

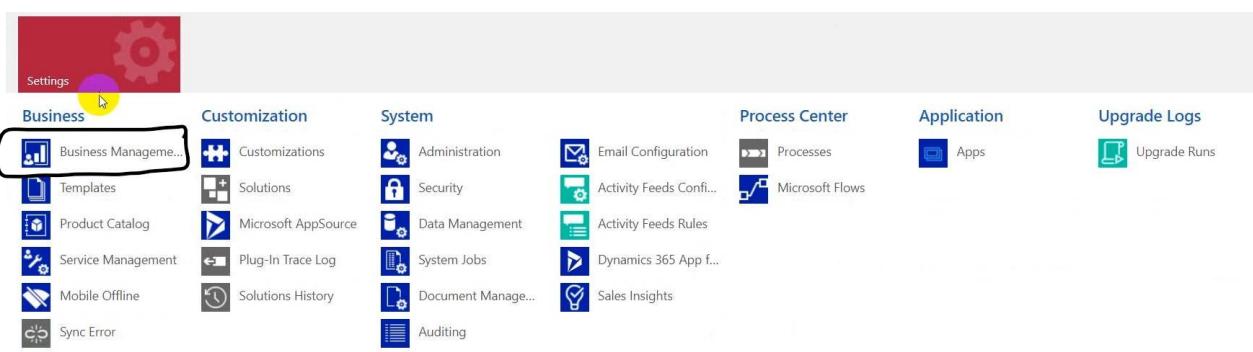
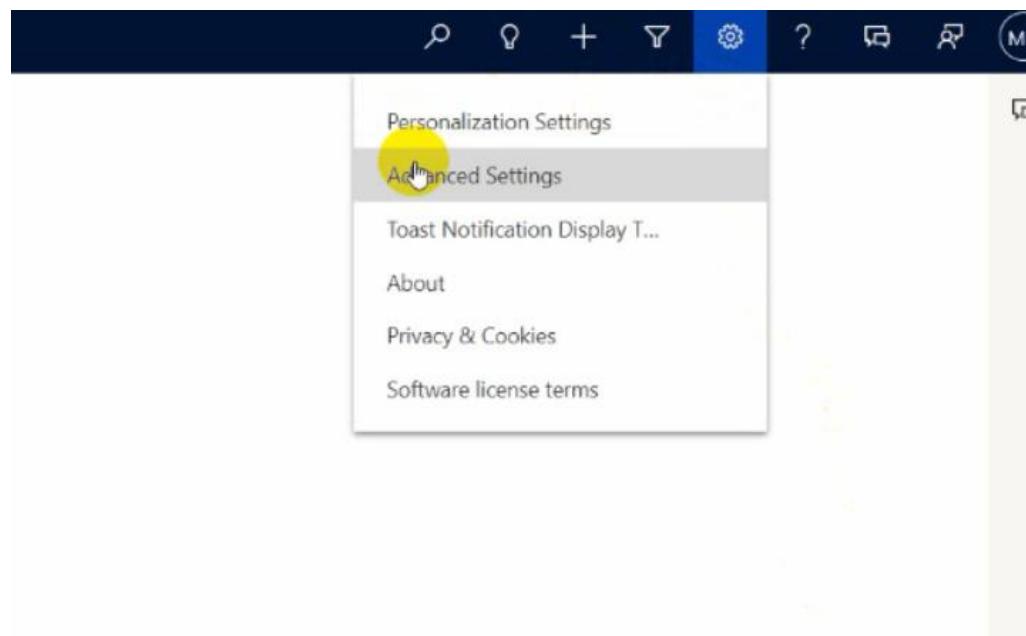
## Business activities

Sales, Marketing, customer services, Services activity, goal management

## Administration

To customize your app (Working hours, holidays,...)

From advanced setting



## Now will switch into Business management

- Goal management: Amount, Count (to set how you can measure goals).
- Facilities/Equipment: Facilities and Equipment that will use in service schedule (Like car and delivery man in last lecture example).
- Resource groups: to add more than one equipment and facility on it to deal with them as a group.
- Services: Service scheduling (like delivery services in last lecture example).
- Subject: To manage subject hierarchy for organization, to set hierarchy of subjects (Like set subject name for cases).
- Currency: To manage currency or to change default currency.
- Sites: to manage sites or to add area (like Nasr city in last lecture example)
- Sale Territories: to divide sales team into territories and add manager in this territory.
- Queues: To manage queue of services to Automate something after creating a record.
- Business Closures: To manage holidays or to set time on it business will be closed.
- Fiscal Year setting: To set date details (Quarter, Year, Month...).
- Automatic record creation and update rules: To automate record creation or updating (like if you received an E-mail with specific subject to create a case or update a thing).
- Rollup Queries: To set an automated query in a group of related data (like to create rollup query to calculate summation of revenue from specific field so we can say to track field in entity and cumulative the summation of it).
- Connect roles: To set relation between two records.

Which feature would you like to work with?

 <b>Fiscal Year Settings</b> Set the start date, template, and display options for the fiscal year and fiscal period used for tracking sales goals.	 <b>Goal Metrics</b> ✓ Define and manage the kinds of goals that your organization tracks.
 <b>Business Closures</b> ✓ Create a list of holidays and other times when the business is closed.	 <b>Facilities/Equipment</b> ✓ Add facilities and equipment for service scheduling. Change information about resources or delete existing resources.
 <b>Queues</b> ✓ Create and manage service queues, and manage the membership of private queues. Establish criteria for automatic record creation and updates.	 <b>Resource Groups</b> ✓ Add new groups and new members to existing groups for service scheduling. Update group information and delete groups or group members.
 <b>Sales Territories</b> Create new sales territories and assign territory managers. Add and remove members, modify territory information, and delete territories.	 <b>Services</b> Add new services for service scheduling. Change service information and deactivate existing services.
 <b>Sites</b> Create new sites or office locations where service operations take place. Add and remove resources, change site information, or delete sites.	 <b>Subjects</b> ✓ Manage the subject hierarchy for your organization's products, literature, and articles.
 <b>Currencies</b> Add new currencies or change the exchange rates for existing currencies.	 <b>Connection Roles</b> Create, edit, and delete the standard labels used to define connections between records.
 <b>Automatic Record Creation and Update Rules</b> Create and manage rules for automatic record creation and updates. You can set up rules for either out-of-the-box entities or custom entities.	 <b>Rollup Queries</b> Go to your list of Rollup Queries that you can use to gather data about a group of related records.
 <b>LinkedIn Sales Navigator</b> Manage settings relating to LinkedIn Sales Navigator Integration	

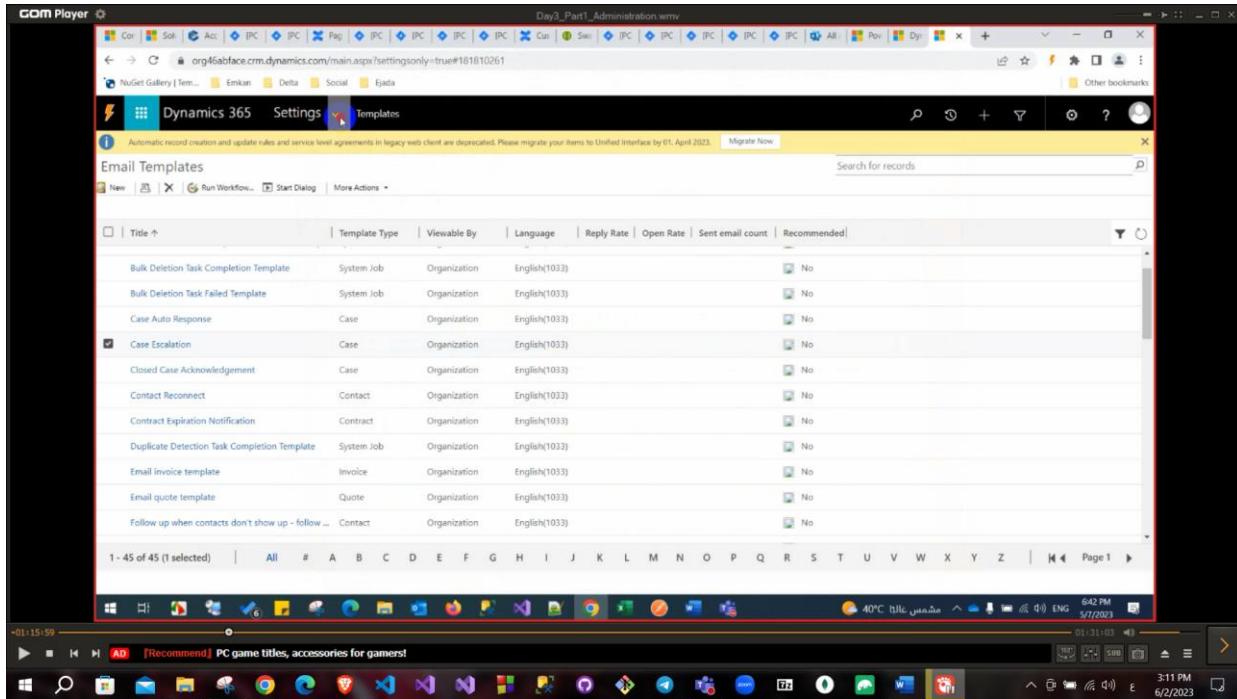
- Now will switch into Templates

## Templates

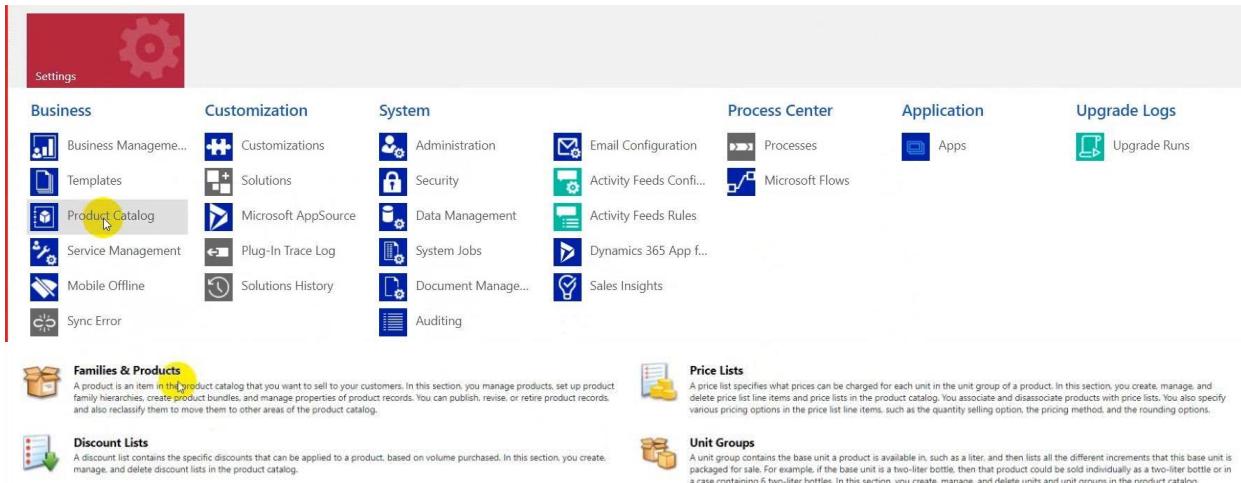
**Which feature would you like to work with?**

<b>Article Templates</b>  Create and manage templates for articles in the knowledge base.	<b>Contract Templates</b>  Create and manage templates for contracts.
<b>Email Templates</b>  Create and manage templates for email messages.	<b>Document Templates</b>  Create and manage templates for documents.
<b>Email Signatures</b>  Create and manage email signatures.	

