**Level 1: Brief Introduction**

1. Introduce your self (Interviewer)
2. Could you please tell me about your professional accomplishments?

**Level 2: Microsoft Dynamics CRM**

1. Can you highlight the Microsoft Dynamics 365 Authentication methods?

Answer –

* 1. User Credentials (Username and Password)
  2. OAuth 2.0
  3. Azure Active Directory (Azure AD) Integration
  4. Azure AD Application User
  5. Service Principal and Client Secret
  6. Certificate-based Authentication
  7. Dynamics 365 Token-based Authentication

1. I am sure that you must have worked on the business rules and JavaScript. If there is a business rule and a JavaScript on a CRM form. Which one execute first Java-Script or Business Rule

Answer - In Microsoft Dynamics CRM, the JavaScript code executes first, then the business rule. Business rules are server-side scripts that get executed on the server, while JavaScript is client-side and gets executed on the client's browser. So, when a form containing both is loaded, the browser runs the JavaScript first, then the form data and business rules are sent to and processed by the server.

1. If you delete a record from dynamics CRM UI, what happens in database? Can you bring it back?
2. Let’s say there are various plugins in the solution. Some them are not working as expected. What will be your approach to identify the root cause?
3. What are the different ways to fetch the data from a data verse table ? what are the limitations of one over the other?

Answer-

1. Odata Web API
2. FetchXml
3. QueryExpression
4. Dynamics CRM SDK
5. How the security model is designed in MS Dynamics 365?
6. I have a table called Department, and another table called Employees. An employee can be only in a single department.

A single department can have many employees. I am in the Employee table, and I want to create a relationship between this table and the Department table. What sort of relationship do I need?

Answer- Many to one

1. I want to create a new table in the Dataverse and assign the ownership to the specific business unit. What are the steps for the same?
2. Assume that there are 1 million records in a Dataverse table. You need to update a specific column value for all the records. What would be your approach to update such a huge amount of data.
3. Imagine that the client wants to transfer their data from system X to system Y. There N number of tools to perform this job. As a lead, what will be your approach to finalize the tool?

Answer – To finalize the tool below points are vital,

1. Cost of the tool
2. Vulnerability/security checks of the tool
3. Data protection guidelines as per the region where data is stored or being transmitted
4. Ability to handle large volumes of data
5. Ability to perform parallel transmission
6. Performance while transmitting substantial amounts of data
7. Data loss handling mechanisms
8. Feedback mechanisms in case of failure

**Level 5: Power Apps**

1. What are some common scenarios where you would suggest the use of model-driven apps over canvas apps?
2. How many ways are there to create a canvas app that you are aware of?

Answer –

1. Template
2. From scratch
3. Copilot
4. I have a canvas app with a gallery control. I want to show the item in the right side panel when a particular item is selected from the gallery. How to do that?

* **IsSelected** is a Boolean value, evaluating to "true" or "false", for whether this item in the Gallery is selected or not. Only one item in our Gallery can be selected at any time, so this value can only be "true" for one item. If you put your app in **Preview** mode. Try selecting some different coffee makers and notice how the Rectangle control only appears to the one that you've selected. The visible rectangle also corresponds to the item displayed in the form next to the gallery.

1. **How to show in app notification for error, information and success**

* In Power Apps, you can show in-app notifications for errors, information, and success messages using the `Notify` function. Here's an example of how you can implement it:

1. Success Notification:```Notify("Operation Successful", NotificationType.Success)```

* The above statement will display a success notification with the message "Operation Successful".
* 2. Error Notification: ```Notify("An error has occurred", NotificationType.Error)```
* The above statement will display an error notification with the message "An error has occurred".
* 3. Information Notification:```Notify("Please check the details", NotificationType.Information)```
* The above statement will display an information notification with the message "Please check the details".
* The `Notify` function also allows you to customize the duration of the notification by adding a third parameter that represents the duration in milliseconds (the default is 10 seconds = 10000 milliseconds).
* ```Notify("Operation Successful", NotificationType.Success, 5000)```
* This will display a success notification that lasts for 5 seconds.
* 4. Warning Notification:
* ```Notify("Warning! Check the input details", NotificationType.Warning)```
* The above statement will display a warning notification.

