manager
- Salesforce Business Analyst

Salesforce Certifications

Salesforce Terminologies

Salesforce.com Vs Force.com

- Both terms are used interchangeably. But…
- Salesforce.com is generally used to refer to the CRM functionality (the sales, service and marketing applications).
- Force.com is generally used to refer to the underlying platform (the database, code, and UI on which all the apps are built).

Salesforce Terminologies

- Lightning/Classic
- Org
- App
- Objects
- Fields
- Sales Cloud
- Service Cloud
- Marketing Cloud

Salesforce Terminologies

- Tab
- Profile
- Role
- Campaigns
- Leads
- Accounts
- Contacts

Salesforce Terminologies

- Opportunities
- Quotes
- Cases
- Customer 360 [How to Use Customer 360 | Salesforce]

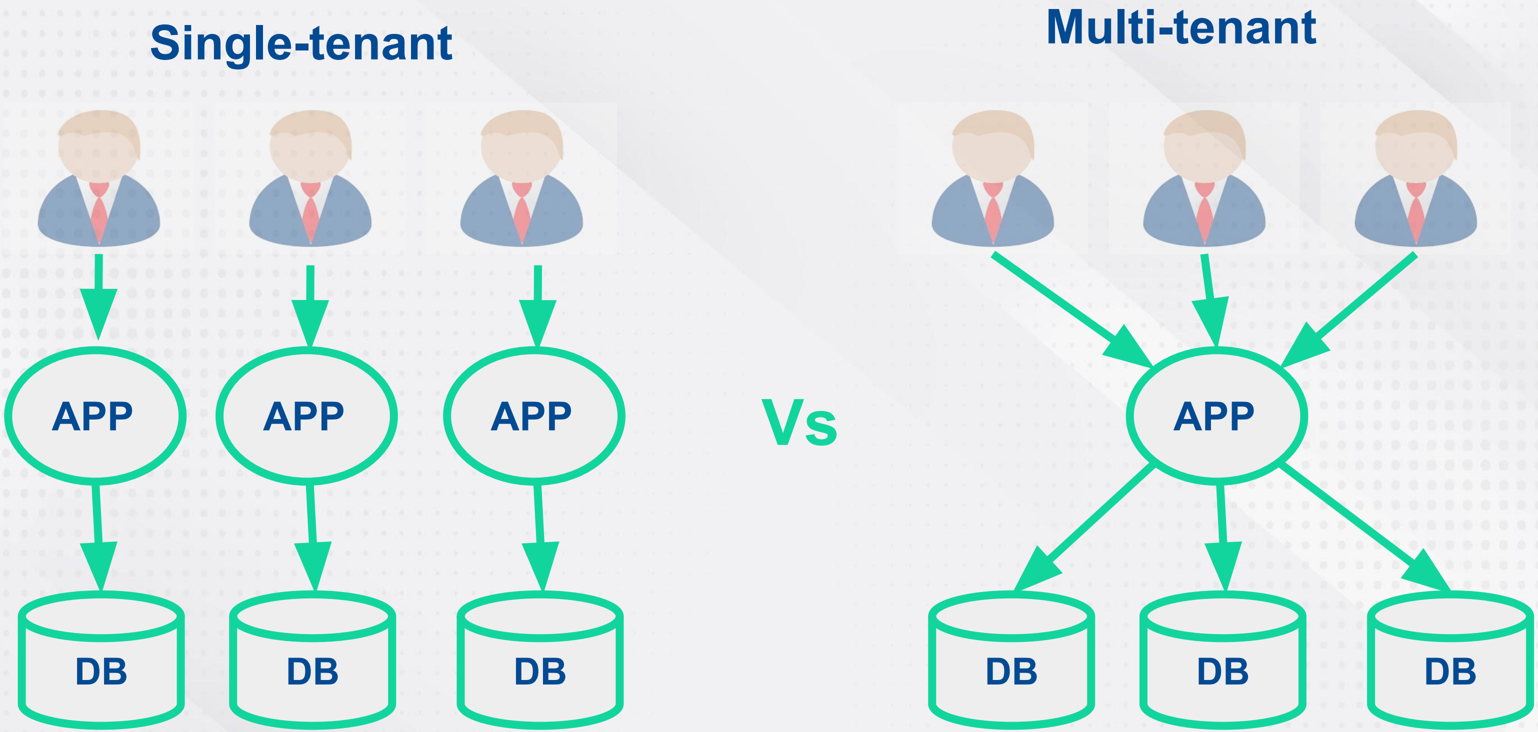
Salesforce Architecture

Architecture on which Salesforce works

1. Multi-tenant Architecture

2. Metadata Architecture

Multi-tenant Architecture



Multi-tenant Architecture

- Multitenancy means that multiple customers of a cloud vendor are using the same computing resources.

- Despite the fact that they share resources, cloud customers aren't aware of each other, and their data is kept totally separate.

- <u>Economical:</u> Resources and maintenance cost is shared.

- <u>Update only once:</u> and changes will be reflected to every client.

- <u>Sharing Rules are enforced by Governor limits.</u> Governor limit ensures that nobody else get access to your data.

Metadata Architecture

- Salesforce metadata is an essential element of the Salesforce architecture.
- It involves different fields, code, configurations, logic, and page layouts used for building the key information architecture of your Salesforce org, making your Salesforce instance look the way it does.
- Metadata architecture is an extension of Governor limits. Here we have tenant-specific metadata so, tenant-1(client-1) can not access data of tenant-2(client-2).

Governor Limits

- Governor limits in Salesforce are used to ensure the effective use of resources on the Force.com multi-tenant platform.
- To ensure that no one acquires resources from others, Force.com sets many restrictions that limit normal code execution.
- For example: The total number of *sendEmail methods* allowed is 10.
- Salesforce has to do this because of its multi-tenant architecture, where all organizations and customers share a single resource.
- If one of the governor limits is not met, an error will be raised and the program will stop or halt. Therefore, it is important to ensure that our code is scalable and does not violate governor limits.

Salesforce Editions

1. Essentials Edition
2. Professional Edition
3. Enterprise Edition
4. Unlimited Edition
5. Developers Edition

Each edition has its own Salesforce limitations and features. Editions in Salesforce also differ in terms of price, so, depending on the type of a company (its product and service lines as well as the size of sales teams), it should determine the edition that suits its needs best.

Salesforce Pricing

Essentials	Professional	Enterprise	Unlimited
		MOST POPULAR	
Small business CRM for up to 10 users	Complete RCM for any size team	Deeply customizable sales CRM for your business	Unlimited CRM power and support
$25	$75	$150	$300
USD/user/month* (billed annually)	USD/user/month* (billed annually)	USD/user/month* (billed annually)	USD/user/month* (billed annually)

Salesforce Editions

	Essental **$25** per user per month	**Proffessional** **$75** per user per month	**Enterprise** **$150** per user per month	**Unlimited** **$300** per user per month
Account, Contact, Lead and Opportunity Management	✔	✔	✔	✔
E-Mail Integration with G-mail or Outlook	✔	✔	✔	✔
Salesforce Mobile App	✔	✔	✔	✔
Campaign Management	❌	✔	✔	✔
Workflow and Approval Automation	❌	❌	✔	✔

Salesforce Editions

Find Your Edition

1. From Setup → Quick Find box → Company Information.

2. Organization Edition appears in the lower right.

Salesforce Editions

Salesforce Editions That Are No Longer Sold:

- Contact Manager Edition
- Group Edition
- Personal Edition
- Performance Edition
- Database.com Edition

Salesforce Cloud Services

Sales Cloud

- It helps the companies to support sales and provide marketing & customer support for the B2B and B2C aspects of a business.
- It is an entirely customizable cloud service of Salesforce that integrates all the customer related information at one place. It includes marketing, sales, lead generation, customer service, business analytics, etc., and also provides access to various other applications through the AppExchange.

Features of Sales Cloud

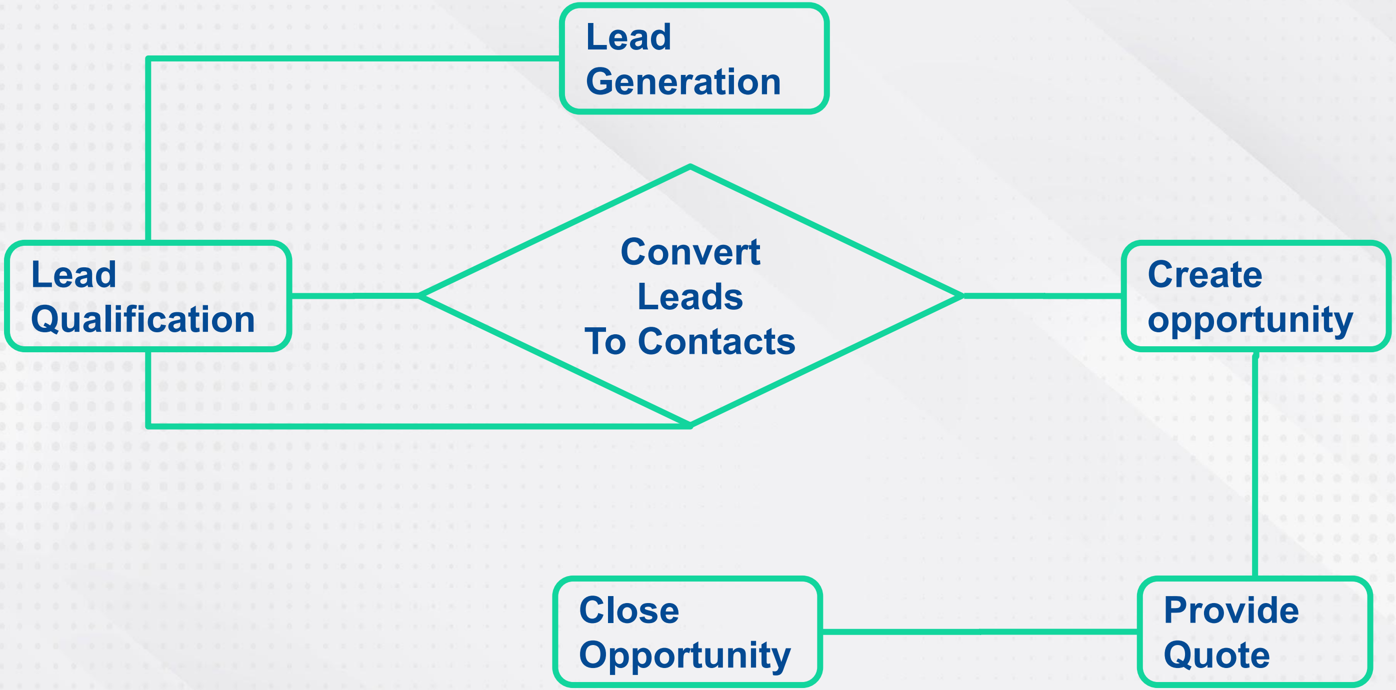
- Accounts and Contact Management
- Lead Management
- Opportunities and Quotes
- Approval and Workflow
- Email and Productivity
- Content Library
- Analytics and Forecasting
- Chatter
- Partners
- Mobile
- AppExchange

Sales Cloud

Frequently used objects

- **Leads**: Leads are people who have shown some level of interest in your product or service.
- **Contacts**: Contacts are created as soon as a lead expresses interest in doing business. It also contains vendors and partners.
- **Accounts**: Accounts are companies with which customers, vendors or partners are associated.
- **Opportunities**: Opportunities are transactions. When an opportunity is created (converted) it’s to signal the start of a sales cycle.