- Contact Template: Is deprecated now.
- Article Template: To create or update template of article.
- Email Template: To create or customize your email template. (شوية تمبلت جاهزة)
- Email Signatures: To create email signature.
- Document templates: to create or manage documents.



## Now will switch into Product Catalog



- Families & Products: (like laptop is a family and laptop dell is a product in this family).
- Price list: (like case if we have a product with different currency price).
- Discount List: (percentage or amount) and set a condition to apply this discount when it success (Like when you buy 4 products apply discount).
- Unit group: (Like a laptop box contain charger and laptop)

## Now will switch into Service management

The screenshot shows the Dynamics 365 Settings interface. The top navigation bar has a red 'Settings' button with a gear icon. Below it, there are several categories: Business, Customization, System, Process Center, Application, and Upgrade Logs. Under the Business category, the 'Service Management' option is highlighted with a yellow circle. Other options include Business Management, Templates, Product Catalog, Mobile Offline, Sync Error, Customizations, Solutions, Microsoft AppSource, Plug-In Trace Log, Solutions History, Administration, Security, Data Management, System Jobs, Document Management, Auditing, Email Configuration, Activity Feeds Configuration, Activity Feeds Rules, Dynamics 365 App, and Sales Insights.

The screenshot shows the 'Service Management' setup page. It includes sections for 'Set up customer service for your organization', 'Case Settings with Record Creation and Update Rules', 'Service Terms', and 'Knowledge Base Management'. The 'Case Settings' section contains 'Queues', 'Routing Rule Sets' (which is highlighted with a yellow circle), 'Subjects', and 'Automatic Record Creation and Update Rules'. The 'Service Terms' section contains 'Service Level Agreements', 'Holiday Schedule', and 'Customer Service Schedule'. The 'Knowledge Base Management' section is partially visible at the bottom.

- **Routing rules sets:** To route tasks to queue and assign this case to someone (by click on save and route).  
When select a queue item from view you can button on pick to assign this task to you.
- **Parent and child case settings:** to specify information to be cascaded from parent to child.

The screenshot shows the Dynamics 365 Settings interface again. The top navigation bar has a red 'Settings' button with a gear icon. Below it, there are several categories: Business, Customization, System, Process Center, Application, and Upgrade Logs. Under the System category, the 'Administration' option is highlighted with a yellow circle. Other options include Security, Data Management, System Jobs, Document Management, and Auditing. The other categories (Business, Customization, Process Center, Application, Upgrade Logs) have their first item highlighted.

## Administration

Administration

Which feature would you like to work with?



### Auto-Numbering

Specify the prefix numbers for contracts, cases, quotes, orders, articles, invoices, and campaigns. Select the suffix length for contracts, cases, quotes, orders, and invoices.



### Languages

Add or remove support for additional languages.



### System Notifications

View important system messages such as scheduled outage notifications.



### Virtual Entity Data Sources

Add, edit, or delete connection information for external data sources used by virtual entities in the system.



### System Settings

Set the format for various values, such as numbers, the calendar, and currency. Select the email tracking, marketing, and customization options for your organization. Set Microsoft Dynamics 365 for Outlook options. Manage report categories.



### Subscription Management

See payment and billing options, and purchase additional licenses. You must be a member of an appropriate security role to do these tasks.



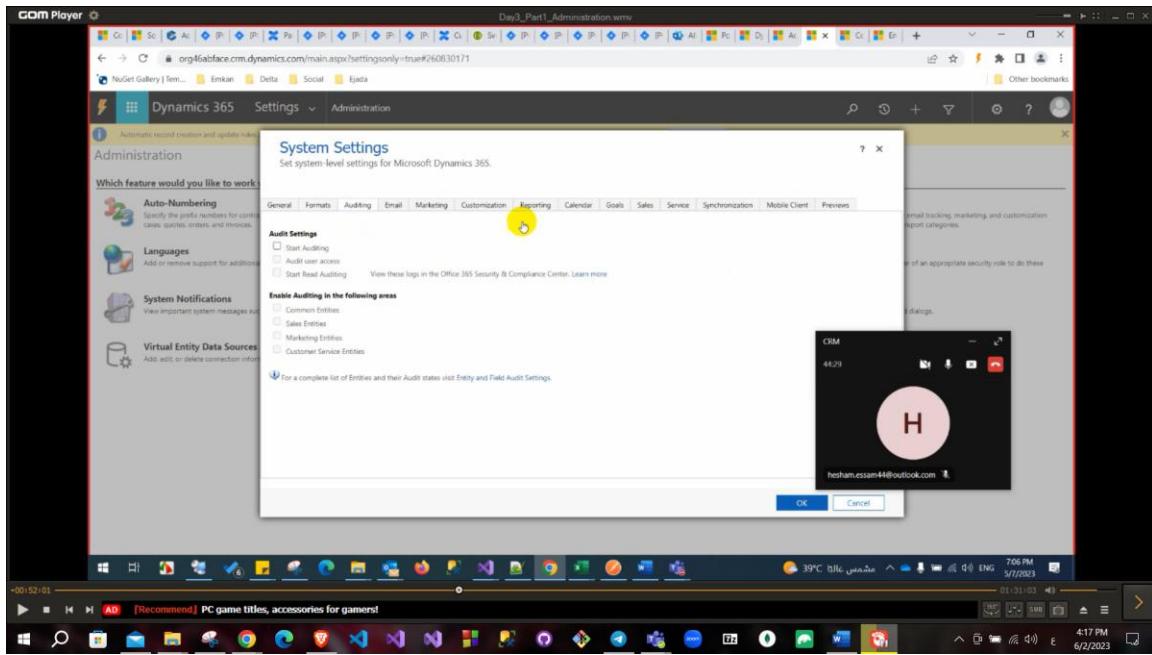
### Resources In Use

View details about your organization's use of storage, custom entities, and workflows and dialogs.



- Auto-Numbering: To set auto numbering on entity number when it created like cases, contacts or when you add custom entity you can add pattern of auto numbering (with prefix, Number, Suffix length).
- Language: To set more than one language, after download language you will see this language in settings → Options
- System notification: to set a notification and appear this when anyone open system (Like deploy time).
- Virtual Entity data sources: to retrieve data from another system and do not save this data on my system (Real-time and on the fly) will use in development (create data source and data provider) and connect on data source and retrieve your data from another external integrated system but it separated into two types **retrieve and retrieve multiple**, but in this typeworks as read only cannot modify this data.  
لو عايز اجيب ايست بالفواتير من داتا سورس تانية واعرضها في جريد عند يورز معين ده كده  
(retrieve multiple)  
لو عايز اجيب فاتورة منهم دي كده  
(retrieve->)
- System setting: it has some settings (general, Format, Auditing -> to watch if someone edits in record for example as I am logging any changes in entities, Email,Sales....)

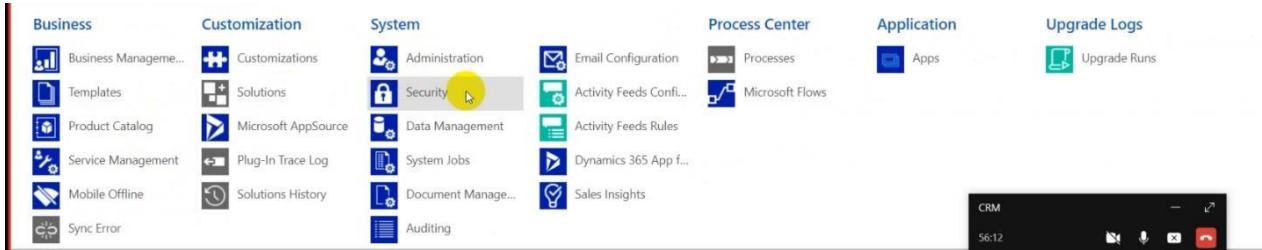
Auditing: to log who edit on table, or log anything



This tab has more settings so to need to investigate it.

A screenshot of the Microsoft Dynamics 365 System Settings dialog box with the 'Service' tab highlighted by a yellow circle. The 'Service' tab is the second tab from the right. The dialog box contains several configuration sections: 'Set pricing calculation preference' (radio button set to 'Yes'), 'Set whether a discount is applied as a line item or per unit' (dropdown set to 'Line item'), 'Set maximum number of properties allowed for a product or bundle' (text input field containing '50'), 'Customize close opportunity form' (radio button set to 'No'), 'Make price lists optional' (radio button set to 'No'), 'Qualify lead experience' (radio button set to 'Yes'), and 'Save business card images' (radio button set to 'Yes'). The background shows a CRM application window with a user profile picture and some data.