1. **How will you make sure that the data is secured in PowerApps OR What are DLP policies in Power Apps**

* To safeguard data in your organization, you may use Power Apps to define and enforce policies that restrict which consumer connectors can share with certain business data. These policies are known as data loss prevention (DLP) policies.
* DLP policies ensure that data is controlled uniformly across your organization and prevent essential company data from being accidentally shared to connections such as social networking sites. DLP policies can be defined and managed at the tenant or environment level using the Power Platform admin centre.

1. **What is a DataCard in the form?**

* Inside of the form, when you select a Field, that field is portrayed as a **DataCard** in the Tree view. Notice how each **DataCard** contains four different controls. The two most important controls in your **DataCard** are the label control, which will initially include the name **DataCardKey**, and the text input control, which will initially include the name **DataCardValue**. The other two controls are optional and depend on whether the data is required or not. The **StarVisible** is a text label with an asterisk in it that appears if you designate that field as required (either in your form or in the data). The **ErrorMessage** is another text label that appears if you try to submit a form and that input is missing. You can look at the Visible properties for these controls. **Visible** evaluates to: "true" or "false". The **And()** function you'll see in the **StarVisible** control means that both conditions, separated by a comma, must be true for the function to evaluate as "true".

1. Let’s say there is a junior developer in your team. He/she is working on a Power Automate flow. You need to help that developer with a pseudocode to implement a power automate flow.

Here is a problem statement.

A new column is added to the Account entity as AccountNumber. You need to make sure that all the existing records have unique AccountNumber value.

You also need to make sure that in future, if new accounts are created, the AccountNumber should be incrementally generated for new accounts.

You can consider the format as ACT-000001

1. **What is Power Apps delegation**

* Delegation is the point at which the expressiveness of Power Apps formulas reaches the need to limit network data transfer. In short, rather than transmitting data to the app for local processing, Power Apps will outsource data processing to the data source.
* Working with huge data sets necessitates the use of delegated data sources and formulae. It's the only way to keep your app running smoothly and guarantee users have access to all of the information they require.

1. **How can you import data into a model-driven app?**

* Data can be imported into a model-driven app using the built-in 'Get Data' feature. You can also use external services like Power Automate or Azure Data Factory to automate data import.

1. **How to handle errors in the power apps?**

* To do so, first, we will have to get information about any errors through the Errors function. And then, through Validation and DataSourceInfo, some of the errors can be ignored even before they take place.
* The Canvas App introduced the 'IfError' and 'isError' functions, to manage errors and display the appropriate message.
* Formula-level error management must be enabled in order to use these features. To enable it, follow the steps below:  
  To begin, start the Canvas App and choose File.  
  Under Settings, select Advanced Settings.  
  Allow for formula-level error management.

1. **How to embed a canvas app on the form and making it context aware**

* Here are the steps to embed a canvas app on a form and make it contextually aware in Microsoft Dynamics 365:
* 1. Navigate to the model-driven form designer, and open the form you want to add the canvas app to.
* 2. Select "Insert"-> "Canvas app".
* 3. Configure your canvas app.
* 4. To make your canvas app context aware, you need to set the 'ModelDrivenFormIntegration' parameter.
* Here is a step-by-step explanation:

- Open the canvas app in the Power Apps studio.

- On the 'Insert' tab, click on 'New screen' to add a screen to your app.

- Choose 'ModelDrivenFormIntegration' from the Data panel on the right-hand side.

- In the formula bar, type 'ModelDrivenFormIntegration'. You will see a set of properties under it like 'Data', 'Display Name', 'Errors', 'Item', etc.

