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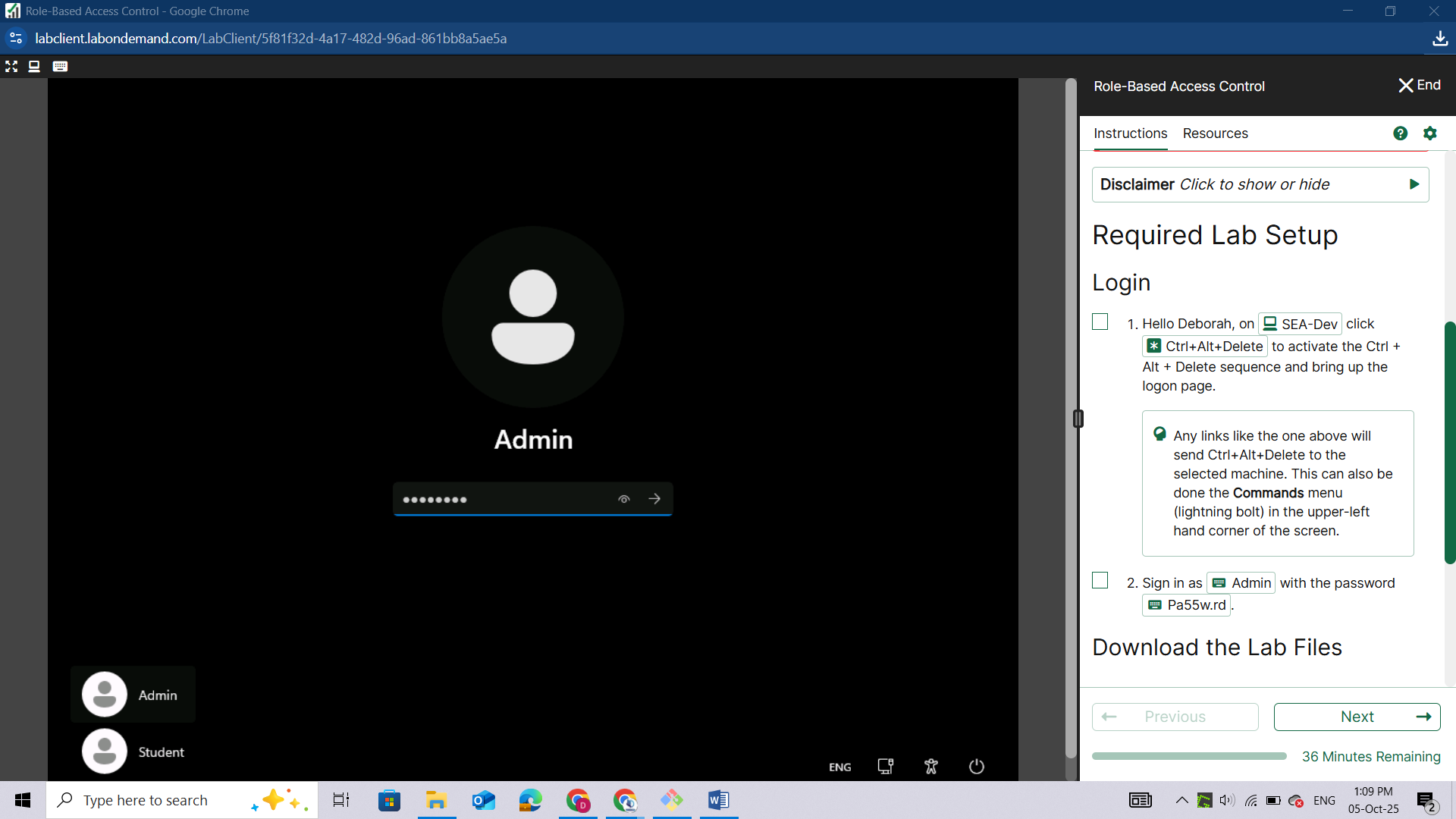