6 stages of Sales in Salesforce



Marketing Cloud

Marketing Cloud includes:

- integrated solutions for customer journey management,
- email, mobile, social, web personalisation,
- advertising,
- content creation and management,
- data analysis.

Marketing Cloud

What is the difference between Sales and Marketing Cloud?

Salesforce Marketing Cloud is built to identify leads and guide them toward your product or service, while Salesforce Sales Cloud is built to close deals and bring in revenue.

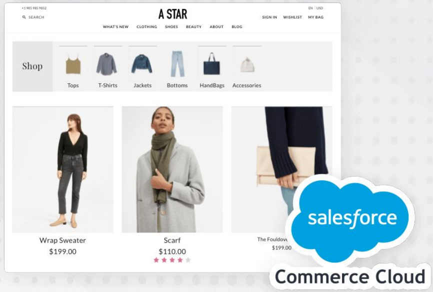
Products of Marketing Cloud

1. Journey Builder
2. Email Studio
3. Audience Studio
4. Mobile Studio
5. Social Studio

6. Advertising Studio
7. Interaction Studio
8. Data Studio
9. Pardot

Commerce Cloud

- The salesforce commerce cloud service is all about the customer services and experiences.
- It allows the companies to provide the best services and experiences to their customers, either online or in-store.
- It provides the leading B2B and B2C e-commerce solutions.
- It's designed specifically for B2C companies that offer their services online.



Product & Capabilities

- B2B Commerce
- B2C Commerce
- Order Management
- Content Management
- Commerce Platform
- Einstein AI for Commerce

salesforce

commerce cloud

Service Cloud

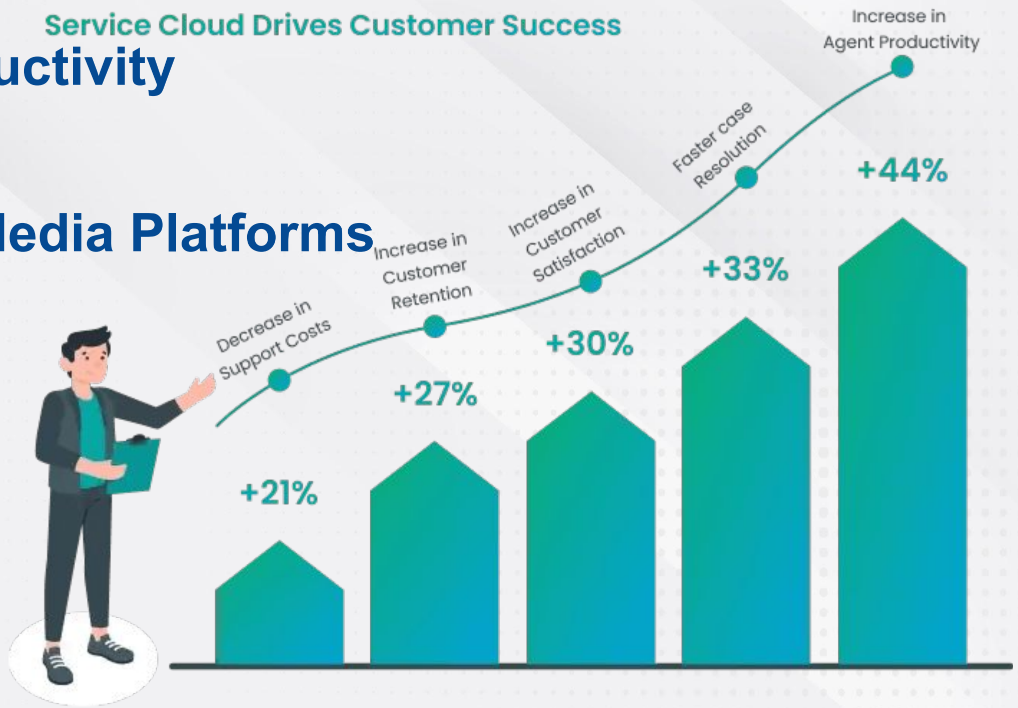
- Service Cloud provides services and support to the customers.
- It gives the fast and more personalized services virtually via any possible platform such as phone, email, instant messaging, Twitter, Facebook or other social platforms.
- It provides the customer's 360-degree view to provide smarter, faster and personalized services to the customers.

Features of Service Cloud

- Lightning Service Console
- Case Management
- Activities
- CTI (Computer Telephony Integration) or Call Center
- Contracts and Entitlements
- Knowledge Base
- Live agent Chat
- Omni-Channel
- Ideas and Answers
- Social Customer Services
- Service Process and Automation
- Asset and Order Management
- Account and Contact Management

Benefits of Service Cloud

- ➢ Increases the Agent's Productivity
- ➢ Faster Case Resolution
- ➢ Integrates with the Social Media Platforms
- ➢ Data Security
- ➢ Customer Retention
- ➢ Best Customer Experience



Experience Cloud

- Formerly known as Community Cloud.
- Experience Cloud connects customers, employers, partners, and agents into online communities.
- It helps you create web-based portals for collaboration, customer services, sales, and other key activities.
- It also functions as a help forum and support site to connect with the teams.

Features of Experience Cloud

- Integration of data from any source
- Provide of personalized experiences
- Personalized design for each type of device
- Boost interaction with your users
- Real-time tracking
- Optimize response management
- Analytics for decision-making

Analytics Cloud

- Analytics cloud is a business intelligence (BI) platform from Salesforce.com that is optimized for mobile access and data visualization.
- It is designed to help your organization get the most value from the data you collect.
- It uses AI technology to dig deep into your data and extract actionable insights.
- It lets you intuitively visualize your data in useful graphs and charts to share with key stakeholders.
- The goal is to provide more useful information to help your team make better and more informed decisions.

Features of Analytics Cloud

- Mobile First
- Dynamic Visualization Engine
- Self-Service Access
- Multiple Dashboards
- Native Salesforce Integration

Some more Clouds…

APP Cloud	IOT Cloud	Integration Cloud
Financial Cloud	Manufacturing Cloud	Education Cloud
Health Cloud	Vaccine Cloud	Non-Profit Cloud

Salesforce Products/Services

salesforce appexchange

einstein

salesforce pardot

salesforce chatter®

tableau®

AppExchange

- AppExchange is a marketplace featuring hundreds of cloud applications created by Salesforce customers, developers, and partners.
- Many of the applications are free and all of them are pre-integrated with Salesforce, enabling you to easily and efficiently add functionality.

Pardot

- The platform is primarily focused on email marketing with additional features for creating landing pages, forms, lead scoring, and reports.
- One of the most widely used Marketing Cloud products, Pardot is Salesforce's B2B marketing solution.

Einstein Analytics

- Einstein Analytics is an app used to visualize the activity occurring in your Salesforce environment.
- Whether you use Salesforce for Sales, Marketing, or Service, this visibility tool offers insights into the data (like contacts, campaigns, or accounts) your users add to the CRM every day.
- Einstein Analytics is now called Tableau CRM.

einstein

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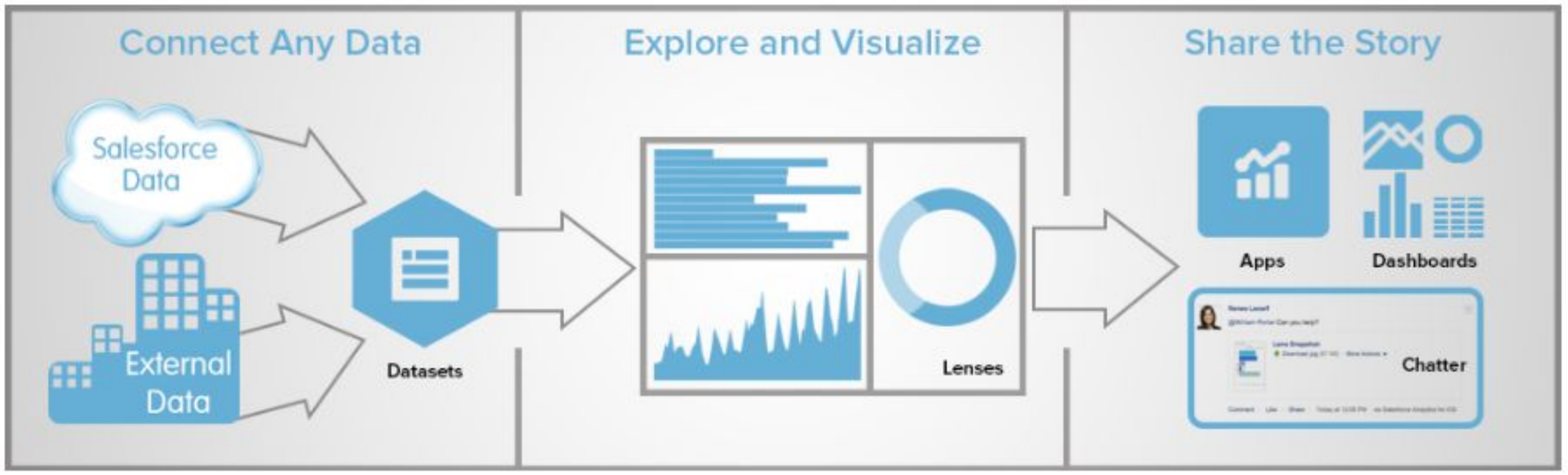
How Einstein Analytics works



Customer 360

- Customer 360 is the breadth of Salesforce technology — one integrated CRM platform to bring your company and customers together — from anywhere.
- Customer 360 unites your marketing, sales, commerce, service, and IT departments with shared, easy-to-understand data on one integrated CRM platform.

Chatter

- Salesforce Chatter is a social platform for the enterprise.
- Chatter lets your users work together, talk to each other, and share information.

Salesforce Administrator

Salesforce Administrator

The Salesforce administrator—or “admin” is a Salesforce user with system administration duties and other super powers.

Admins are responsible for setting up Salesforce for their organizations and making sure it runs smoothly.

Responsibilities/Power

- Admins are planners, problem-solvers, and heroes.
- Admins have special permissions. For example, they can add user accounts and specify what people can see and do in Salesforce.
- Admins can create custom Salesforce objects, workflows, validation rules, reports, and more.
- Admins can manage user profile information and delete Chatter feed updates, including posts and comments.
- All Salesforce organizations have at least one administrator.

Organizational Setup

Org or Environment

Salesforce Environments lets users access, deploy or create applications with various feature sets, depending on the configuration of the environment.

Characteristics of an Environment

- It is used for development, testing, and production.
- Contains data (records) and customizations.
- Each environment is based on an edition, which contains specific functionality and limits.
- Can be accessed through a web browser.

Types of Salesforce Environments

1. Production Environments

1. Development Environments
   - Developer Edition (DE)
   - Sandbox

1. Testing Environments

Salesforce Classic vs Lightning

Classic vs Lightning

Classic

Lightning

- ➢ The Original and Older version

- ➢ The intuitive and intelligent features will empower users to navigate the platform seamlessly and work with greater efficiency.
- ➢ Influence better decisions and help teams to close more deals.