- Click on the 'Item' property. Here you can retrieve any field from the current entity record that the form is displaying.

- Finally, use the information to display the relevant content or perform actions in the canvas app as per the context of the form record.

* By using the 'ModelDrivenFormIntegration' object you can make your embedded canvas app contextually aware and thereby interact with the form in which it is embedded.

1. **how to make a power app responsive**

* You can make a Power Apps responsive by using the App's properties and formulas, and taking advantage of a feature called "containers". Here are the steps:
* 1. Set properties: Open the Power Apps Studio, click on `File`, then `App settings`, and then `Screen size + orientation`. Change the screen size by setting `Width` and `Height` to the maximum expected size, and then switch on the `Scale to fit` option.
* 2. Use Relative Positioning: If you want your app to be responsive, you want controls to move and adjust based on screen size. Instead of using hard-coded X & Y positioning, use controls like Parent.Height or Parent.Width, which change dynamically based on the parent control or screen.
* 3. Use ‘Flexible height gallery’: Flexible height galleries have property wrap count. You can use the formula like: If(App.Width < App.Height, 2, 4) which simply means if the orientation is portrait use wrap count as 2 else 4 – this will auto adjust the number of items seen in a gallery based on orientation.
* 4. Use Containers: In Modern App Designer, containers are the recommended control to use for grouping and arranging other controls in your app. The Canvas is a free-form surface, but the controls inside containers can be arranged either in Flexible width or Flexible height format which helps in building responsive interfaces.
* 5. Apply relative sizes to controls: Like positioning, the height and width of the controls should also be relative. You can use parent control height, screen width etc. to adjust the height and width of controls.
* 6. Use media queries: Media queries help in delivering different styles to different devices based on their characteristics or parameters like device-width, device-height, device-dpi, etc.
* Remember, making an app truly responsive requires careful design and consideration of the various screen sizes and orientations your app users might have.

1. **Is it possible to use the canvas app in a model-driven app?**

* Canvas apps can be added to model-driven forms in the same way that other custom controls can. Rich data integration capabilities in an embedded canvas app integrate contextual data from the host model-driven form into the embedded canvas app.

**Level 6: Project Process**

1. Which process is followed by your team for SDLC? What is your role in it?
2. What is agile methodology?
3. What is scrum? What is the team size?
4. What is the sprint length?
5. Do you have any automated process for the deployments? OR
6. **How you are handling deployments to the environments? (Expectation is CICD)**
7. **What all steps you have taken in CICD? ( Unit tests, Lining, vulnerability, code smells, code coverage , security etc.)**
8. **What is the code coverage in your current project? How you will achieve the 100% code coverage?**

**Level 7: Azure concepts**

1. **I have a power app which provides media upload facility to the end user. What** **considerations you have to make in designing the app in terms of storing the media files?**

* Up to 200 MB of media for each app can be uploaded to Power Apps. However, what is majorly recommended is using media/blog storage services, such as Azure Media or Azure Storage, and embedding the media URL to the app.

1. **What is the difference between Power Apps and logic apps?**

* Azure Logic Apps is a service that allows you to integrate apps, build workflows, and more. Power Apps are used to create graphical user interfaces. Since almost everything can be referred to as an application or an app, it's not logical to suppose that all applications are similar in some manner.

1. **What are Azure functions?**

* Azure Functions is a serverless compute service that enables developers to build, deploy, and manage small pieces of code without worrying about server infrastructure. These functions can be triggered by various events, such as HTTP requests, timer-based schedules, or data changes.

1. **How the Azure functions are invoked?**

* Azure Functions are typically invoked or triggered based on specific events or conditions. Here are some ways Azure Functions can be invoked:

1. HTTP Trigger: This allows the function to be invoked upon receiving an HTTP request. This is ideal for creating APIs or web-hooks.

2. Timer Trigger: With this, the function is executed at set intervals, based on a time schedule that you define (for example, every 15 minutes or every Sunday at 8AM).