## Security tab is very important

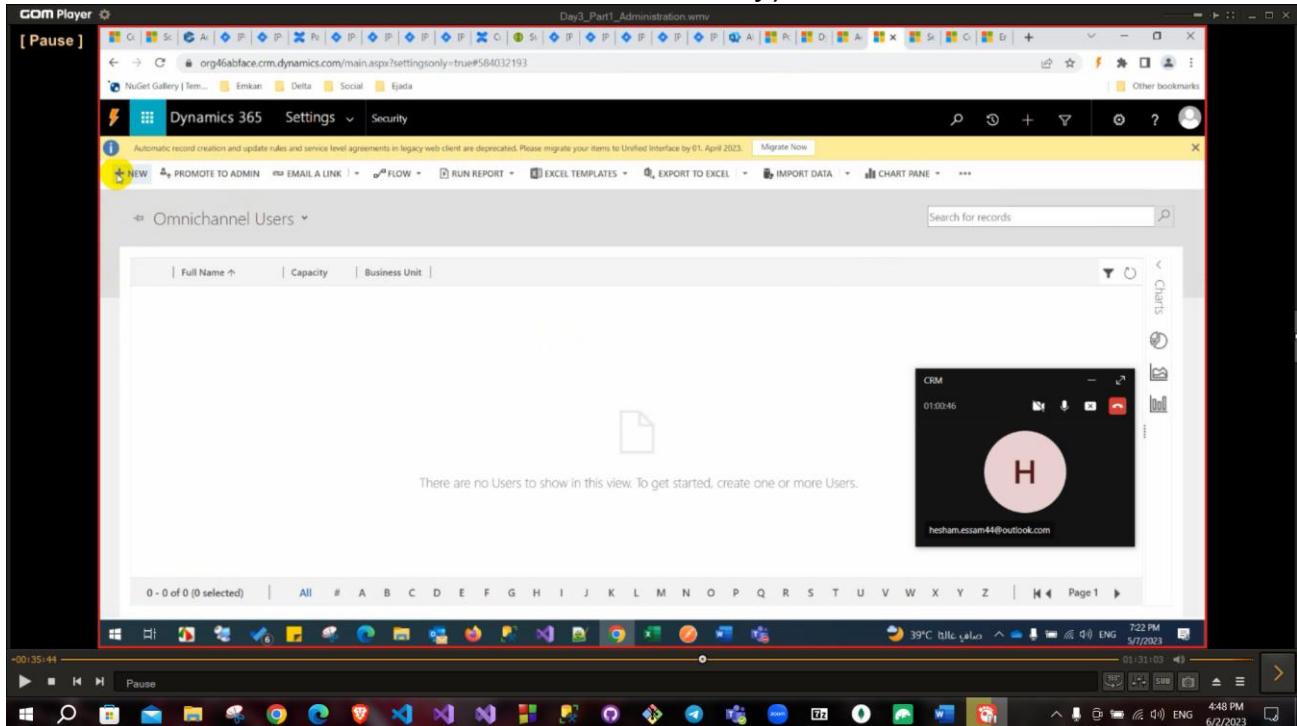


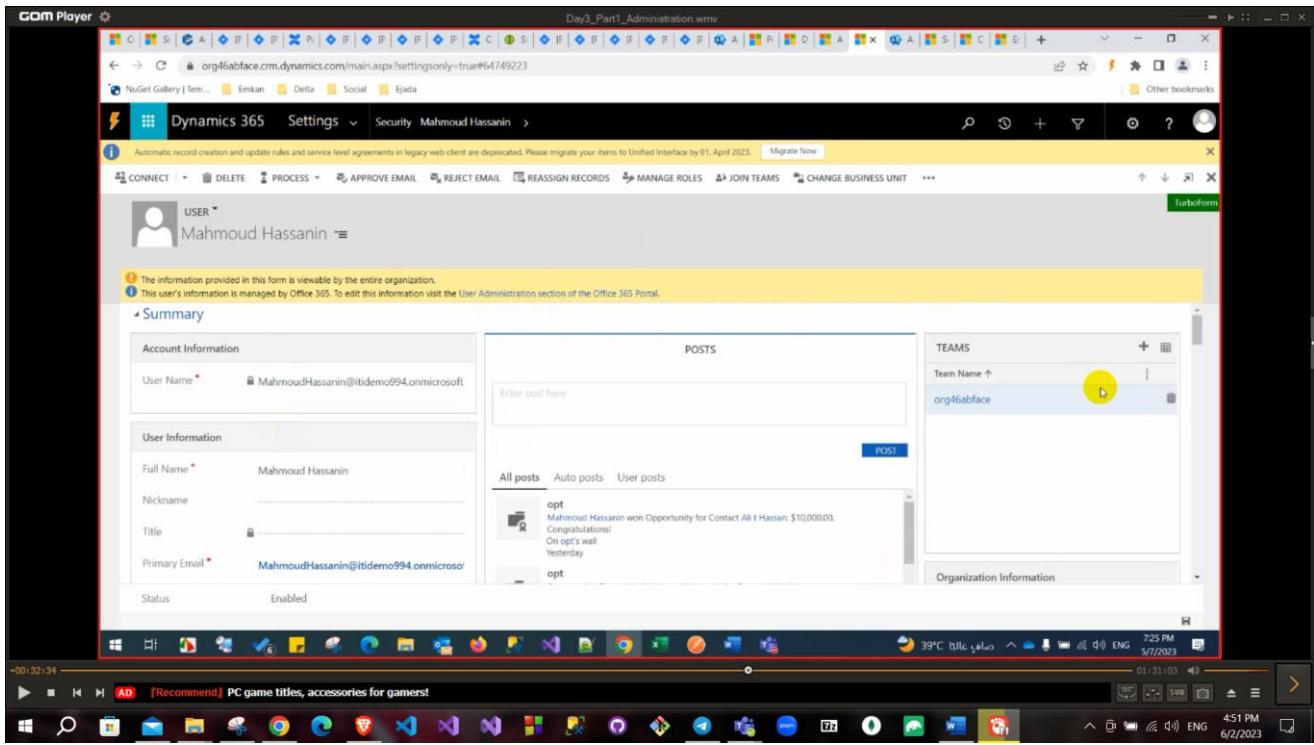
**Which feature would you like to work with?**

<b>Users</b> Add new users. Edit information about users and deactivate user records. Manage the teams, roles, and licenses assigned to users.	<b>Teams</b> Add new teams and new members to existing teams. Modify the team description and delete members from teams.
<b>Security Roles</b> Create new security roles. Manage and delete existing security roles for your organization.	<b>Business Units</b> Add new business units. Edit and deactivate existing business units. Change the parent business unit.
<b>Field Security Profiles</b> Manage user and team permissions to read, create, or write information in secured fields.	<b>Hierarchy Security</b> Configure hierarchy security, including enabling hierarchy modeling and selecting the model. You can also specify how deep the hierarchy goes, and specify the entities to exclude from a hierarchy.
<b>Positions</b> Add new Position. Modify the Position description.	<b>Access Team Templates</b> Add new team templates. Modify the team template description.

CRM 56:12

- **User:** a person has access on CRM (if you connect on active directory you need to add this user in this active directory).





And from manage role in the ribbon buttons I can assign security role

- Security role: a salesperson (set some privileges and add them into security role and set this role to this User).

**\*\*There is a default admin always found called “system”**

- Teams or owner team: when you create a team and set some users on this team, they can see records that created from one of them and edit on these records.
- Business units: As department

Ahmed and Mohamed are users and together they are a team and they are part of SD business unit and sd business unit is part of ITI business unit.

- Security Role

\*\*You can assign a role on specific business unit but it not recommended.

\*inside the Security Roles there are many security roles and If I opened One of the roles it has many tabs like details and core records,..... and inside The core records tab there are the entities and I can choose the permissions This role can apply on this entity.

Details	Core Records	Marketing	Sales	Service	Business Management	Service Management	Customization	Missing Entities	Business Process Flows	Custom Entities
Table	Create	Read	Write	Delete	Append	Append To	Assign	Share		
Account	○	○	○	○	○	○	○	○		
ACIViewMapper	○	○	○	○						
Action Card	○	○	○	○	○	○	○			
Action Card User Settings	○	○	○	○				○		
Activity	○	○	○	○	○	○	○	○		
Advanced Similarity Rule	○	○	○	○	○	○	○			
Announcement	○	○	○	○		○				
Application File	○	○	○	○						
Azure Service Connection	○	○	○	○	○	○				
Category	○	●	○	○	●	●	○	○		
Connection	○	○	○	○	○	○	○	○		
Connection Role	○	○	○	○	○	○	○			
Contact	○	○	○	○	○	○	○	○		
Customer Relationship	○	○	○	○	○	○	○	○		
Data Import	○	○	○	○	○	○	○	○		
Data Map	○	○	○	○	○	○	○	○		
Data Performance Dashboard	○	○	○	○	○	○				
Document Location	○	○	○	○	○	○	○	○		
Document Suggestions	○	○								
Duplicate Detection Rule	○	○	○	○	○	○	○	○		

Key

- None Selected
- >User
- Business Unit
- Parent: Child Business Units
- Organization

<https://org46abface.crm.dynamics.com/biz/roles/edit.aspx?i...>

On sales there are (Leads, Opportunities...)

Core Records (Contact, Account...)

## Keys access is very important:

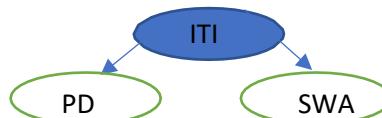


None selected: has no access.

User: has access for items that you are owner of it or my **team**.

Business Unit: has access for item of your business unit only.

Parent child business units: has access for child business unit of my parent business unit (if we have a hierarchy ITI as a parent and PD – SWA as children in this case PD can access SWA business unit).



Organization: has access for all records.

**Access levels is very important** (Create - Read – write - Delete - Append - Append on - Share)

Append: To append lookup on my record.

Append to: To have privilege of adding this lookup on my record.

**(Like lookup the account name in the contact form, the user must have a security role with append on the entity contact and append to the entity account)**

Assign: Assign this record to someone.

Share: Share this record with another one (when this person has no access to it and set privileges also to him).

\*\*Example to demonstrate append and append to: if you add access to someone to add account lookup to contact record so you need to add:

**Append to** privilege to Account entity, also need read privilege.

**Append** Privilege to Contact entity, also need Create privilege

Let's continue what you can find on the security tab in advanced settings:

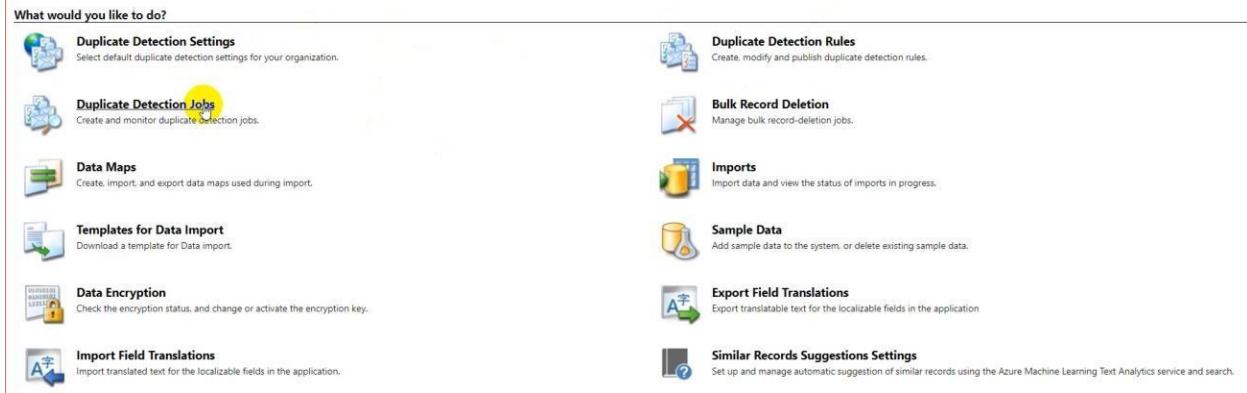
Field Security: to secure a field (like if you have a password field in entity so you can set a field security on it so only accessed users can see this field).

Access team templates: to add privilege to users that not assigned in one team as if they are in one team.

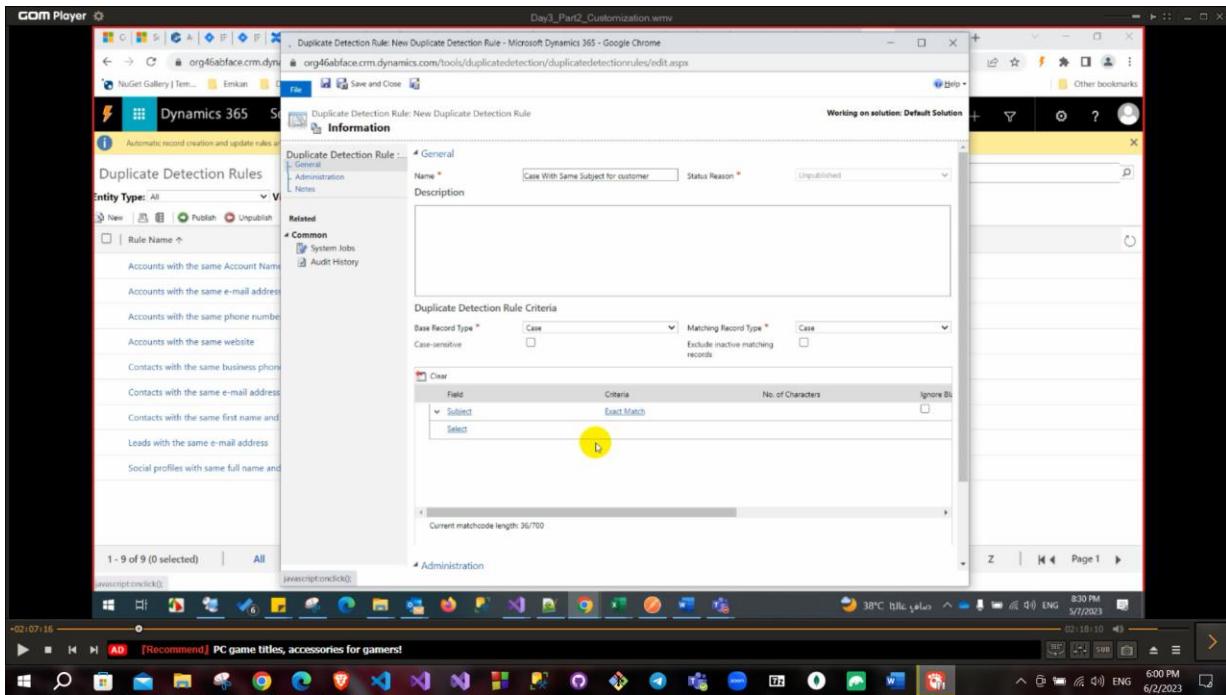
\*\*Difference between **access team templates** and **owner team** is very important.