Classic vs Lightning

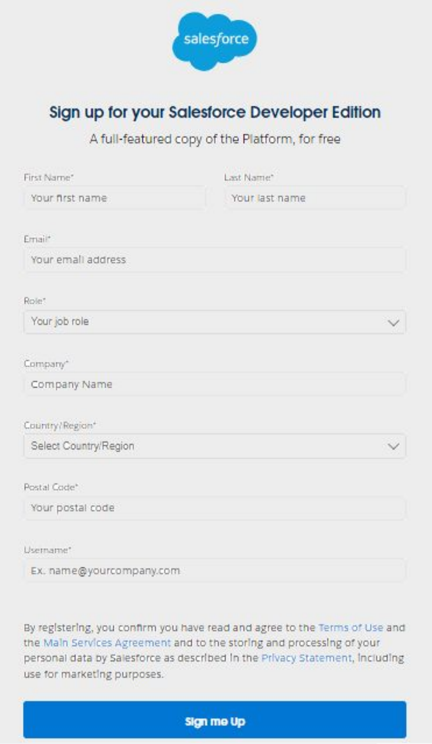
	Classic	Lightning
Modern interface	✗	✔
Activity timeline	✗	✔
Workplace page layouts	✗	✔
Einstein opportunity insights	✗	✔
Einstein bot builder	✗	✔
Einstein automated contacts	✗	✔

Lightning benefits

- Advanced User Interface and User Experience
- Lightning component library
- Reusability
- Flexibility of Lightning record pages
- Lightning App Builder
- Third-party apps on AppExchange

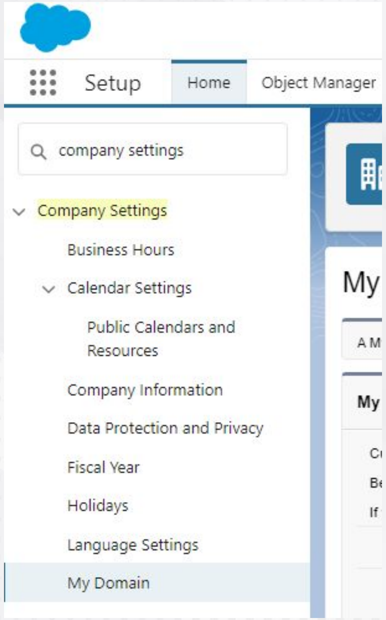
Login on Salesforce.com

1. In your browser go to https://developer.salesforce.com/signup.
2. Fill in the fields about you and your company.
3. In a moment you'll receive an email with a login link. Click the link and change your password.



Company Settings

1. Company settings are a collection of global attributes to describe the organization.
2. They consist of company, currency, fiscal year, support, and locale settings.



Salesforce Licenses

Salesforce Licenses

- Each and every Environment comes with a License.
- The Salesforce pricing model allows organizations to pay per license, ensuring the correct number of licenses can be purchased, maintained, and scaled.
- Additionally, licenses aren’t one-size-fits-all; different license types provide flexibility based on the access and features.

Salesforce Licenses

- Development license does not allow conversion to production.
- One cannot Upgrade Sandbox but can buy additional or different types of Sandbox if that particular individual has Enterprise or Unlimited edition.

Salesforce Licenses

Salesforce License Types

- User License
- Feature License
- Permission Set License

User License

- The user license specifies which feature or functionality a user can access on salesforce.
- Each user must have one license.
- The users are assigned for the data access through their user-profile and optionally using one or more permission sets.

Feature License

- The feature license authorizes the users to access additional features available in the salesforce that are not included in their user license, e.g., Marketing or WDC.
- A user can have any number of feature licenses.

Permission Set License

- Like the feature license, the permission set license authorizes the users to access those features that are not included in their user-license.
- It is a convenient way to assign the permissions to use various tools and functions available on the platform.
- Permission set licence can perform following actions:
  - It allows to check for the number of permission set licenses in salesforce.com.
  - These licenses can be assigned to a user.
  - It also allows the company to remove the assigned license from the User.

Different User Licenses

- Salesforce
- Salesforce Platform
- Lightning Platform
- Force.com-One App
- Knowledge only User
- Content Only User
- Guest User
- Customer Portal Manager Standard
- Customer Portal Manager Custom
- High Volume Customer Portal User
- Chatter Only
- Chatter Free License
- Chatter External

Different User Licenses

- **Salesforce :** Full Access to Standard CRM, Custom apps, AppExchange apps. Available in all editions.
- **Salesforce Platform:** access to custom, core apps(like contacts and Accounts) or AppExchange App without the standard CRM functionalities(like opportunities or forecasts).
- **Force.com-One App:** One custom app and read only for accounts and Contacts, NO CRM. not available for the new users
- **Force.com Free App:** same features as Force.com-One app except for the access of accounts and Contacts.

Different User Licenses

- **Knowledge only User:** access to the salesforce knowledge app. This license includes authorization of different tabs, such as Articles, Article Management, Home, Reports, Chatter, Files, Profile, Custom objects, and custom tabs.
- **Content Only User:** who want to access the salesforce CRM Content only. It also includes the access of Workspaces, Content, Subscriptions, Ideas and Home.
- **Guest User:** designed for the public users who want to access the force.com site or Salesforce Sites.

Different User Licenses

- **Customer Portal Manager Standard:** designed for the contacts who want to view or access the customer support information by logging to the Customer Portal.

- **Customer Portal Manager Custom:** advanced version of the customer portal manager standard

The partner users can have the below two user licenses to authorize them for the additional features:

- **Silver Partner**
- **Gold Partner**

Different User Licenses

- **Chatter Free License:** for those users who want access to chatter with some additional Salesforce objects but don't have a salesforce license.

  The users can access the standard chatter features such as profiles, groups, and files. The users are not allowed to access any salesforce object or data.

- **Chatter Only:** also termed as Chatter plus license.

  Access to chatter with some additional Salesforce objects but don't have a salesforce license. User can view Salesforce accounts and contacts.

- **Chatter External:** for users who are outside of the company's email domain. Chatter external users can be known as customers.

User Management

Who is a User??

- A user is anyone who logs in to Salesforce.
- Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records
- Every user in Salesforce has a user account.
- Each user account contains at least the following:
  - Username
  - Email Address
  - User's First and Last Name
  - License
  - Profile
  - Role (optional)

Managing Users

- ➢ Setup → Quick Find Box → Select Users.
- ➢ The user list shows all the users in your organization.
- ➢ From the list, you can:
  - Create one or more users.
  - Reset passwords for selected users.
  - View a user's detail page by clicking the name, alias, or username.
  - Edit a user's details.
  - Login as any user if the system permission is enabled or if the user has granted you system administrator login access. (Login Access Policies)

Key terms in User Management

- **Usernames:** Username must be unique across all SF organizations.
- **User Licenses:** A user license determines which features the user can access in Salesforce.
- **Profiles:** Profiles determine what users can do in Salesforce.
- **Roles:** Roles determine what users can see in Salesforce based on where they are located in the role hierarchy.
- **Alias:** An alias is a short name to identify the user on list pages, reports, or other places where their entire name doesn't fit.

Control User Access

- To make sure users can see only what they need to see.
- Salesforce provides a flexible, layered sharing model that makes it easy to assign different data sets to different sets of users.

Levels of Data Access

Data access can be configured at four main levels.

- **Organization**
- **Objects**
- **Fields**
- **Records**

Organization Level Security

At the highest level, you can secure access to your organization by

- Maintaining a list of authorized users (User management)
  - Inactive user : License is released
  - Freeze user License remains occupied
- Setting password policies (Password Policies)
- Limiting login access to certain hours and certain locations.(Restricting Access by Location - Network Access)

Object Level Security

In this level of security we prevent a user or group of users from Creating, Viewing, Editing or Deleting records of an object by setting permission on that object.

Object-level access can be managed through two configurations:

- Profiles
- Permission sets.

Field Level Security

Field level security controls whether a user can see and edit the value for a particular field on an object.

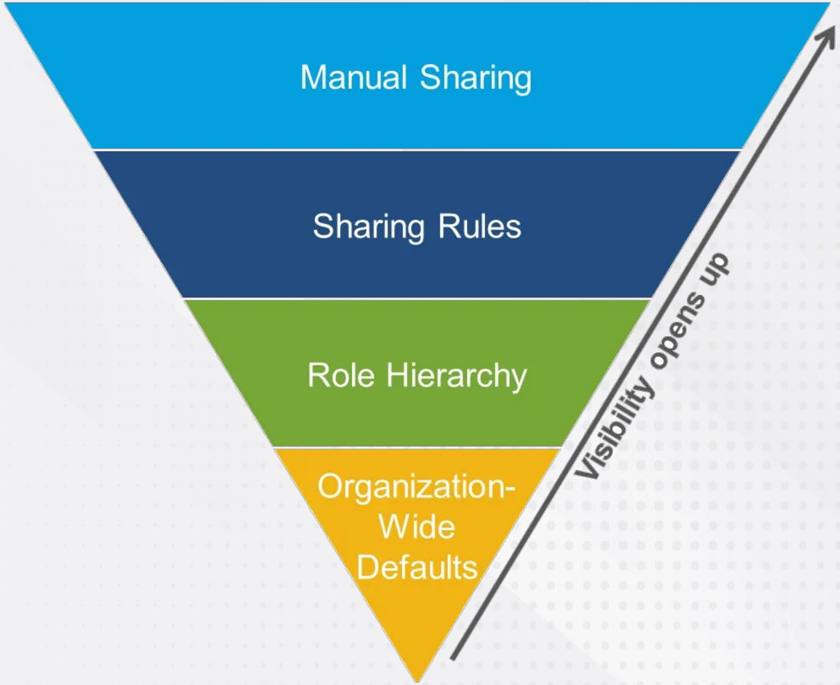
Field level Security can be implemented on:

1. Profiles
2. Permission sets

Record Levels Security:

It determines which individual records user can see and edit in each object they have access to their profile.

- ➢ **Organization–wide defaults**
- ➢ **Role Hierarchy**
- ➢ **Sharing Rules**
- ➢ **Manual Sharing**

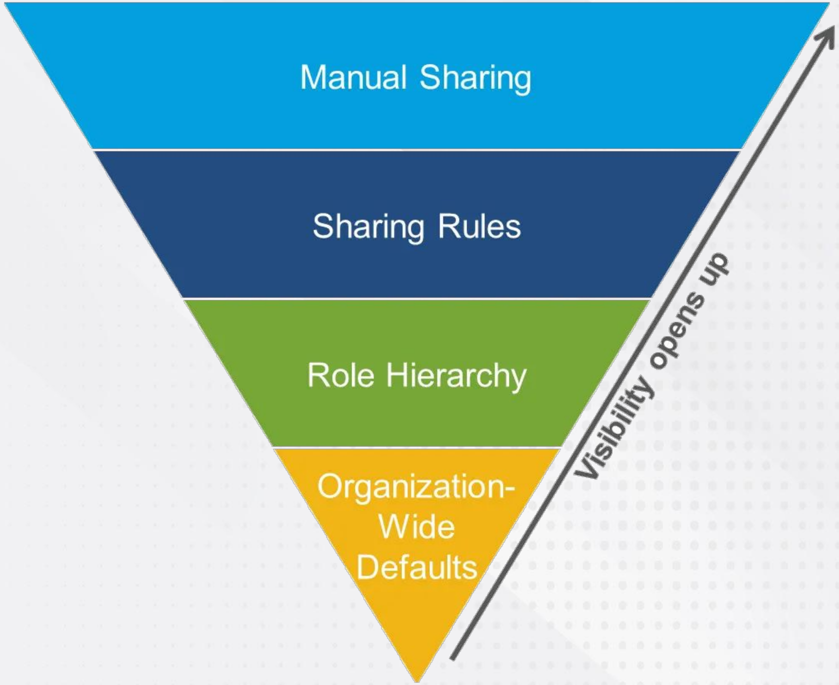


Organization–wide defaults (OWD)

OWD is most restrictive in record level.