3. Blob Trigger: This trigger runs the function whenever a new item is added to a Azure Blob Storage, or when an existing blob gets updated.

4. Queue Trigger: The function is executed when a new item is added to an Azure Queue Storage.

5. Cosmos DB Trigger: This trigger allows the function to execute when there are changes to data in an Azure Cosmos DB.

6. Event Grid Trigger: With this, the function gets invoked whenever an event is fired in Azure Event Grid.

7. Event Hub Trigger: This is similar to Event Grid trigger, but specific to Azure Event Hub.

8. Service Bus Trigger: This enables your function to be executed when a message lands in a specific Azure Service Bus Queue or Topic.

9. IoT Hub Trigger: This trigger runs the function whenever an Azure IoT Hub receives a message.

Each of these triggers can be configured when you create a new Azure Function, and the parameters of the trigger (like blob name, queue message, schedule, etc.) can be used as inputs for your function.

1. **Can you write an Azure function with HttpTrigger? The function should return the message as,**

**"Hello World!"**

[FunctionName("HttpTriggerExample")]

public static async Task<IActionResult> Run(

[HttpTrigger(AuthorizationLevel.Function, "get", Route = null)] HttpRequest req,

ILogger log)

{

log.LogInformation("C# HTTP trigger function processed a request.");

// Your code here

return new OkObjectResult("Hello, World!");

}

1. **How does Azure Functions handle scaling automatically?**

Azure Functions scale automatically based on the number of incoming requests or events. For example, if you have a function handling incoming messages from a queue, as the queue load increases, Azure Functions will provision additional instances to process the messages in parallel, ensuring timely processing.

1. **Explain Azure Durable Functions.**

Azure Durable Functions allow you to create complex, stateful workflows by orchestrating multiple Azure Functions. For instance, you can create a durable workflow that involves multiple functions to process an order, update inventory, and notify customers when their order is complete.

1. **What is Azure APIM?**

Ans:

Azure API Management is a fully managed solution that allows users to securely publish, adapt, manage, and monitor APIs. Users can construct an API facade in the Azure portal with a few clicks that serves as a "front door" through which external and internal apps can access data or business logic implemented by our custom-built backend services running on Azure.

1. **Q: What is API gateway?**

Ans:

An API gateway is a solution for managing APIs that lies between a client and a group of backend services. An API gateway serves as a reverse proxy, accepting all API calls, aggregating the numerous services required to fulfil them, and returning the accurate outcome. It can also handle cross-cutting activities including authentication, SSL termination, and rate limitation.

1. **Q: What is Gateway Aggregation?**

Ans:

We can utilize this gateway pattern, when to combine several requests into a single request. When a single activity needs calls to several backend services, this pattern fits. A single request is sent to the gateway by the client. The gateway forward request to various backend services, then aggregates and returns the results back to the client. This minimizes the level of communication between the client and the backend.

1. **Q: What is Gateway Offloading?**

Ans:

Should use gateway to offload cross-cutting concerns and functionality from separate services to the gateway. Instead of making each service responsible for implementing these services, it may be more efficient to combine them into a single location. This is especially true for features like authentication and authorization, which require specialist skills to perform correctly.

1. **Q: Is Azure APIM a load balancer?**

Ans:

API Management will not really handle load balancing, it can be used in combination with a load balancer like Application Gateway or a reverse proxy.

1. **Q: How to create Azure API Management service instance from the Azure portal?**

Ans:

Select Create a resource from the Azure portal menu/Azure Home page.

Select Integration > API Management from the Create a resource page.

Select subscription, resource group, Instance details, and pricing tier on the Create API Management page, then click the Review+Create button.

Search API Management services from the Azure Portal Home Page once it's been setup.

Select the API Management service that you just built.

1. **Can you run long-duration processes in Azure Functions?**

Azure Functions are optimized for short-duration tasks. For long-running processes, consider using Azure Durable Functions or other Azure services like Azure Logic Apps or Azure Kubernetes Service (AKS).