## Now we will switch to Data management

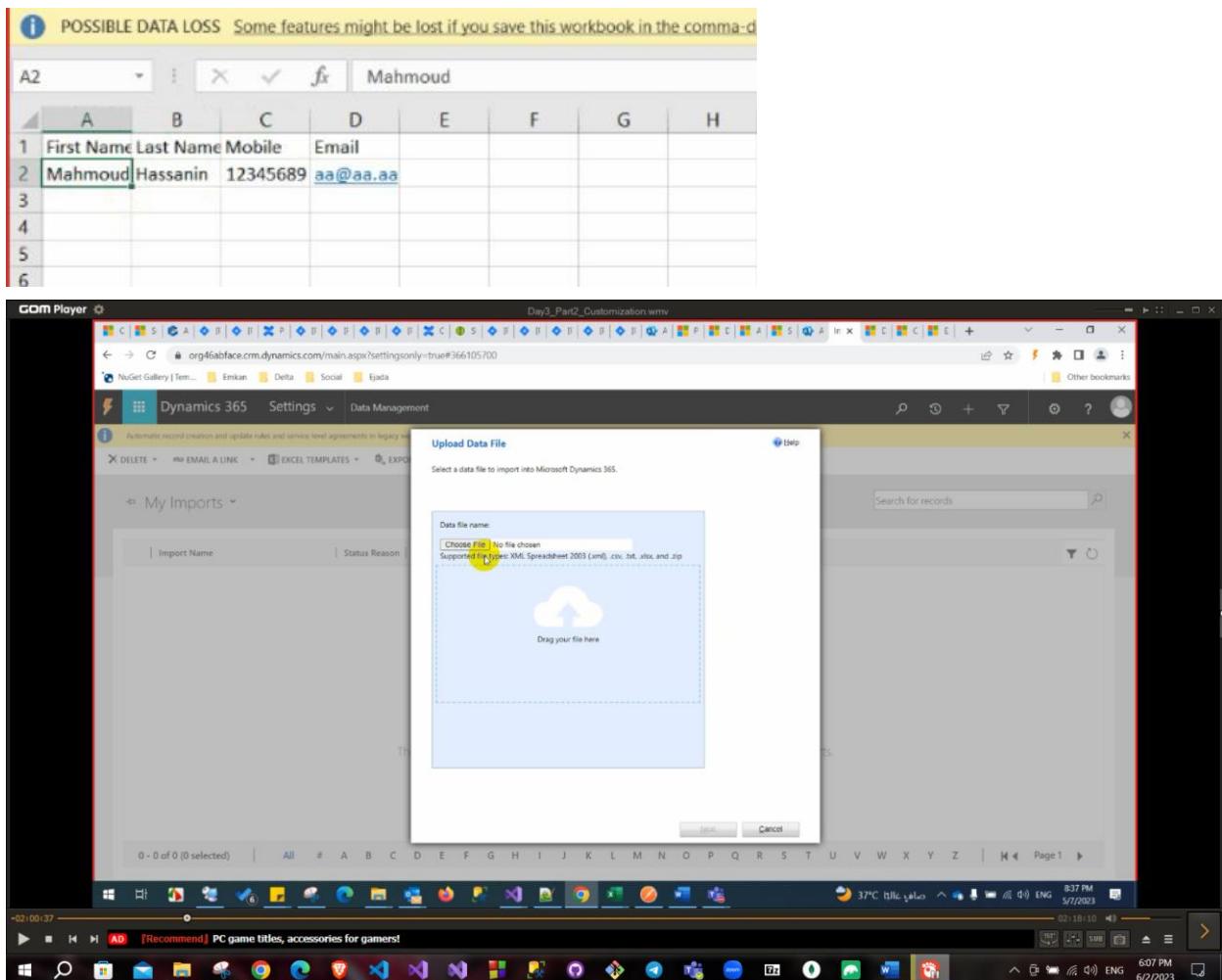
### Data Management



Duplicate detection rules: if you want to set a rule to detect duplication case  
(For example if you want to do not create two cases have the same subject).



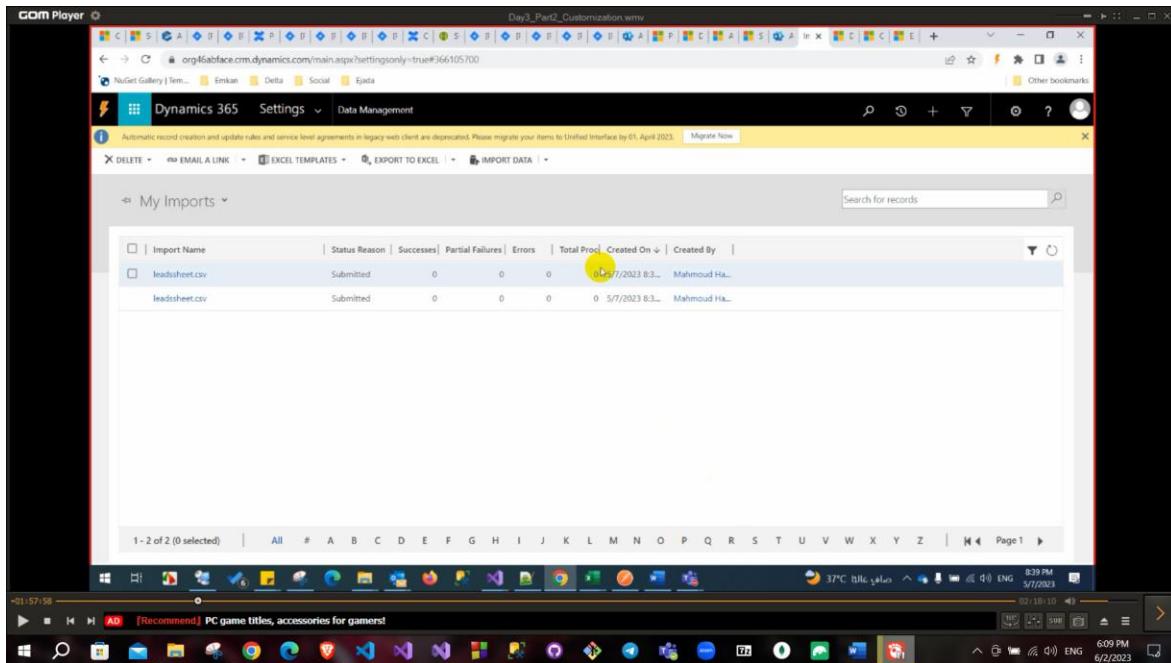
Import: to import data from external source but **.CSV** extension is must also you need to map this file to entity (for example to load leads records from external file note to set first row as header in this file with field name to detect mapping automatically), also you can save this mapping and use it later.



Choose the file and the mapping and **the entity** click submit.

Now if you go to lead which I chose as the entity there will be the imported record.

After importing you can double click on it to route to adding records from imports.



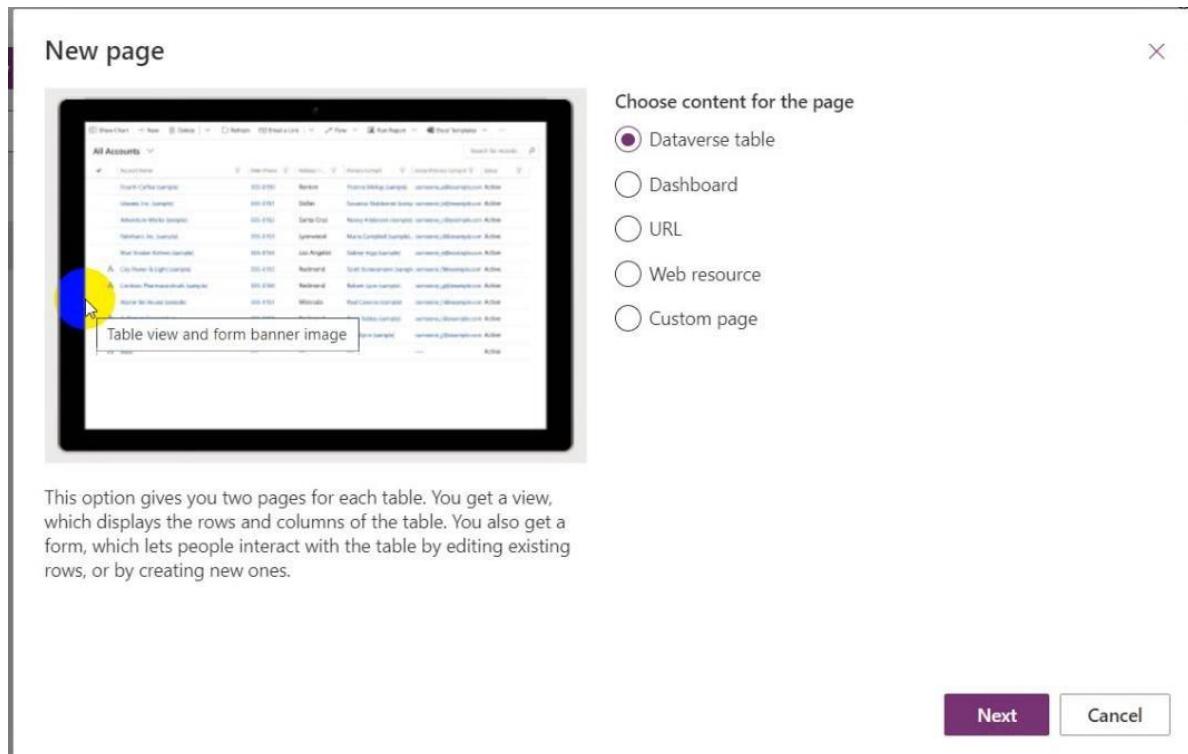
Data maps: To set pre-defined mapping pattern to use during import.

Data-Encryption: it has an encryption key of your organization so you can check it or edit it.

## Customization: From Advanced settings

Apps → Create new app (first step in customization) like sales, services.

If you click on new page button:



This option gives you two pages for each table. You get a view, which displays the rows and columns of the table. You also get a form, which lets people interact with the table by editing existing rows, or by creating new ones.

Then you can choose the contact or the account or any out f the box entity to be on your app.

Dataverse table: to redirect it for entity.