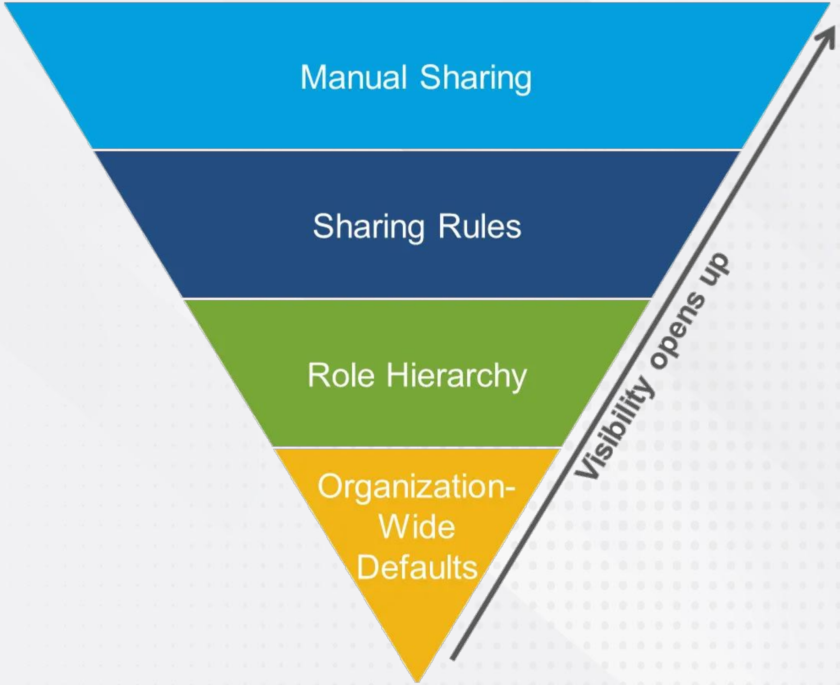
All other three can only open up the access. But they can not apply further restrictions.

=> Search Sharing Settings



Role hierarchies

- Open up access to those higher in the hierarchy so they inherit access to all records owned by users below them in the hierarchy.
- Role hierarchies don't have to match your organization chart exactly.
- Can do with Role



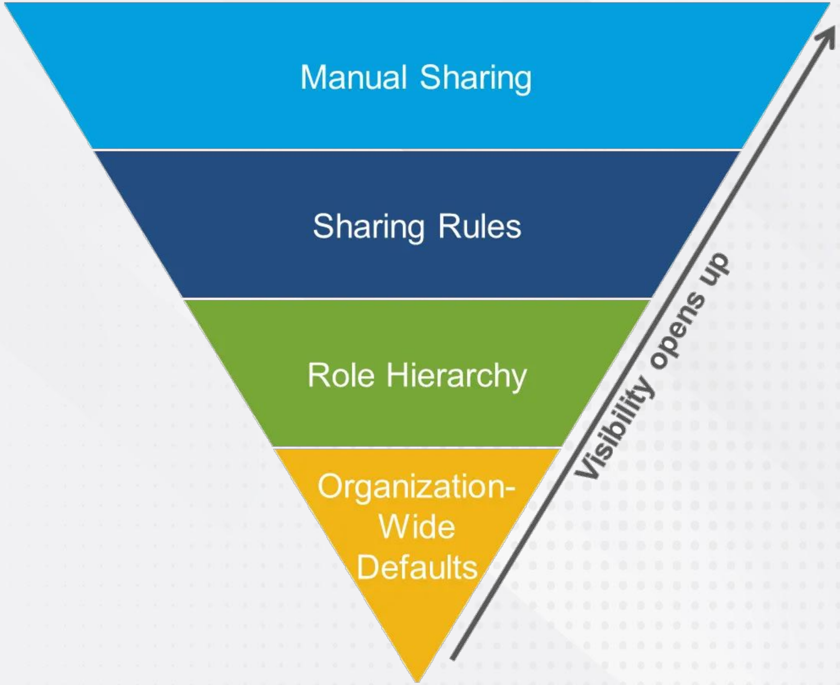
Sharing rules

To make Automatic exceptions to organization–wide defaults for particular groups of users, to give them access to records they don't own or can't normally see.

Two types of Sharing Rules

1. **Based on Record**
2. **Based on Criteria**

➔ **Search (Sharing Setting)**



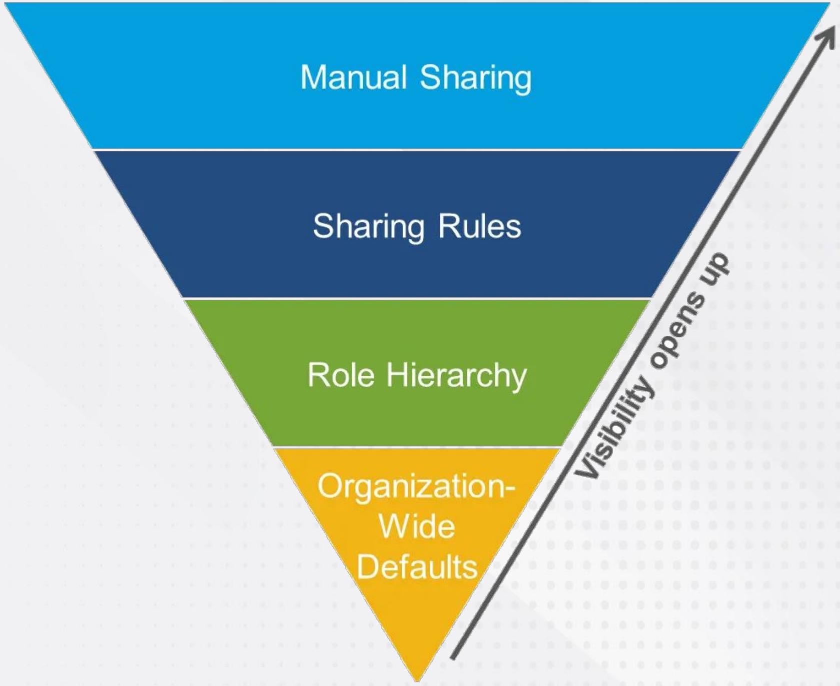
Manual Sharing

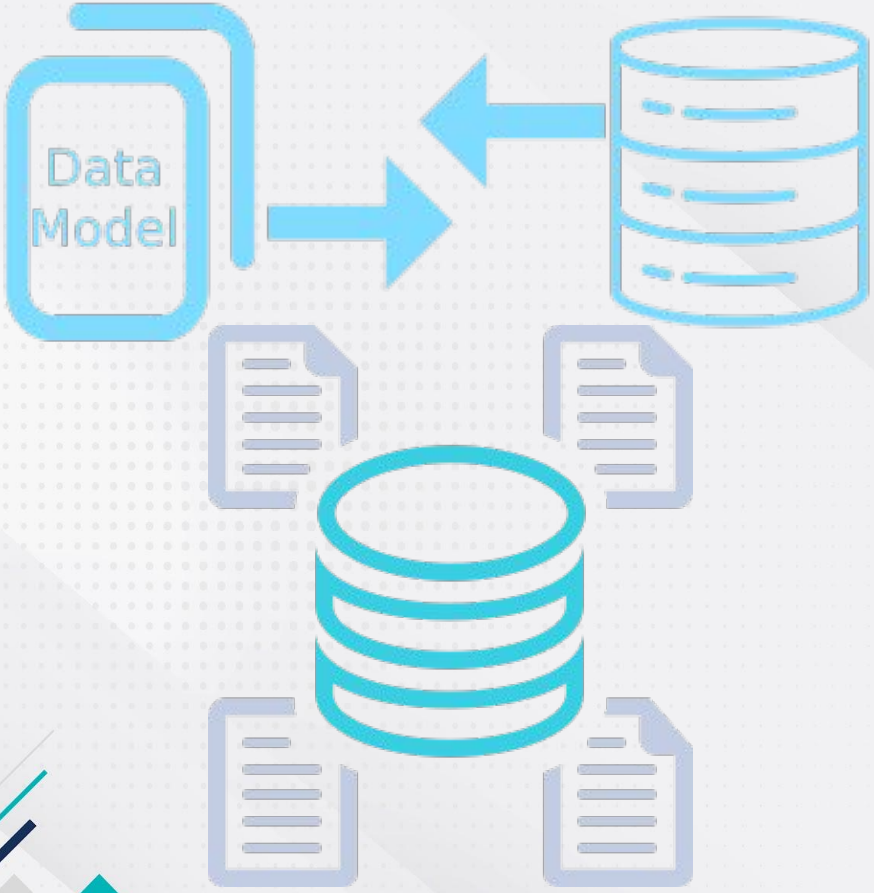
Allows owners of particular records to share them with other users.

It is not automated.

Sharing Records individually with other users using the share button on the Record.

=> Enable Manual Sharing (Sharing Settings)





Data Modeling

Salesforce Implementation Steps

Steps

1. Planning
2. Consulting
3. Data Migration
4. Development
5. Testing
6. Deployment
7. User Training
8. Post Support

Operations On Salesforce

Data modeling

A data model is defined as a method to represent data in the database.

- A table and object are similar in Salesforce.
- Fields present in the object are considered as a column of the table and
- A single row of this table is considered as a record.

Data Model is a collection of objects.

Working with data modeling

	FirstName	LastName	AddressLine1	City	StateProvinceCode	PostalCode
1	Ben	Miller	101 Candy Rd.	Redmond	WA	98052
2	Garrett	Vargas	10203 Acorn Avenue	Calgary	AB	T2P 2G8
3	Gabe	Mares	1061 Buskrik Avenue	Edmonds	WA	98020
4	Reuben	D'sa	1064 Slow Creek Road	Seattle	WA	98104
5	Gordon	Hee	108 Lakeside Court	Bellevue	WA	98004
6	Karan	Khanna	1102 Ravenwood	Seattle	WA	98104
7	François	Ajenstat	1144 Paradise Ct.	Issaquah	WA	98027
8	Sariya	Harnpadoungsataya	1185 Dallas Drive	Everett	WA	98201
9	Kirk	Koenigsbauer	1220 Bradford Way	Seattle	WA	98104
10	Kim	Ralls	1226 Shoe St.	Bothell	WA	98011

- **Object** is a table to store data.
- **Fields** are columns in an Object.
- **Records** are rows of an Object.
- Objects can be related to other objects using relationship fields.
- **App -** An app is a collection of objects, fields and other functionality that work together to serve a particular function.You can switch between the apps using App Launcher.

Objects

1. **Standard objects**
   - Objects that are included with Salesforce.
   - Ex: Account, contact, Lead, Opportunity etc. are the standard Object
2. **Custom Objects**
   - Customers create custom objects according to their requirements.
   - Custom objects extend the functionality that standard objects provide.
3. **External objects**
   - External objects are similar to custom objects, but external object record data is stored outside your Salesforce organization
4. **Big objects**
   - A big object stores and manages massive amounts of data on the Salesforce platform.