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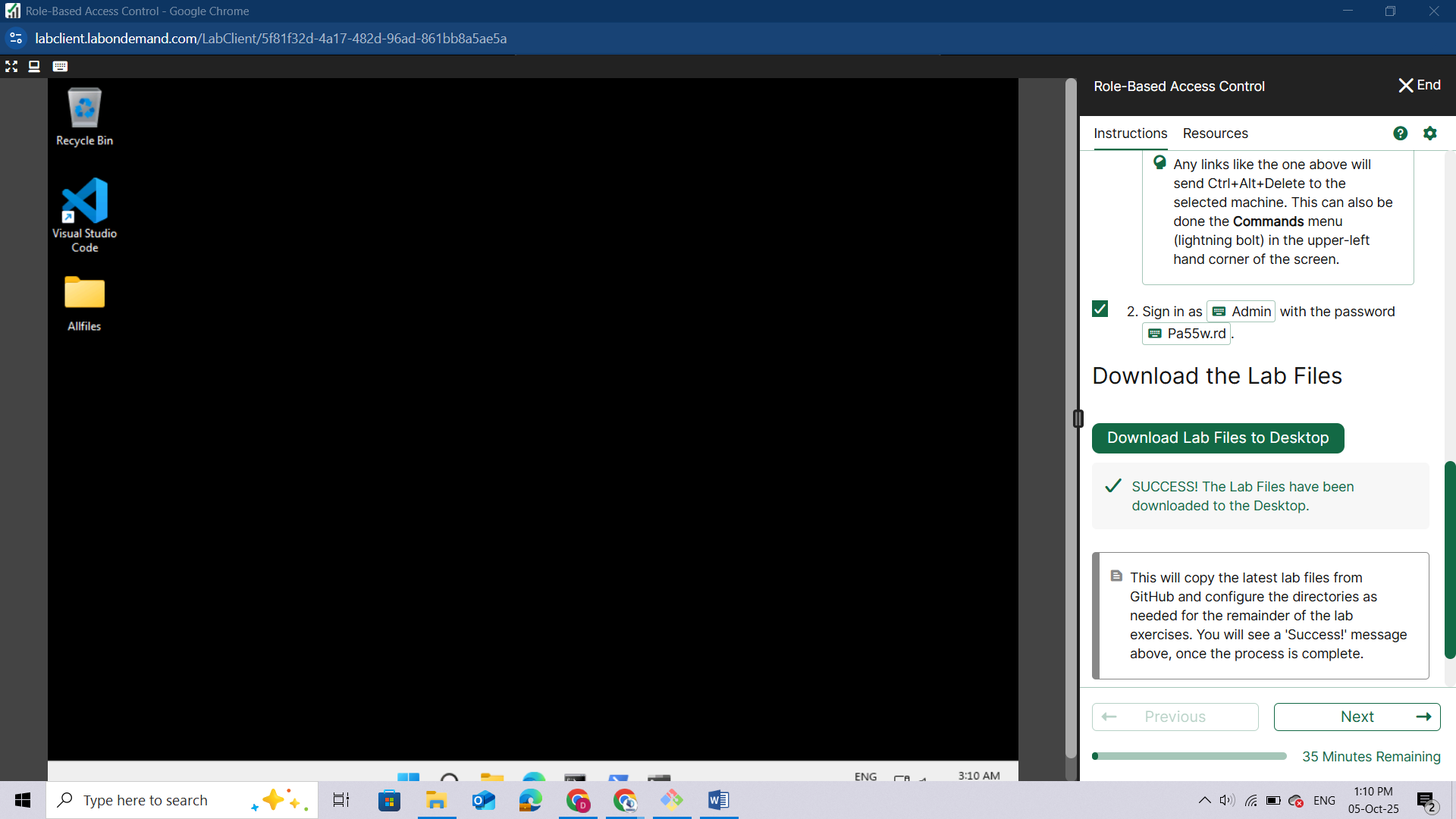
**Login**