Navigation

Dynamics 365

Opportunities

Display options

Content type: Table

Table: Opportunity

Title: Opportunities

Icon: Default icon

ID: subarea\_cc0ba28e

Advanced settings

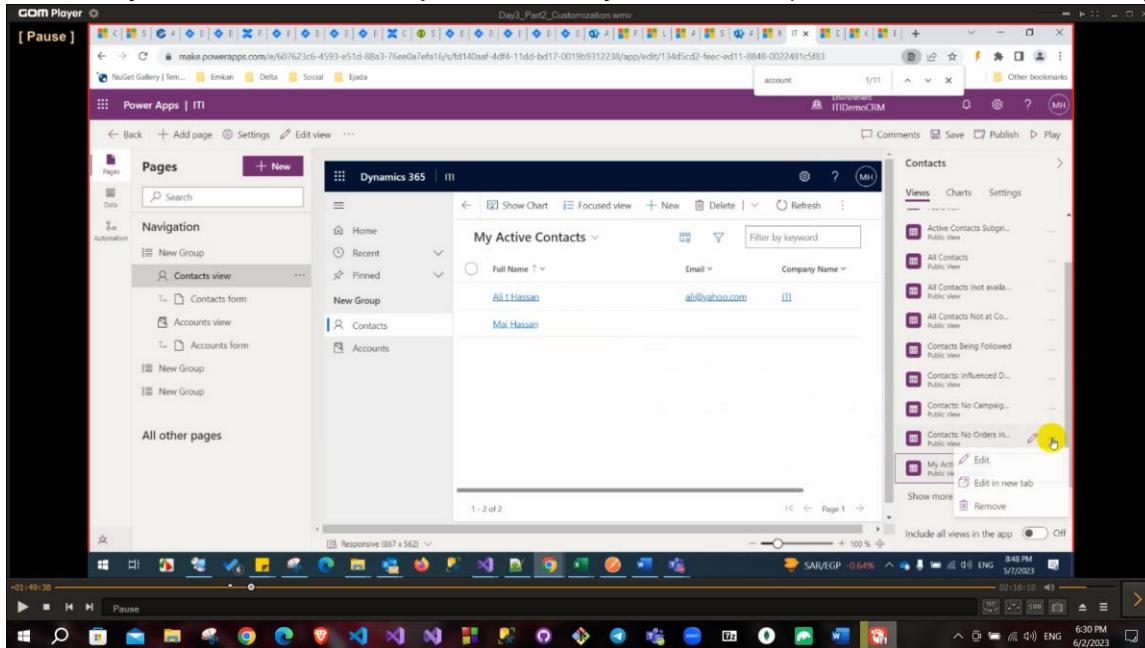
URL: to redirect to URL.

\*\*You can set these entities into groups (like lead and opportunity put into one group).

**You can find Group on the left.**

\*\*Also, you can customize your view (add or delete from image 2)

\*\*Also, you can add multiple areas by enable it (like sales, services...).



You can find the bar on the right to customize views.

## From Customization tab

Customization

Which feature would you like to work with?

---

 <b>Customize the System</b> Create, modify, or delete components in your organization. Components include entities, fields, relationships, forms, reports, processes, and others.	 <b>Publishers</b> Create, modify, or delete a solution publisher.
 <b>Solutions</b> Create, modify, export, or import a managed or unmanaged solution.	 <b>Developer Resources</b> View information or download files that help you develop applications and extensions for Microsoft Dynamics 365.
 <b>Themes</b> Adjust your organization's colors. Create, change, or delete themes that are used in your organization.	

Theme: To modify on theme or create new one to modify colors and design and publish.

## Developer Resources:

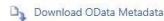
Organization services (end-point of C# code) -> SOAP,  
Instance Web API (end-point of JS) -> REST

Developer Resources

**Getting Started**

Developer Center    Developer Forums    SDK NuGet Packages  
SDK Download    Sample Code    Developer Overview

**Connect your apps to this instance of Dynamics 365**

**Instance Web API**  
HTTP REST API providing access to this instance of Dynamics 365. For more information see Microsoft Dynamics 365 Web API.  
Service Root URL:  

**Instance Reference Information**  
Use this information to uniquely identify this instance of Dynamics 365. You can use this to retrieve the current URL for this instance. For more information see Azure extensions for Microsoft Dynamics 365.  
ID:    
Unique Name:  

**Connect your apps to the Dynamics 365 Discovery Service**

**Discovery Web API**  
HTTP REST API providing connection information for the set of Dynamics 365 instances to which the caller has access. For more information see Discover the URL for your organization with Discovery Web API.  
Endpoint Address:  

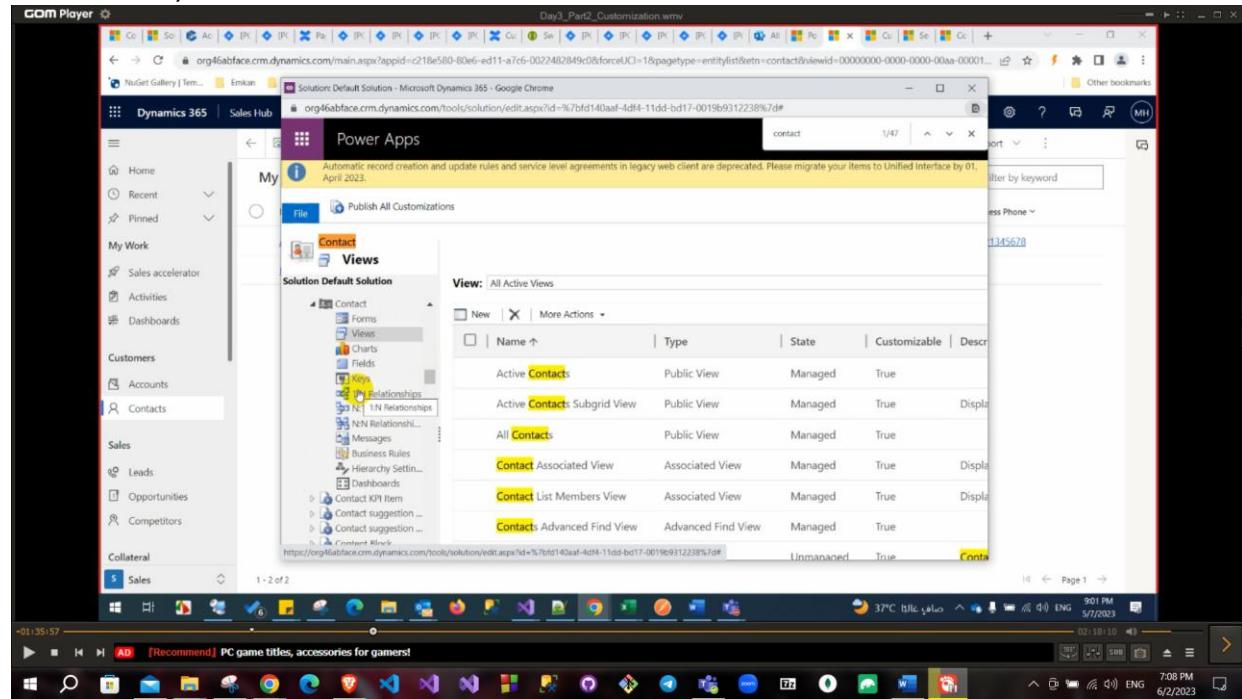
**Discovery Service**  
SOAP Service providing connection information for the set of Dynamics 365 instances to which the caller has access. For more information see Discover the URL for your organization with IDiscoveryService web service.  
Endpoint Address:  

## Customize the System:

to add or edit or delete(entity or field or form...).

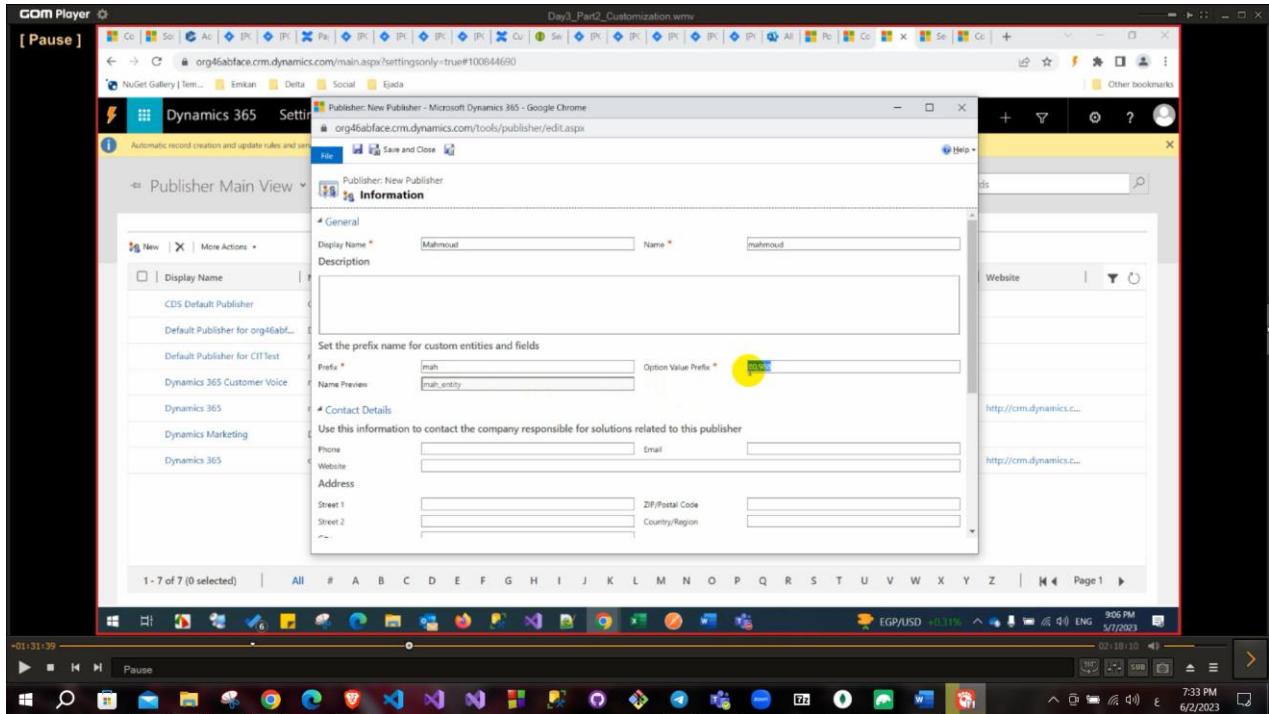
\*\*Relationships in CRM are (1: many, many:1, many: many).

\*\*Business rules: to set a specific rule (like to set condition to if a field is empty then another field will be hidden).



Publisher: to create publisher that will respond for a solution (for example to track what is the new entities that are created so it will have a prefix of this publisher).