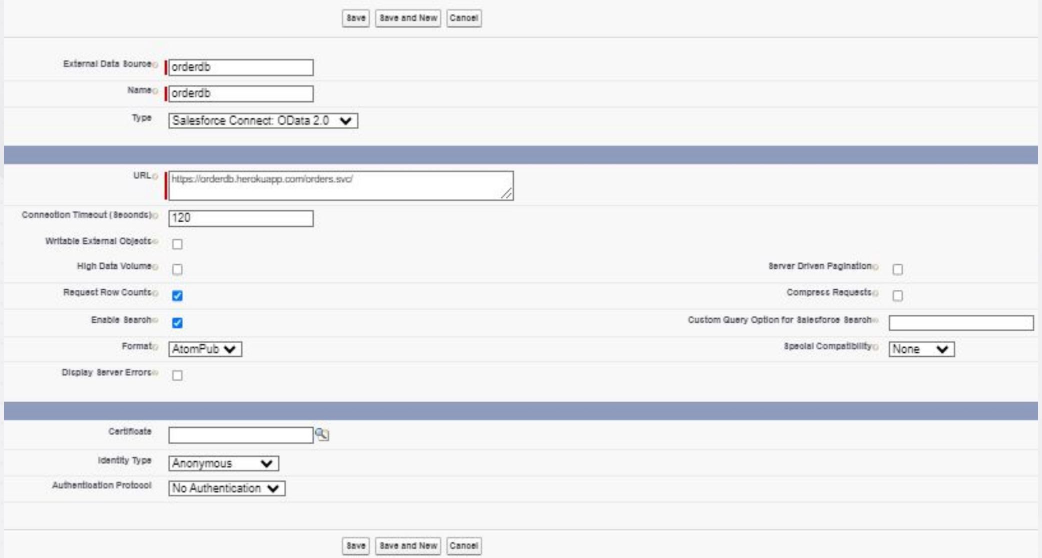
External Objects

- External objects are similar to custom objects except that they map to data that is stored outside your salesforce org.
- Each external object relies on an external data source definition to connect with the external system's data.
- Each org can have up to 200 external objects. External objects don't count towards the amount for custom objects.

If you are having your customer data outside your org on MySQL server then MySQL is External Data Source

Create External Data Source

- To create external data source use the following link: orderdb.herokuapp.com/orders.svc/
- Now goto setup -> Quick Find -> External Data Sources -> Create new External Data Source



Create External Object

- To create external object for the given Data Source click on Validate and Sync -> Select the Tables for which you want to create the objects -> Sync
- You can find all external object under External Object link.
  Find -> External Object -> Select any -> Check the API Name
- You can use this API name in apex code.

Tabs

- ➢ Tabs in Salesforce help users view the information at a glance.
- ➢ It displays the data of objects and other web content in the application.

There are mainly 4 types of tabs:

1. **Standard Object Tabs:**
   a. Standard object tabs displays data related to standard objects.
2. **Custom Object Tabs:**
   a. Custom object tabs displays data related to custom objects.
   b. These tabs look and function just like standard tabs.
3. **Web Tabs:**
   a. Web Tabs display any external Web-based application or Web page in a Salesforce tab.
4. **Visualforce Tabs:**
   a. Visualforce Tabs display data from a Visualforce Page.

Fields

It can store data values which are required for a particular object in a record.

There are 2 types of fields:

1. **Standard Fields:**

- Which are present by default and cannot be deleted from standard objects are standard fields.
- There are four standard fields in every custom object :

  1. Created By, 2. Last Modified By, 3. Owner, and 4. the field created at the time of the creation of an object.

1. **Custom Fields:**

- The Fields that we create in an object.

Relationship

Relationship in Salesforce is a 2-way association between 2 objects.

Using relationships we can link objects with each other and we can make connections and display data about other related objects.

Id	Name	Phone	Team	Captain	Capt_Phone
p001	Ankit	8899	Red	Sameer	7788
p002	Samuel	3434	Blue	Alok	5454
p003	Jacob	4433	Red	Sameer	7788
p004	Bhuvnesh	2356	Yellow	Mahesh	7574
p005	Virat	4786	Red	Sameer	7788

Issues:
1. Redundancy
2. If the captain of a team changes you have to change multiple values.
So, to remove redundancy we have to split the table.

Relationship

Id	Name	Phone	Team	Captain	Capt_Phone
p001	Ankit	8899	Red	Sameer	7788
p002	Samuel	3434	Blue	Alok	5454
p003	Jacob	4433	Red	Sameer	7788
p004	Bhuvnesh	2356	Yellow	Mahesh	7574
p005	Virat	4786	Red	Sameer	7788

TeamId	Team	Captain	Capt_Phone
R	Red	Sameer	7788
B	Blue	Alok	5454
Y	Yellow	Mahesh	7574

Id	Name	Phone	TeamId
p001	Ankit	8899	R
p002	Samuel	3434	B
p003	Jacob	4433	R
p004	Bhuvnesh	2356	Y
p005	Virat	4786	R

Types of Relationship

- One to One
- One to Many
- Many to One
- Many to Many

Relationship in salesforce

- Master-Detail Relationship
- Lookup Relationship

Master-Detail Relationship

- ➢ A master-detail relationship defines the relationship between the parent and the child.
- ➢ The master table defines the parent relation and the detail defines the child relation.
- ➢ If the master table is deleted then the child record data is also deleted.
- ➢ The RUS(Roll-Up Summary) fields are also created on master records.
  - Master- detail or
  - Parent - Child relationship or
  - One to many relationship

Note: We can create upto 2 Master Detail Relationships in 1 Object. Not more than that.

Master-Detail Relationship

- The relationship is used when we need to connect 2 objects together in strong bonding mode.
- Master-Detail Relationship in Salesforce is a parent-child relationship in which the master object controls certain behaviors of the detail object.
- The owner of the primary record will become the owner of the child record, another feature that to be considered in the MDR, where it is not available in Lookup Relationship.
- The fields are always mandatory.
- The Child Object does not have an owner field.
- If the parent record is deleted the child records are also deleted.
- The child inherits all the security and sharing from the parent.
- It can be defined between custom objects or between a custom object and a standard object. However, the standard object cannot be on the detail side of a relationship with a custom object.

Rollup Summary

- To give some summarized data in master object from detailed object.
- A read-only field that displays the sum, minimum, or maximum value of a field in a related list or the record count of all records listed in a related list. We can create a roll-up summary to display values of the master record based on field values in the detailed record, and the record must be related to MDR.

How to create a Roll-Up Summary?

Fields and Relationships → Choose Roll-up summary datatype→ next→ Label (Maximum Salary) → Next→ select the summarized object. (Employees) >> Select the Roll Up type. (Max) >> select the field to aggregate. (Salary) >> Filter Criteria (All records) >> next → next → Save.

Now to check goto Company Name→ Select any Record(Company) there you will see Roll-up Summary (maximum salary in that company).

Reparenting

- In a Master Detail Relationship, records cannot be reparented. However, to allow child records in master-detail relationships on custom objects to be reparented, enable the "Allow reparenting" option in the master-detail relationship definition.
- When this option is enabled, users can change the parent of the child records. When the parent is changed for a child record, then the child record access will move to the new parent record since sharing for the child record is inherited from the parent record in a master detail relationship.

1. Goto Child Object(Employee) → Fields and Relationships →Edit Master-detail Relationship(Company Name field) → Enable "Allow reparenting" option in the master-detail relationship definition → Save

After Save Go to Employees Object → Select Employee → Edit → Option to select Company Name.

Now you can edit the company name of an employee.

Lookup Relationship

- A Lookup relationship involves finding the value of a field based on the value in another field in another object. It is mostly used in the case of commonly shared data between two objects.
- When two objects are connected through a Lookup relationship, then fields of one object can be accessed by another object. Lookup relationships are implemented in two ways:

  1) one-to-one 2) one-to-many.

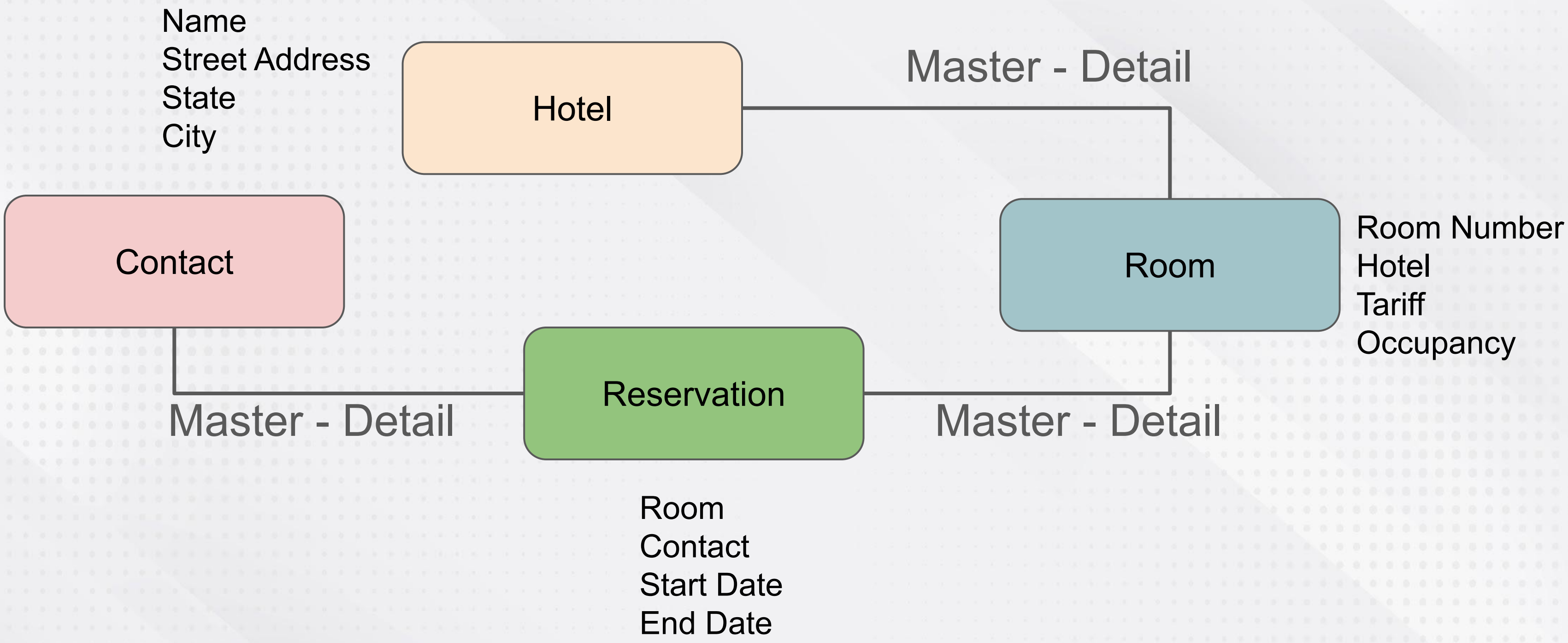
- Objects which have Lookup relationships are sometimes connected, and sometimes they are not connected.

Note: In Master-Detail relationships if the Parent Record is deleted then all related child records will also get deleted. But this is not the case in Look-up relationships.

Master Details vs Lookup Relationship

Master Details	Lookup
➢ This is parent-child relationship	➢ This links two objects together
➢ Detail object is deleted when parent is deleted	➢ No effect on linked records
➢ Parent can have Roll-Up Summary field	➢ Roll-Up Summary field is not available with lookups
➢ Detail record must have master record reference	➢ Reference to linked record is optional
➢ The detail record inherits the sharing and security settings of its master record	➢ Both linked records have independent sharing and security settings
➢ Only 2 MD fields are allowed	➢ Up to 40 lookups per object is allowed (38+2)

Data modeling (Hotel Reservation)



Validation Rules

- (To verify user entered data before saving)
- Validation rules in Salesforce verify the data a user enters in a record. The data should meet the standards specified by the organization. It can contain a formula or expression that evaluates the data in one or more fields & returns a value true or false.
- Use Formula. If it returns True it will give an error and if it returns False data will be saved successfully.

Goto Object manager → Select Object (Book) → Validation Rules (Left Bottom) → New → Enter Rule Name(PriceNotNegatve) and in Error Condition Formula insr field and write formula (Price__c < 0) and write Error message (Price can not be negative).