1. **How can you secure Azure Function endpoints?**

Azure Functions can be secured using authentication and authorization mechanisms. For example, you can enable authentication for an HTTP-triggered function and require valid API keys or tokens for access. You can set up authentication in the Azure Portal like this:

1. **Q: What is Azure Active Directory?***Microsoft's Azure Active Directory (Azure AD) is a cloud-based identity and access management (IAM) solution for businesses. The backbone of the Office 365 system is Azure Active Directory, which can sync with on-premise Active Directory and offer OAuth authentication to cloud-based applications.*

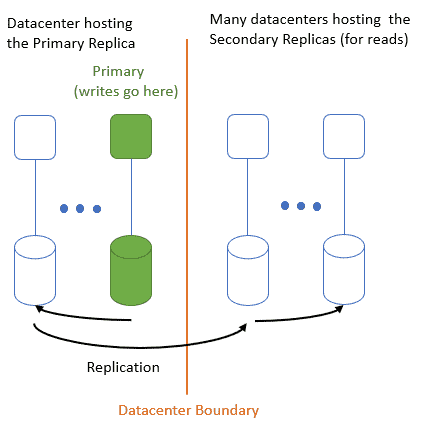
## Q: What is the benefit of Azure AD? Ans:

Azure Active Directory (AD) is a cost-effective and simple-to-use service that helps businesses streamline processing, improve productivity, and security, while single sign-on (SSO) gives employees and business partners access to thousands of cloud applications like Office 365, Salesforce, and DropBox.

## Q: What is Azure Active Directory Service architecture design? Ans:

Azure Active Directory (Azure AD) allows you to control and manage users access to Azure services and resources securly.

Scaling units are called Partitions for the Azure AD data tier.

[](https://www.techgeeknext.com/img/azure/architecture.PNG)

The data tier includes a number of read-write front-end services. The diagram below depicts how the components of a single-directory partition are distributed across multiple datacenters.

The components of Azure AD architecture have primary replica and secondary replicas.

##### Primary replica

The primary replica receives all writes for the partition it resides. Before delivering success to the caller, any write operation is promptly duplicated to a secondary replica in a different datacenter, providing geo-redundant durability of writes.

##### Secondary replicas

All directory reads are handled by secondary replicas, which are spread across datacenters in different parts of the geographies. Because data is replicated asynchronously, there are multiple secondary replicas. Directory reads, like authentication requests, are handled from datacenters that are near to customers. The read scalability is handled by the secondary replicas.

**Level 8: Additional topics**

1. **Have you worked on any ETL tool?**
2. **Any experience in the data migration process**

[L3/L4]

**1.**

**2. Do you remember situations where you had to skip processes/rules to achieve the goal faster?**

Answer – Ideally there should not be any exceptions, however as a matter of emergency to the client sometimes some minor rules can be delayed delivering things faster. Those could be,

1. Postponed writing unit test cases to address the production issues, where delivering a fix was critical to the client.
2. Following Kanban in some sprints to adhere to fast changing market needs.

**3. If you were given complete freedom to start a project from scratch and to select the team, what would be your approach?**

Answer – As a lead developer following points to be considered,

1. Which technology stack has been finalized in the architectural board
2. What is the maximum allowed team size
3. Based on the above answers, I will be able to pick up the right balance of the team with skillset.

**4. You are team lead. You identify that one of your team members is not performing well. How will you handle this situation?**

Answer – As team lead, I will first have a dialog with the concerned team member and let him/her know what is expected from him/her. I will try to understand if that person is going through any troubles like personal issues, emotional issues which are causing performance problems. If the reason is not from above, I will try to understand if that team member is feeling comfortable working on that specific assignment. Is there any need for additional training etc. I can try rotating the tasks to understand if that team member is enjoying any other type of work. As a last resort, I will recommend the project manager, to put the team member under PIP so that we can give another chance to the concerned team member.