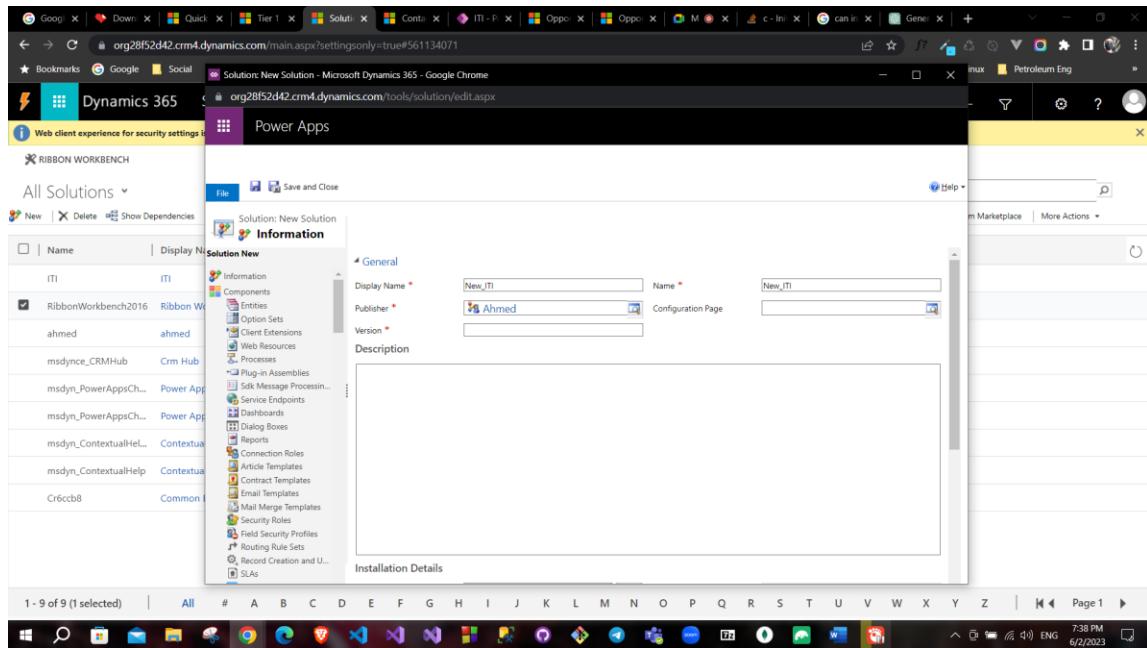
Any entity will start with the prefix



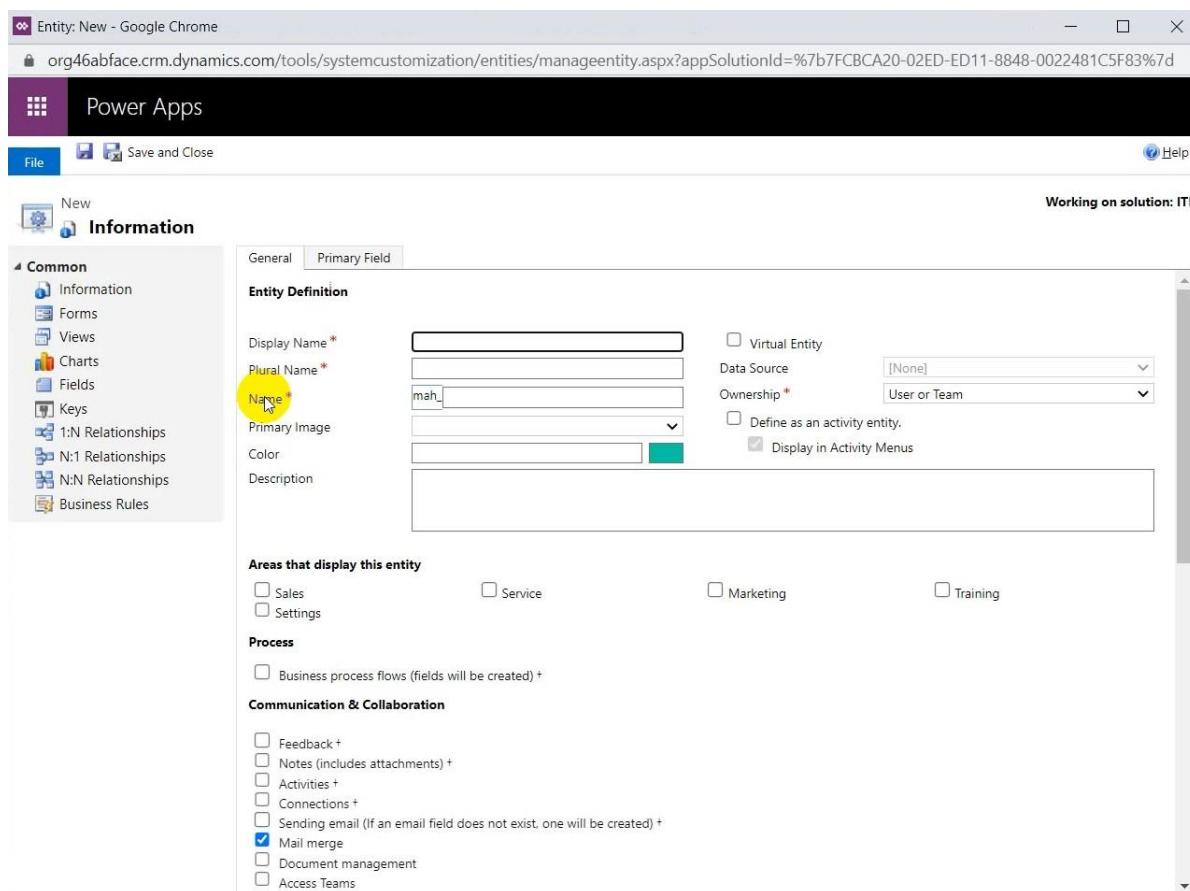
Solution: To add entities or add anything on it like schema in database and you identify the publisher name

The screenshot shows the 'All Solutions' page in Microsoft Dynamics 365. A red circle highlights the 'New' button in the top left corner. The table lists several solutions:

Name	Display Name	Version	Installed On	Type	Publisher	Description
msdynce_CRMHub	Crm Hub	9.0.22025....	4/29/2023	Managed	Dynamics 365	
msdyn_PowerAppsCh...	Power Apps Checker B...	1.2.0.198	4/29/2023	Managed	Dynamics 365	PowerApps Checker promotes higher-quality mo...
msdyn_PowerAppsCh...	Power Apps Checker	1.2.0.198	4/29/2023	Managed	Dynamics 365	Power Apps Checker promotes higher-quality m...
msdyn_ContextualHel...	Contextual Help Base	1.0.0.22	4/29/2023	Managed	Dynamics 365	
msdyn_ContextualHelp	Contextual Help	1.0.0.22	4/29/2023	Managed	Dynamics 365	
Cr2c57d	Common Data Service...	1.0.0.0	4/29/2023	Unmanag...	CDS Default Publisher	



After creating a solution and button save you can create new entities on it.



Business process flows (like sales process: create opportunity after qualify lead).

Ownership is you select organization you can set full privileges (Organization) or none selected only but user or team you can set all privileges

**All entity has primary field and this is different with primary key that also automatic created to map relationship in database.**

The screenshot shows the Microsoft Dynamics 365 Entity New screen. The title bar indicates "Entity: New - Google Chrome" and the URL "org46abface.crm.dynamics.com/tools/systemcustomization/entities/manageentity.aspx?appSolutionId=%7b7FCBCA20-02ED-ED11-8848-0022481C5F83%7d". The main area is titled "Information" under "Common". On the left, there's a navigation pane with options like "Information", "Forms", "Views", "Charts", "Fields", "Keys", "1:N Relationships", "N:1 Relationships", "N:N Relationships", and "Business Rules". The right side shows the "Primary Field" tab of the entity configuration. It includes sections for "Schema" (Display Name: Library Name, Name: mah\_libraryname, Field Requirement: Business Required) and "Type" (Data Type: Single Line of Text, Format: Text, Maximum Length: 100). A yellow circle highlights the "Description" section, which contains the text "The name of the custom entity.".

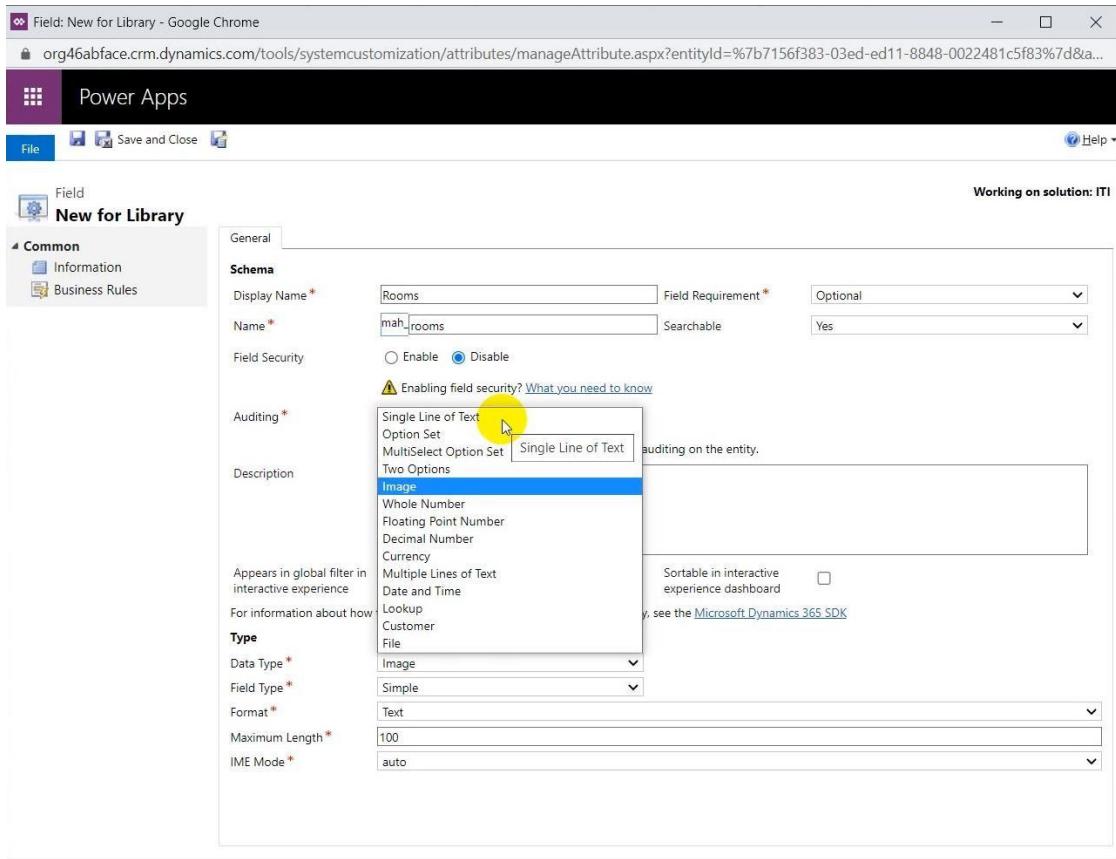
You can update icon of this entity.

All entity created has some fields (like modified by, created on, Created by, State code, status code...).