Validation Rules

- Validates that the account Annual Revenue is not negative and does not exceed $100 billion.
- Validates that the Account Number is exactly seven digits and should not be blank.
- Validates that the contact Mailing Street, Mailing City, and Mailing Country are provided.
- Validates that the contact Mailing Street is provided.
- Validates that the contact Mailing Zip/Postal Code is in 99999 or 99999-9999 format if Mailing Country is USA or blank.
- Validates that the Phone number begins with a plus sign (+) for country code. Note that this validation rule conflicts with the ten-digit rule.
- Validates that the value of a custom date field is a Saturday or Sunday.
- Validates that a custom field called Delivery Date is provided if an opportunity has advanced to the Closed Won or Negotiation/Review stage.

Cross Object Formula Field

- These formulas get data from related parent objects to display on the child object. Using them is a great way to avoid duplicate work, duplicate data, and data inconsistency.
- For example: Account is a Parent Object and Contact is a child object. An account(say ABC) has a field called a website. Contact object has no field called website. We want to show the website field for all the contacts that are associated with the Account (ABC). For this we will have to use the Formula field.

Go to Setup → object manager → contacts Object → Fields and Relationships → New → Choose data type “Formula” → Next → Field label(Account website) and formula return type(Text) → Next → Advanced Formula and Insert Field (Account.website) and check syntax and select “Treat blank fields as blanks”→ Next → Next → Save.

Note: We do the same thing in roll-up summary but roll-up summary is only used with Master detail relationships.

Lookup Filter

- Lookup filters are administrator settings that restrict the valid values and lookup dialog results for lookup, master-detail, and hierarchical relationship fields.
- It can be applied to Lookup, Master Detail, and Hierarchical Relationship Fields.

Example; Suppose we have a Coupon Object and Employee Object. We want to give coupons to only those employees who are working in “IBM”.

Goto Coupon Object → Fields and Relationships → Select data type lookup or Master detail relationship(Lookup in this case) → Related to (Employee) → Enter Field Label(Coupon For Employee) and Next → Next → SAVE.

Goto Coupon Object → Fields and Relationships→ EDIT Coupon For Employee field in lookup filter “Show Filter Settings” and In fields add Coupon For Employee then Company Name → company name name and select “Value” “IBM” → Next → Next → Next → Save.

Convert Lookup to Master Detail

- For this Objects must not have any Records or the lookup fields must not be blank for all the records..

Convert Master Detail to Lookup

- Before converting Master-detail into Lookup you must have to check if there is any rollup summary over Master or not.
- If Master object has rollup summary then Master-Detail relationship can not be converted into lookup.
- If yes, then delete all rollup summaries from Master and also from recycle bin.
- Then goto Detail object → Fields and Relationship and convert Master Detail into lookup after clicking Change data type button.

Apps

- It is a group of tabs that works as a unit to provide application’s functionality.
- It consists simply of a name, a logo and an ordered set of tabs.

There are 2 types of Apps in Salesforce:

1. **Standard Apps:**
    a. The apps which comes with every instance of Salesforce by default.
    b. It includes App Launcher, Call Center, Community, Content, Marketing, Sales, Salesforce Chatter and Site.com.
    c. These apps can be customized according to the needs and requirements of an organization.
    d. The label, description and logo of a standard app can’t be changed.
2. **Custom Apps:**
    a. The apps which are built to meet the specific business needs & requirements of an organization.
    b. Custom apps can be made by grouping standard as well as custom tabs.
    c. Logo in custom apps can be added and they can be changed after that also.

Working with data modeling

- **Create APP**
- **Create Object**
- **Create Tab for the Object:** It is mandatory to create a Tab for an Object.
- **Create Fields in the Object**
- **Create Records**

Working with data modeling

APP: Cloud Analogy International School

1. Student	
Reg No	Auto Number
Student Name	Text
Phone	Phone
Date of Birth	Date
Present Age	Number(Formula)
Class	Master Detail (Class)
Class Teacher	Lookup (Teacher)
Best Friend in Class	Lookup(Student)

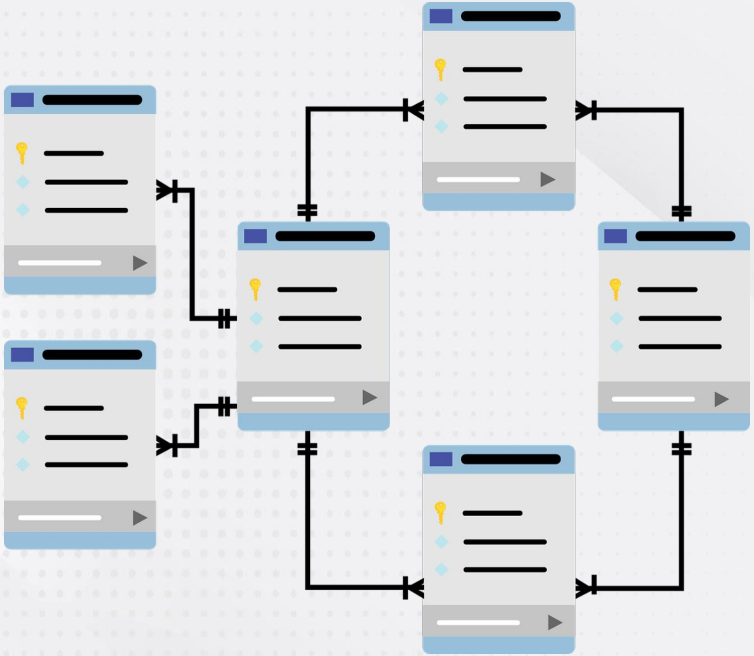
2. Teacher	
Id	Auto Number
Teacher Name	Text
Phone	Number
Subject	PickList(MultiSelect)
Salary	Currency+Validation
Address City	Global PickList(City)

3. Class	
Class Name	Text
Floor	PickList
Room Number	PickList
Oldest Student in the class	Rollup Summary

Field Dependency

4. Club	
Club Id	Auto No
Club Name	Text

5. Club Allocation	
Club Id	MD(Club)
Reg No	MD(Student)



Schema Builder

Schema Builder

- Schema Means Data Model
- Schema Builder is a dynamic environment provided by Salesforce for viewing and modifying all the objects and relationships in your organization.
- The tool simplifies the task of designing, implementing, and modifying your data model, or schema.
- It's also a helpful way for understanding complex Salesforce data models.

Schema Builder

Schema Builder is enabled by default and lets administrators add the following to the schema:

- Custom objects
- Lookup relationships
- Master-detail relationships
- All custom fields except: Geolocation

UI Customization

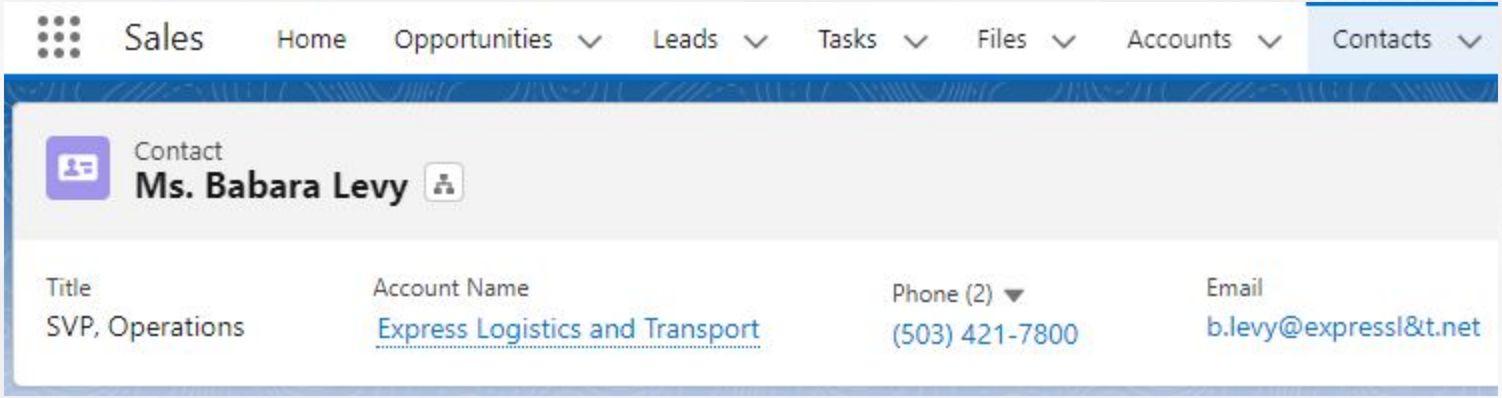
- Page Layouts
- Compact Layouts
- Record Types
- Actions

Page Layout

- Page layouts control the layout and organization of buttons, fields, s-controls, Visualforce, custom links, and related lists on object record pages.
- They also help determine which fields are visible, read only, and required.
- Use page layouts to customize the content of record pages for your users.

Compact Layout

- ➢ **Compact layout displays a record's key fields at a glance in both salesforce1 and Lightning Experience.**



Compact Layout

Points to Remember:

- ➢ Compact layout supports all fields except Text Area, Text Area(Long), Text Area(Rich), Picklist (Multi-Select).
- ➢ Only 10 fields can be added in the Compact layout.
- ➢ Each Record Type can have only one compact layout assigned to it, a compact layout can be assigned to multiple record types.
- ➢ A compact layout can only contain fields from its object only including a formula field that is a cross object reference to another object.

Record Types

- Record Types are used to control page layouts and picklist value in salesforce.
- To Assign more than one page layout to the same profile or to show only some part of the picklist to some profiles, we use record type.

Object Manager → select any object → Record Type → New
Enter Record Type Name → Choose Master or Child → Enable Active Button → Choose profile to whom record type should be visible → Assign the Page Layout to corresponding Profile → Save.

Record Types

Points to Remember:

- A standard record type field gets created whenever we create a record type of an object.(Now we have 5 standard fields)
- Think twice while assigning record types and page layouts to a profile.
- Only admin and users with customized application permission can create Record types.

Actions

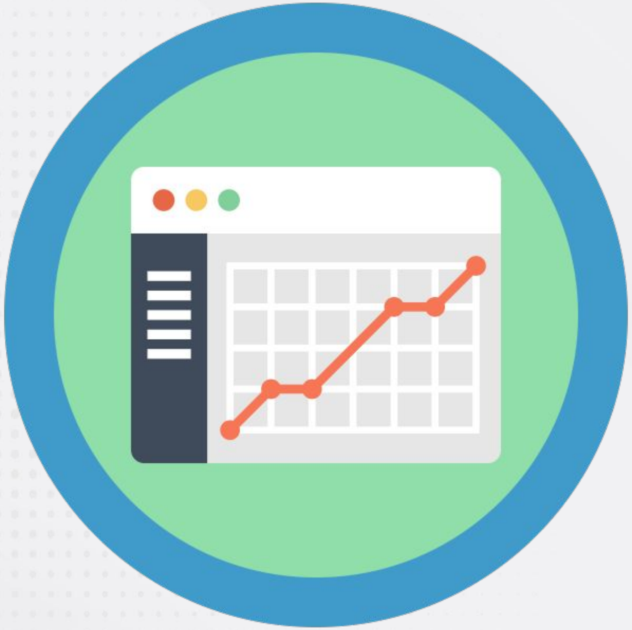
- Actions are similar to Button and Links which gives users access to do things in one go.
- Using these actions we can create or update a record, log a call, send an email or do custom things like opening Visualforce page or lightning component.
- All the actions have their own action layouts which specifies the fields that will be available on that action.
- Actions are of two types:
  - Object Specific Actions and
  - Global actions

Actions

- ➢ Create Action and then place it on page layout
- ➢ We want to Create Opportunity from Account Object.

Goto Account Object → Buttons,Links and Actions → New Action → (Create Object, Target = Opportunity, Standard Label type= None, Name = Create an Opportunity → Uncheck Create Feed Item → Type Success message → Save.

Goto Page Layout → Mobile & Lightning Actions → Place Create an Opportunity button in Salesforce Mobile and Lightning Experience Actions Section → Save.



Data Loader
&
Import Wizard

Data Import Wizard

- It helps to import data from excel/csv format into Salesforce.
- You can find this in setup
- You can import upto 50000 records at a time.
- You can perform insert, update & upsert operations using data import wizard.

Data Import Wizard

Before you import your data...

- **Clean up your data import file**

  You'll have fewer errors to resolve if your data file is clean and free of duplicates. Watch video

- **Make sure your field names match Salesforce field names**

  You'll be required to map your data fields to Salesforce data fields. Data in unmapped fields is not imported. View a list of Salesforce data fields.

- **Don't import too many records at once**

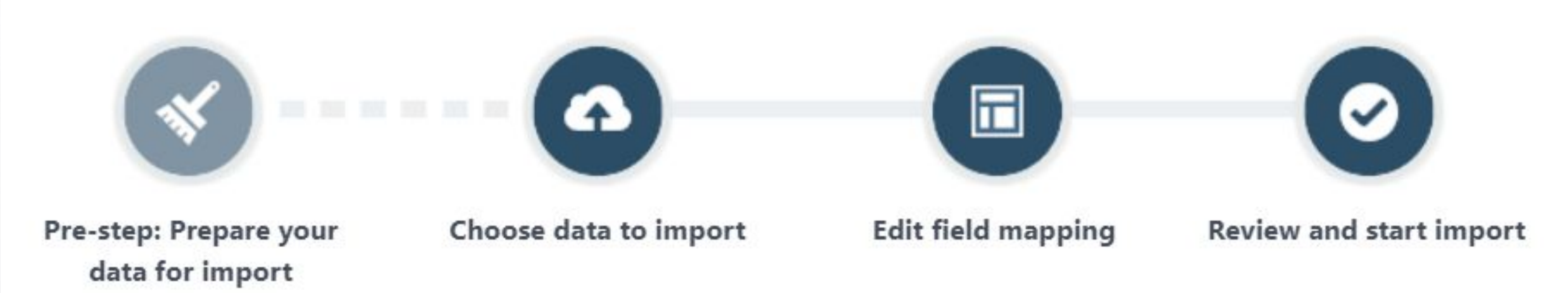
  Using the Data Import Wizard, import up to 50,000 records at a time. Importing too many records can slow down your org for all users, especially during periods of peak usage.

Data Import Wizard

There are three functions you can carry out with the Data Import Wizard:

- **Insert:** This gives you the ability to insert new records into Salesforce.
- **Update:** This enables you to make changes to existing records inside Salesforce.
- **Upsert:** This combines the above options, updates a record if it already exists, or – if not – inserts it.

Import your data in 3 easy steps!

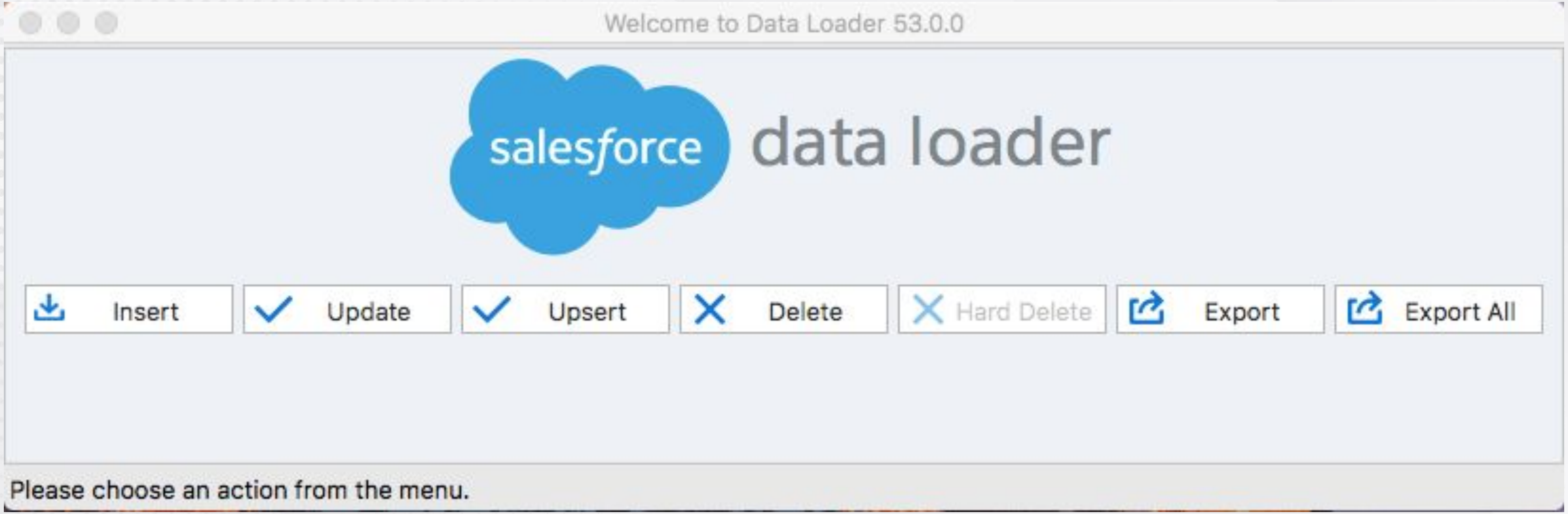


Data Loader

- It helps to import data from excel/csv format into salesforce.
- You have to install it in the computer.
- You can import **5,000,000** records at a time.
- **You can perform following operations:**
    - Insert
    - Update
    - Upsert
    - Delete
    - Export
    - Export all (included deleted records)

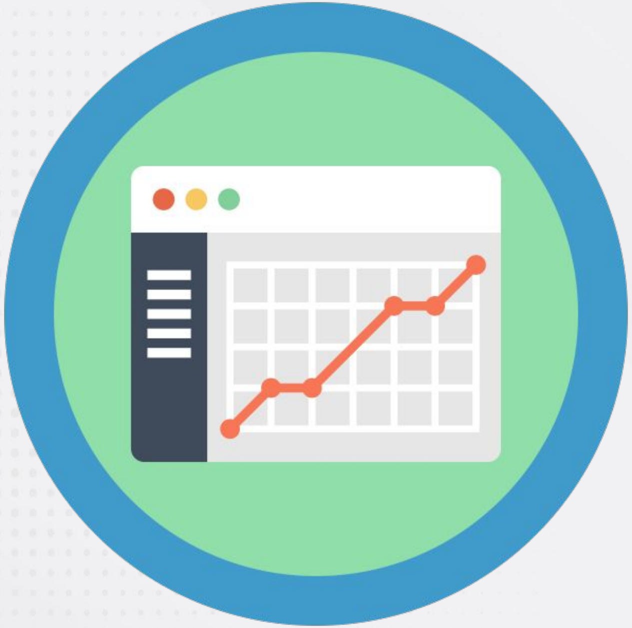
Data Loader Overview

The Salesforce Data Loader needs to be installed locally to your device for you to use it, and it allows you to connect to any Salesforce org that you have credentials for.



Data Import Wizard vs. Data Loader

Feature	Data Import Wizard	Data Loader
# of records	Up to 50,000	50,000+
Import	Yes	Yes
Upsert	Yes	Yes
Delete	No	Yes
Catches duplicates	Yes	No
Identifying duplicates	Limited to Salesforce ID, name, email; Exact match only	N/A
Handling duplicates	Prevented from being imported; update existing with new data (limited)	N/A
Ability to make edits and transformations	No	No
Export data/results	No	No



Reports and Dashboards

Reports and Dashboards

- Salesforce reports and dashboards are the analytical side of the CRM. They are used to convert business requirements into Visual representations like Graphs, Pie Charts, Tables, Scatter Chart, Gauges, Metrics, Funnel chart and so on.

Reports

- Salesforce Reports are used to generate data and display the data in the form of Rows and Columns with rule criteria.
- One can filter, group and do math on Reports.
- One can display reports graphically through Charts.
- Every report is stored in a Folder. Report folder can be public hidden or shared.
- There are two types of Reports in Salesforce.
    1. Standard Reports.
    2. Custom Reports.

Reports

- **Standard reports :** Standard Reports in Salesforce are the one created when an object is created and can not be modified.
- **Custom Reports :** Custom reports in Salesforce are one created by the admin for custom objects. Custom reports are of four types:
  1. Tabular Reports.
  2. Summary Reports.
  3. Matrix Report.
  4. Joined Report.

Report Folders

- Report folders determines how one can access reports to view, Edit or Manage.
- Report folder can be public, hidden or shared.
- We can control access of contents of the folder based on Roles, Permissions, public groups, territories and license types.

Dashboards

- Salesforce dashboards are pictorial representation of reports data which can be displayed using Graphs, Bar charts, Pie Charts, Tables, Scatter Chart, Gauges, Metrics, Funnel chart and so on.
- Source of dashboard is report.

Dashboards

➢ To represent Salesforce dashboards we have to use Dashboard components. Some of them are:

Charts	**Gauges**	**Tables**	**Metrics**
Scatter Chart	**Funnel Chart**	**Donut Chart**	**Pie Chart**
Line Chart	**Vertical bar chart**	**Horizontal Bar Chart**	**Visualforce pages**

Dashboard Folders

- Dashboard folder controls who has access to its content.
- If one has access to folder then only one can access its dashboard.
- However, to view the dashboard components, one need access to underlying reports as well.

Important Points About Dashboard

- Each Dashboard has a running user.
- Running user's security settings determine which data to display in Dashboard.
- If the running user is a specific user, then all dashboard viewers sees data based on the security setting of that user, regardless of their own security settings.
- Dynamic Dashboards are those for which running user is always logged in user. Here, each user views the dashboard as per their own security settings.

Custom Report Types

- While creating any report we have to select the report type.
- Salesforce has standard and custom report types.
- To create custom report type: **Setup => Quick Find Box => Report Types => Continue => New Custom Report Type => Fill All the Details and Save the data.**

Process Automation

- Process Builder
- Flow Builder
- Workflow
- Approvals

Process Automation

- Process Builder
- Flow Builder
- Workflow
- Approvals

Introduction

- Provides declarative process automation.
- Lightning flow provides this point and click automation

Process Automation Tools

	Process Builder	Flow Builder	Workflow	Approvals
Complexity	Multiple if/then Statements	Complex	A single if/then Statement	A single if/then Statement
Visual Designer	Yes	Yes	No	No
Supports Time-Based Actions	Yes	Yes	Yes	No
Supports User Interactions	No	Yes	No	No

Process Automation Tools

	Process Builder	Flow Builder	Workflow	Approvals
Starts when	• Record is changed • Invoked by another process • Platform event message is received	• User click button or link • User accesses Lightning Page, Community Page or Custom Tab. • User Accesses item in a utility bar. • Process starts • Apex is called • Record is Created or Updated.	• Record is changed	• User clicks button or link • Process or flow starts that includes a Submit for Approval action. • Apex is called

Supported Actions

	Process Builder	Flow Builder	Workflow	Approvals
Launch a flow	Yes	Yes	No	No
Post to Chatter	Yes	Yes	No	No
Send email	Yes (Email alert only)	Yes	Yes (Email alerts only)	Yes (Email alerts only)
Send outbound messages without code	No	No	Yes	Yes

Supported Actions

	Process Builder	Flow Builder	Workflow	Approvals
Submit for Approvals	Yes	Yes	No	No
Update fields	The record or its parent or child	Any record	The record or its parent	The record or its parent
Custom Notifications	Yes	Yes	No	No
Quick Action	Yes	Yes	No	No

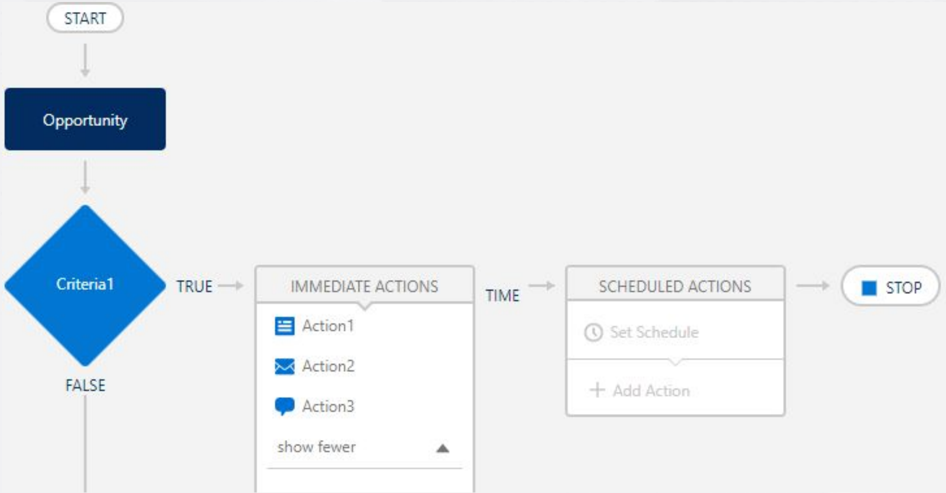
Process Builder

- Process Builder is a point-and-click tool that lets you easily automate if/then business processes and see a graphical representation of your process as you build them.