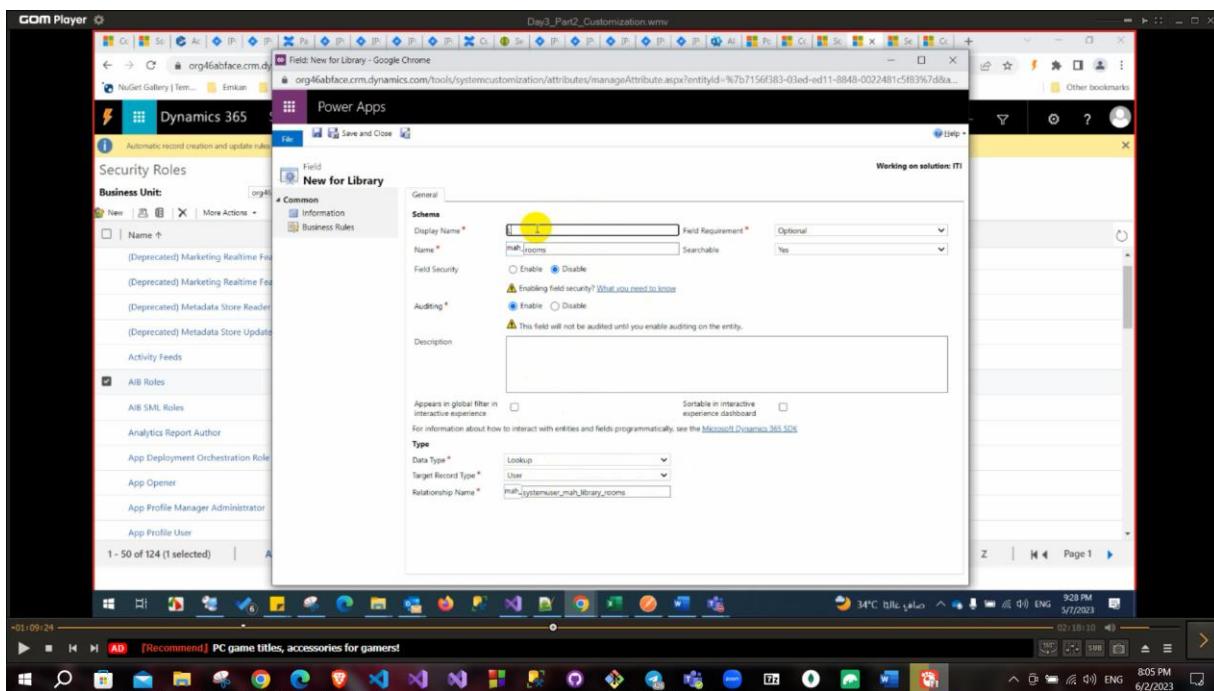
State code is active or Inactive.

Status code is a sub-code under state code.

# Create new field: Data types are important.



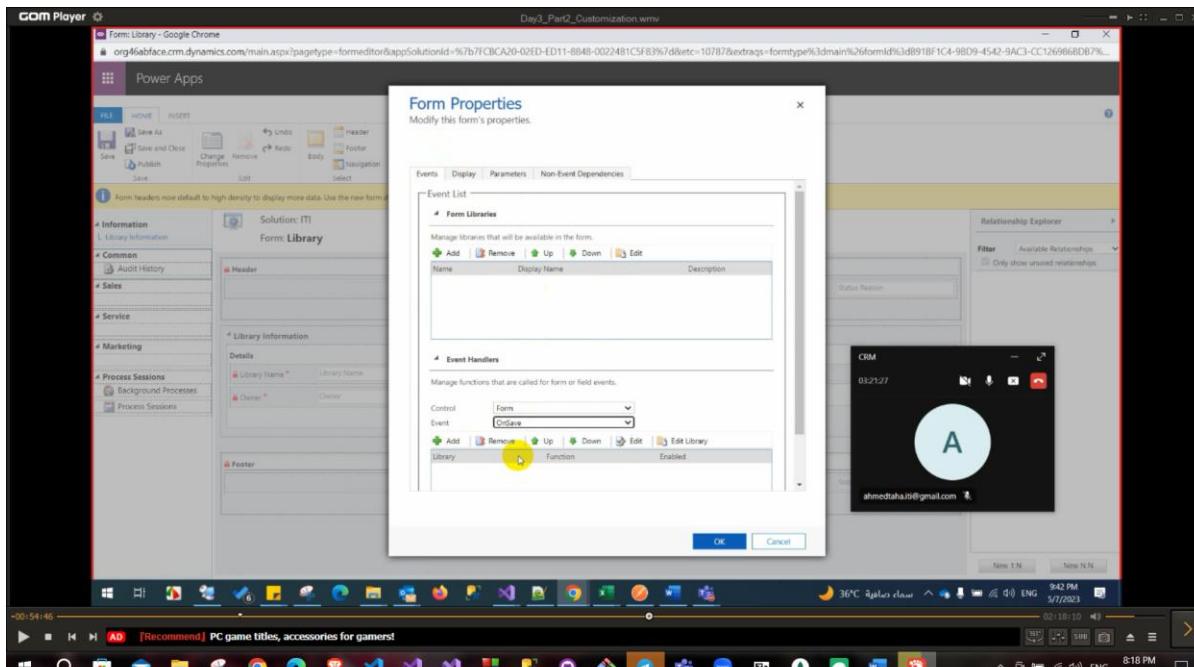
You can choose lookup and make it to add the user



After adding fields, you need to customize them in forms  
 There are three default types of forms (Card, Main, Quick view)  
 You can customize this form as you can:  
 Add field or section or any formatting you want to edit.

The left screenshot shows the 'Form Properties' dialog with the 'Events' tab selected. It displays sections for 'Form Libraries' and 'Event Handlers'. The 'Event Handlers' section shows a table with columns: Library, Function, and Enabled. A yellow circle highlights the 'Function' column header. The right screenshot shows the main form editor window titled 'Form: Library - Google Chrome'. The ribbon has tabs like FILE, HOME, and INSPECT. The left sidebar shows 'Power Apps' with various sections like Information, Common, Sales, Service, Marketing, and Process Sessions. The main area shows a form with sections for Header, Library Information (Details and Footer), and a Section area. A yellow circle highlights the 'Edit' button in the ribbon.

In **form properties** you can customize events on load or on creating using JS in next lectures.



To create a new entity:

Advanced settings – customization – solutions – entity – new

If there is a relationship between created entity and another entity you need

to set this relationship according active entity (one to many or many to one).

After creating the entity you can set the relations to other entities

The screenshot shows the Microsoft Dynamics 365 Power Apps interface. The main window displays a list of relationships for the 'Book' entity. The list includes:

Schema Name	Primary Entity	Related Entity	Type of Behavior	Field Name
business_unit_ahm_bo...	Business Unit	Book	System	Owning Business Unit
lk_ahm_book_createdby	User	Book	System	Created By
lk_ahm_book_created...	User	Book	System	Created By (Delegate)
lk_ahm_book_modifie...	User	Book	System	Modified By
lk_ahm_book_modifie...	User	Book	System	Modified By (Delegate)
owner_ahm_book	Owner	Book	System	Owner
team_ahm_book	Team	Book	System	Owning Team
user_ahm_book	User	Book	System	Owning User

At the bottom of the list, it says "1 - 8 of 8 (0 selected)". The interface also includes a ribbon bar with various tabs like File, Home, Insert, Design, Lay, and a ribbon bar with icons for Save and Close, Show Dependencies, Solution Layers, Publish, Delete, Managed Properties, Share, Comments, Find, Replace, Select, Dictate, Voice, and Reuse Files.

The screenshot shows the Microsoft Dynamics 365 Power Apps interface with a modal dialog for creating a new relationship. The dialog is titled "Relationship: New". The "General" tab is selected. The "Relationship Definition" section shows:

- Primary Entity: Library
- Related Entity: Book
- Name: ahm\_cr64f\_library.ahm\_book
- Searchable: Yes
- Hierarchical: No

The "Lookup Field" section shows:

- Display Name: Library
- Name: ahm\_LibraryId
- Field Requirement: Optional

The "Navigation Pane Item for Primary Entity" section shows:

- Display Option: Use Plural Name
- Custom Label: (empty)
- Display Area: Details
- Display Order: 10,000

The "Relationship Behavior" section shows:

- Type of Behavior: Referential
- Assign: Cascade None
- Share: Cascade None
- Unshare: Cascade None
- Reparent: Cascade None
- Delete: Remove Link
- Merge: Cascade None

The background shows the Power Apps navigation pane with sections like Common, Information, Forms, Views, Charts, Fields, Keys, 1:N Relationships, N:1 Relationships, N:N Relationships, Business Rules, Hierarchy Settings, and Dashboards. The status bar at the bottom shows the date and time as 6/2/2023 9:21 PM.

From end of one it has sub-grid also from side of many it has lookup

**Field requirement has three values:**

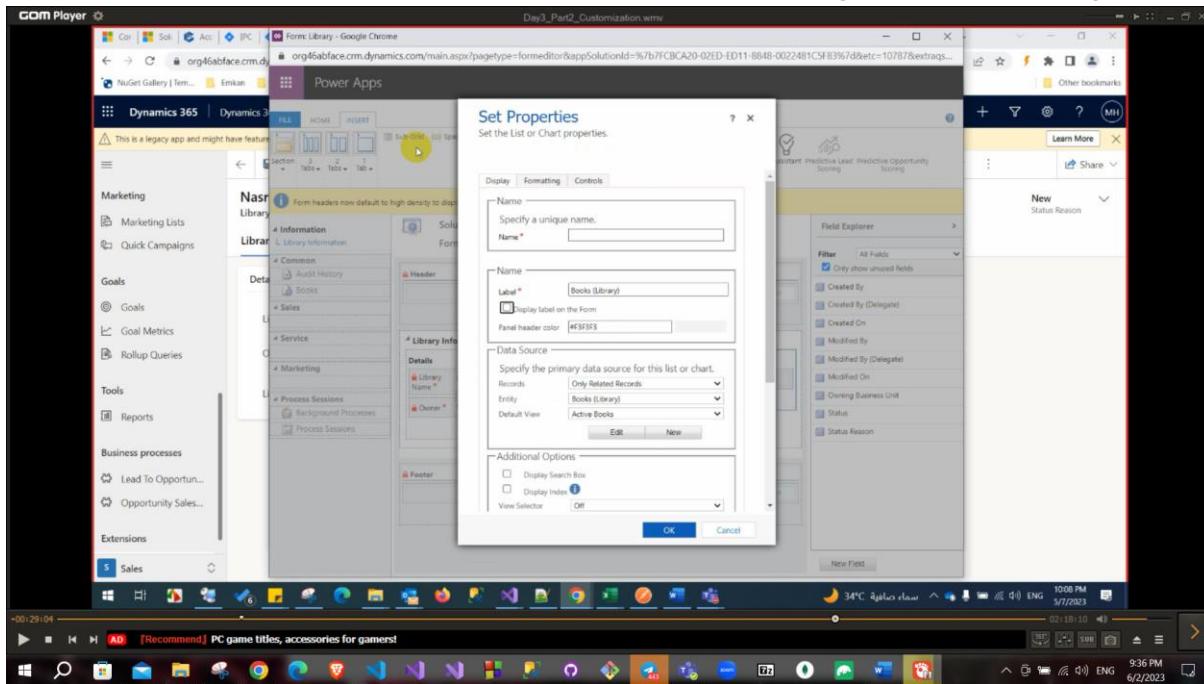
Business recommended vs business required vs optional.