- Use Process Builder when Requirement is to start automated business process behind the scene.

Process Builder

- These Processes Start when
  - A Record changes (Created or updated).
  - A Platform event message is received.
  - It is Invoked by another process.
- What need to define
  - Object
  - Criteria
  - Immediate Actions
  - Schedule Actions



Process Builder

- When on Account object if the Active status is set to No then delete all related Contacts. Apex Class

ByPass Validation Rule Through Process Builder

- On Opportunity object create a validation rule that will prevent the user to update the Phone field from UI.

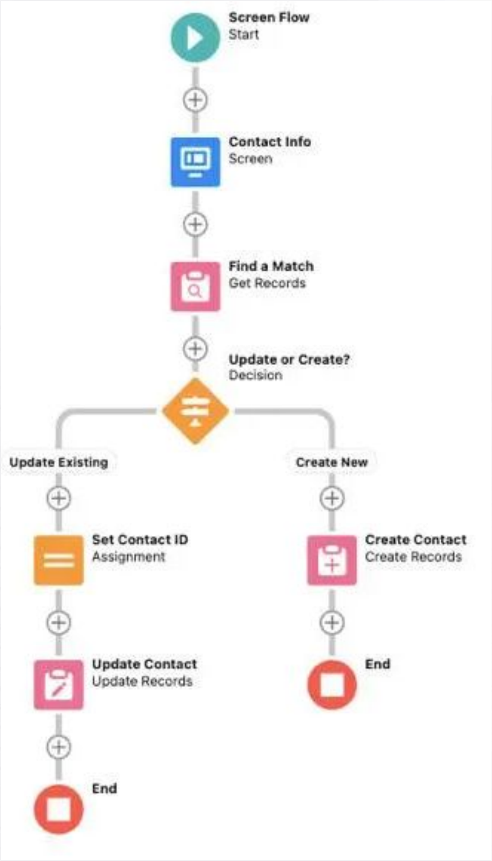
  AND(NOT(ISBLANK(AccountId)), ISCHANGED(Phone__c))

- Now we want to populate the related Account Phone on the Opportunity Phone.
- To do this create one field (Checkbox) named Bypass Validation Rule.
- Now Modify the validation rule as:

  AND(NOT(ISBLANK(AccountId)), ISCHANGED(Phone__c), NOT(By_Pass_Validation))

Flow Builder

- Flow Builder is the declarative interface used to build individual flows.
- Flow Builder can be used to build code-like logic without using a programming language.



Flow Builder

- Use of assignment, decision and loop in flow. Call autolaunched flow using process builder.
- When deadline date on account is updated then populate it on close date of related opportunities whose stage is other than closed lost and closed won.

Flow Builder

- Create lookup in screenflow.
- Use record choice set to create lookup.
- Create Contact and associate it with an Account.

Flow Builder

- Launch screen flow using Quick Action.
- Create opportunity from account record page.

Flow Builder

- Get & update a record data element in flow using process builder.
- When account description is updated, then update description of all related opportunities.

Flow Builder

- Delete Record data element in Flow.
- Delete the opportunity record when its stage is set to closed lost.

Flow Builder

- Send email through autolaunched flow.
- Use of sub flow in lightning flow.
- File upload using lightning flow. After creating contact record upload a file to that contact

Flow Builder

- Call lightning flow through apex
- Create a flow that will fetch the record of an opportunity whose id is passed through apex class.
- Now print the stage name of the opportunity through the apex class.

Flow Builder

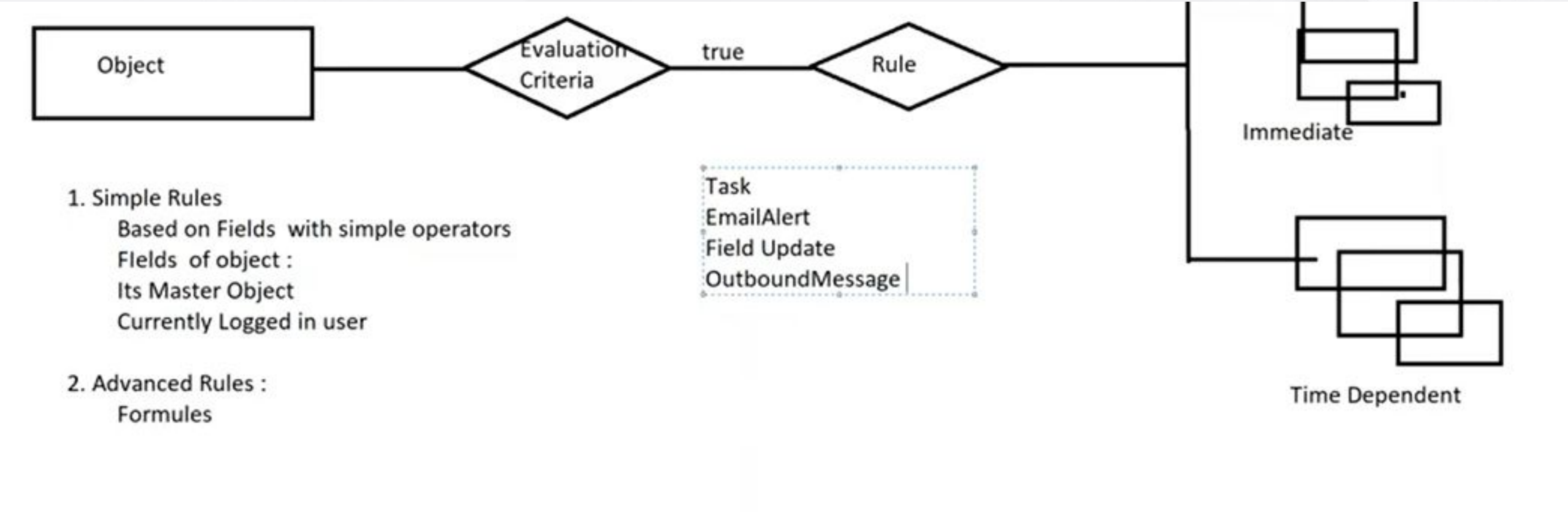
```
Map<String, Id> param = new Map<String, Id>();
param.put('recordId', '0062w00000MJDVDAA5');
Flow.Interview.Get_Opp getOppRecords = new Flow.Interview.Get_Opp(param);
getOppRecords.start();

String stName = (String) getOppRecords.getVariableValue('OppStage');
System.debug('Stage Name=> '+stName);
```

Workflow

- Workflow in Salesforce is basically a container or business logic engine which automates certain actions based on particular criteria.
- If the criteria are met, the actions get executed. When they are not met, records will get saved but no action will get executed.

Workflow

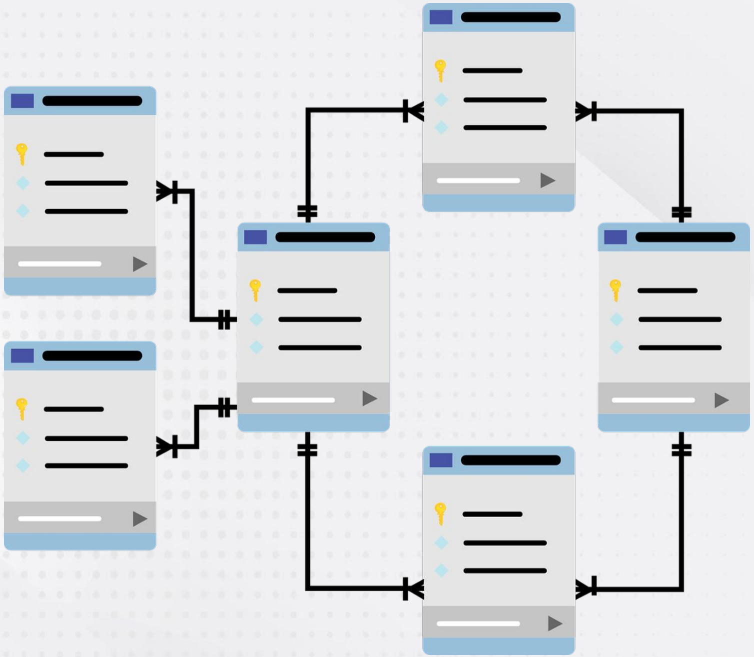

Object
Evaluation Criteria
true
Rule
Immediate
Time Dependent
Task
EmailAlert
Field Update
OutboundMessage
1. Simple Rules
Based on Fields with simple operators
FIelds of object :
Its Master Object
Currently Logged in user
2. Advanced Rules :
Formules

Workflow


Evaluation Criteria
Rule Criteria
Actions
Task(s)
Email Alert(s)
Field Update(s)
Outbound Message(s)
Time Triggers
Actions
Task(s)
Email Alert(s)
Field Update(s)
Outbound Message(s)

Approval Processes

- An approval process automates how records are approved in Salesforce. An approval process specifies each step of approval, including from whom to request approval and what to do at each point of the process. Your org has a three-tier process for approving expenses.



Screenflow

Steps to Create Screen Flow

- Setup → Quick Find Box → Flows → New Flow → Screenflow
- In the left side you will see elements and manager.
- Now to create a screen flow drag and drop the screen from left side elements.
-

Brainstorming Session-1

1. What are the advantages of cloud computing?
2. Why an organization requires CRM?
3. What are the Features of salesforce?
4. What do you mean by multi-tenant architecture?
5. Differentiate between Report and Dashboard.

FRONTEND	BACKEND	DATABASES

Evaluation of Brainstorming Session-1

Quiz-1

https://forms.gle/vhoHrp8ZcJ6uc28Q6

Hands-on Challenge : Add a custom field to the Contact object

Many homebuyers who work with DreamHouse Realty are prequalified for a home loan. Brokers need to know how much money their clients can borrow so they can show properties in the right price range. Add a Loan Amount field to the Contact object so brokers can record and see this information.

https://trailhead.salesforce.com/en/content/learn/modules/starting_force_com/starting_intro

Company Policies

E-Learning Sample Module