**Relationship behavior has four values:**

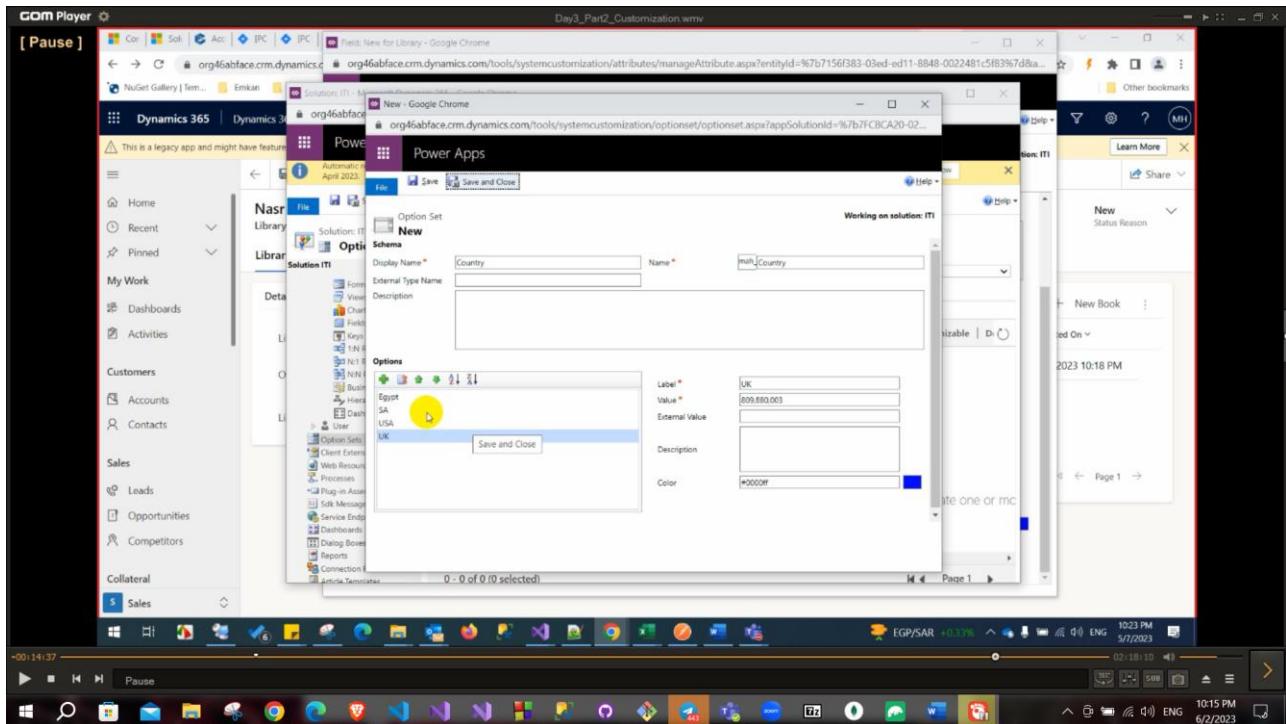
Parental vs referential vs configurable cascading vs Referential, Restrict cascading:

\*\*will discuss later but it very important.

To insert sub-grid to map relationship from insert tab – sub-grid and it will be mapped automatically also you can to apply pagination in sub-grid.

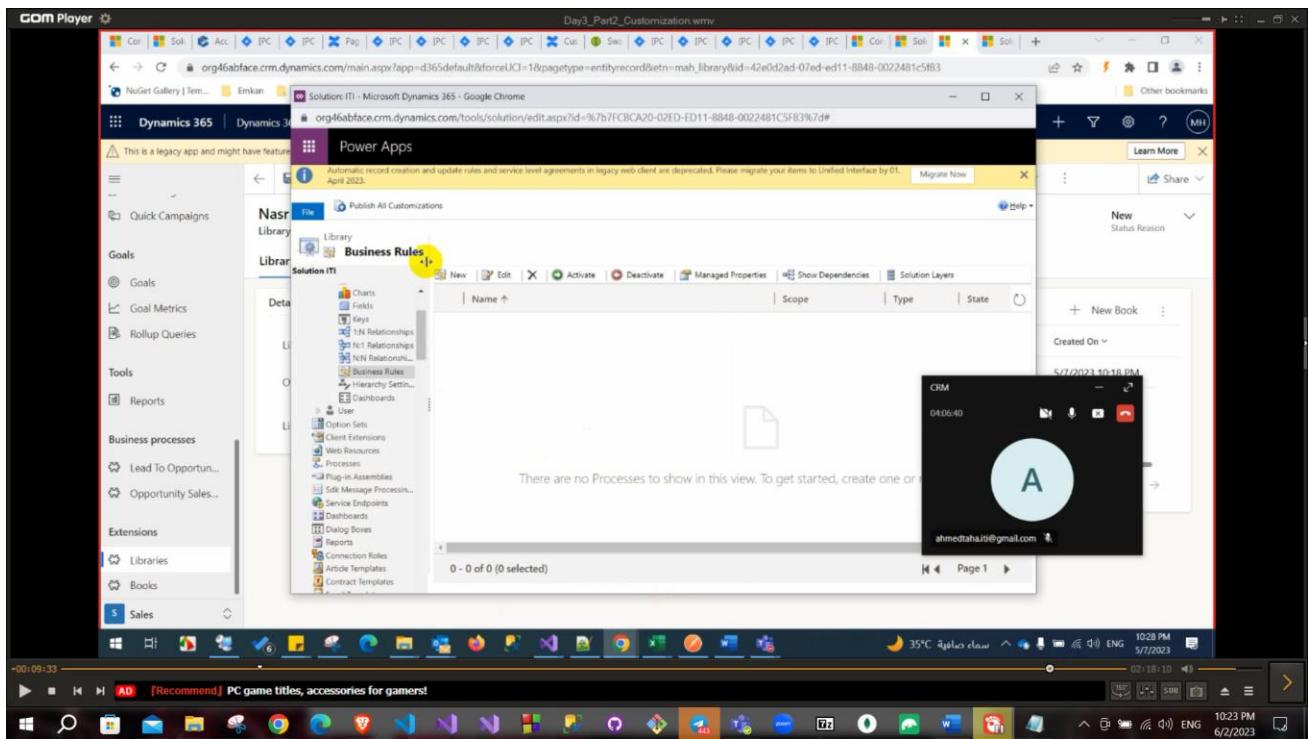


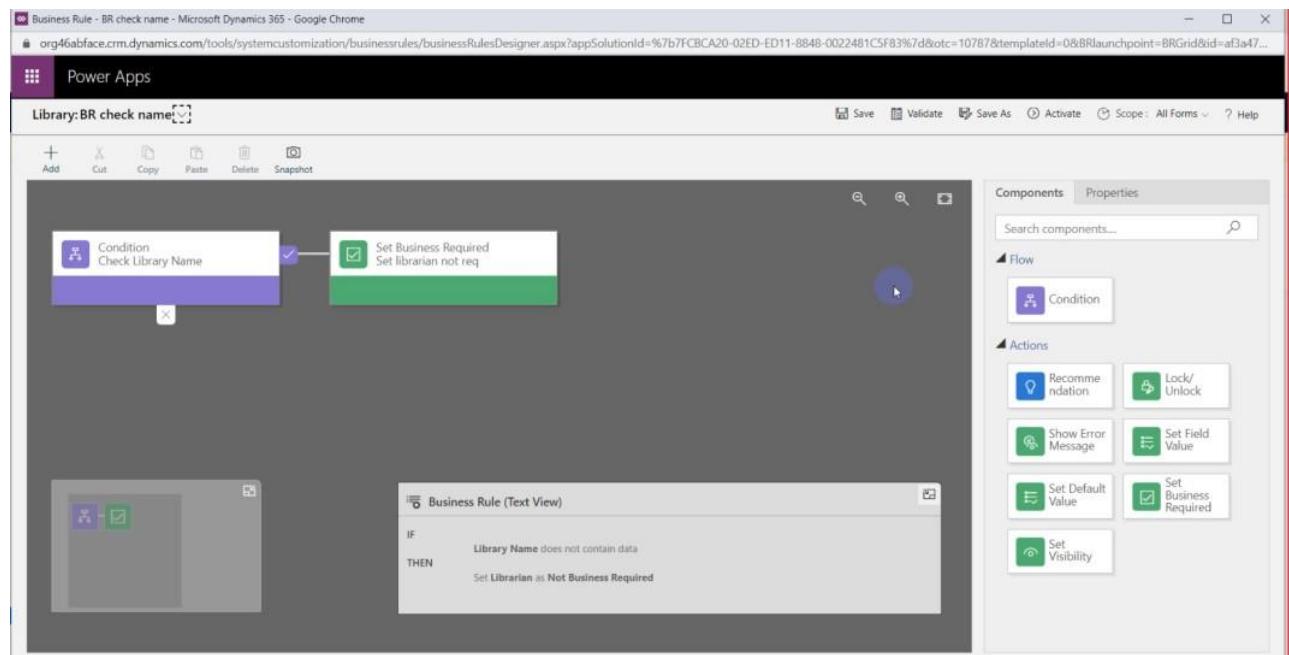
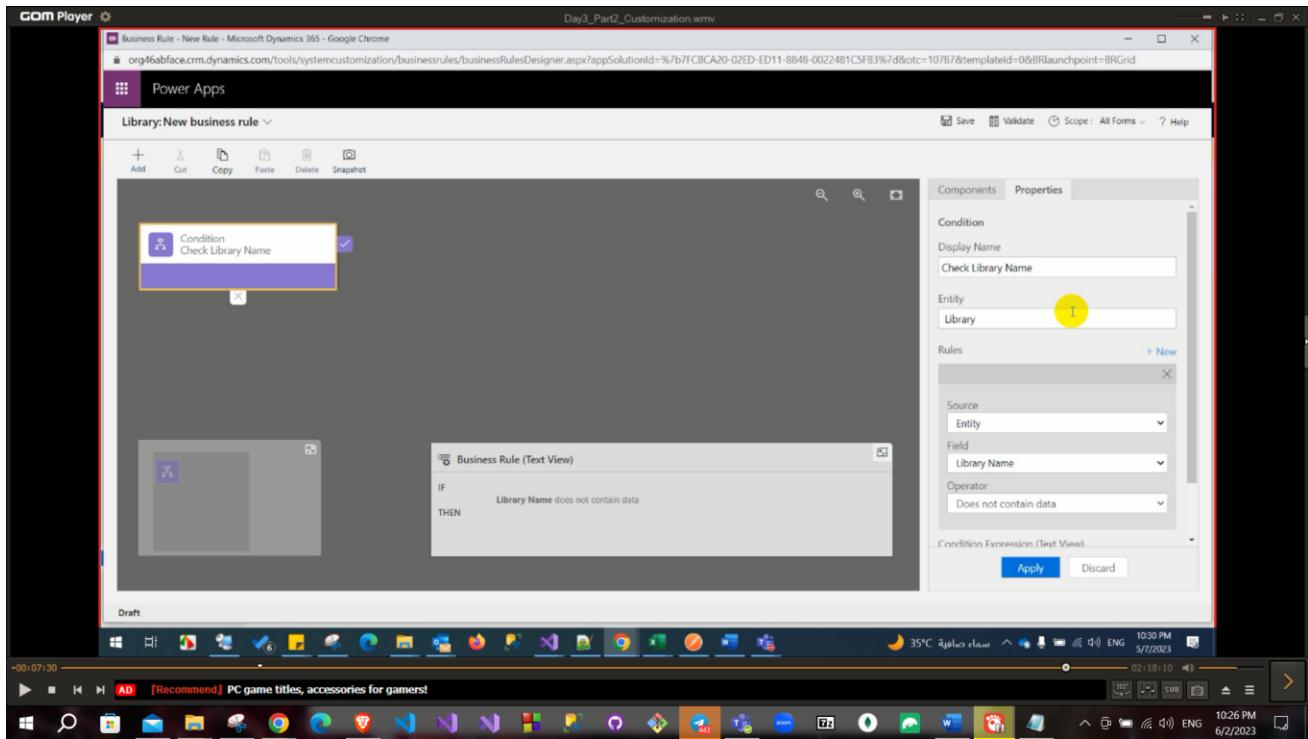
\*\*You can add option set as field and also add option set as a global not related to specific entity (For example to create a shared option set among all entities you need to create from main category not from field).



\*\*You can edit your view inside this entity and customize this as you can.

To set a conditional event: you have two choices JS or business rules.  
Business rules:





-Some important questions in Customization  
 SLA, Queue, Field Security, Append, Append to, Levels of security roles,  
 difference between team and access team, inside Product catalog,  
 business role