Hello Deborah, on [SEA-Dev](https://labclient.labondemand.com/Instructions/5f81f32d-4a17-482d-96ad-861bb8a5ae5a) click [Ctrl+Alt+Delete](https://labclient.labondemand.com/Instructions/5f81f32d-4a17-482d-96ad-861bb8a5ae5a) to activate the Ctrl + Alt + Delete sequence and bring up the logon page.

Sign in as Admin with the password Pa55w.rd



Download the Lab Files



# Lab 01: Role-Based Access Control

**Student lab manual**

## Lab scenario

You have been asked to create a proof of concept showing how Azure users and groups are created. Also, how role-based access control is used to assign roles to groups. Specifically, you need to:

* Create a Senior Admins group containing the user account of Joseph Price as its member.
* Create a Junior Admins group containing the user account of Isabel Garcia as its member.
* Create a Service Desk group containing the user account of Dylan Williams as its member.
* Assign the Virtual Machine Contributor role to the Service Desk group.

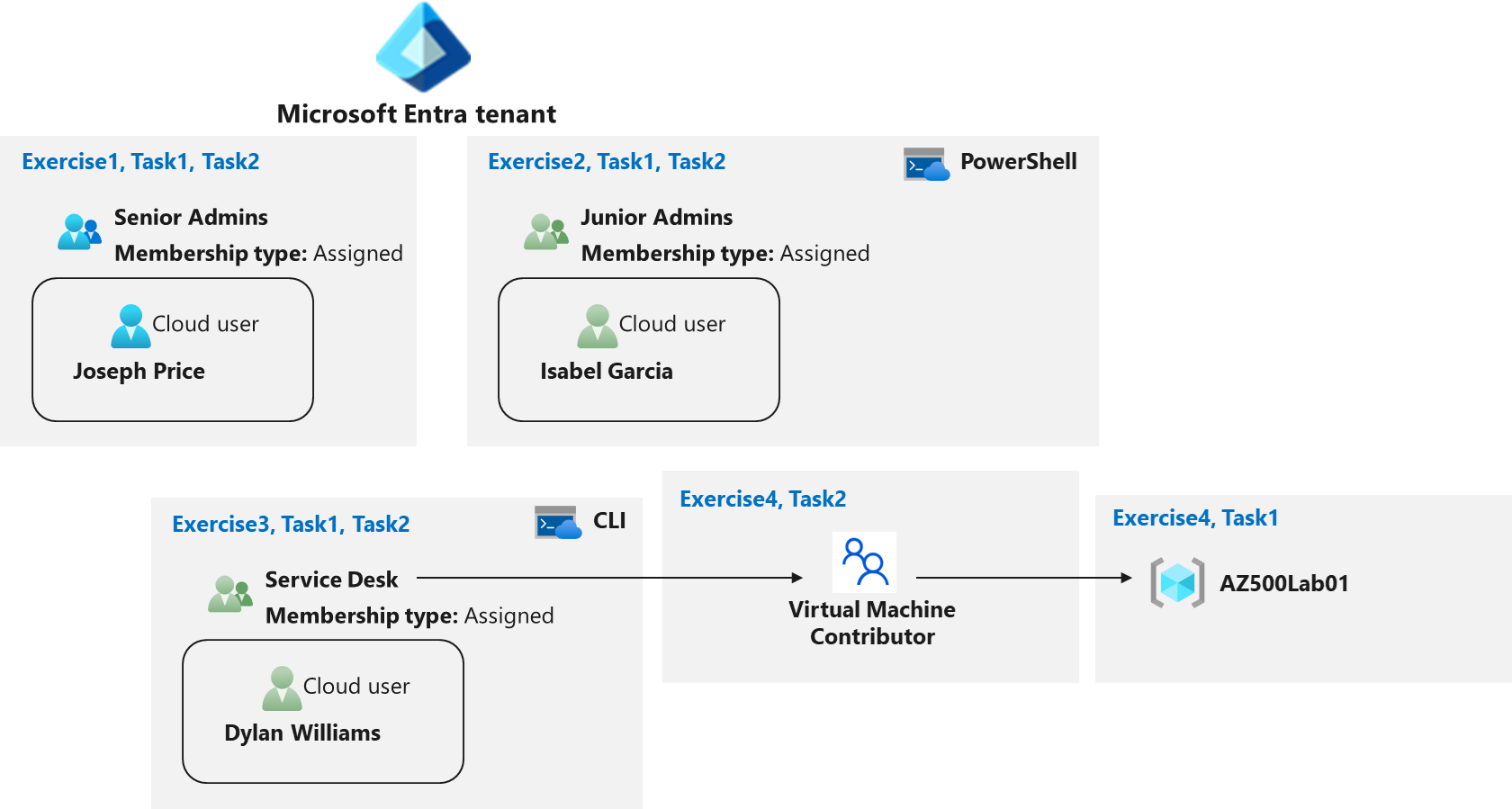
For all the resources in this lab, we are using the **East US** region. Verify with your instructor this is the region to use for class.

## Lab objectives

In this lab, you will complete the following exercises:

* Exercise 1: Create the Senior Admins group with the user account Joseph Price as its member (the Azure portal).
* Exercise 2: Create the Junior Admins group with the user account Isabel Garcia as its member (PowerShell).
* Exercise 3: Create the Service Desk group with the user Dylan Williams as its member (Azure CLI).
* Exercise 4: Assign the Virtual Machine Contributor role to the Service Desk group.

Role-Based Access Control architecture diagram



**Instructions**

### Exercise 1: Create the Senior Admins group with the user account Joseph Price as its member.

In this exercise, you will complete the following tasks:

* Task 1: Use the Azure portal to create a user account for Joseph Price.
* Task 2: Use the Azure portal to create a Senior Admins group and add the user account of Joseph Price to the group.

#### Task 1: Use the Azure portal to create a user account for Joseph Price

In this task, you will create a user account for Joseph Price.

Start a browser session and sign-in to the Azure portal **https:*//portal.azure.com/***.

*Sign in to the Azure portal using an account that has the Owner or Contributor role in the Azure subscription you are using for this lab and the Global Administrator role in the Microsoft Entra tenant associated with that subscription.*

In the **Search resources, services, and docs** text box at the top of the Azure portal page, type **Microsoft Entra ID** and press the **Enter** key.

On the **Overview** blade of the Microsoft Entra ID tenant, in the **Manage** section, select **Users**, and then select **+ New user**.

***Steps 3-8****are for reference only, as this user has already been created for you. If you wish, you may review them but the****New User****button will be greyed out. This is expected in this****Cloudslice****lab and you may proceed to****Task 2****.*

On the **New User** blade, ensure that the **Create user** option is selected, and specify the following settings:

| **Setting** | **Value** |
| --- | --- |
| User name | Joseph |
| Name | Joseph Price |

Click on the copy icon next to the **User name** to copy the full user.

Ensure that the **Auto-generate** password is selected, select the **Show password** checkbox to identify the automatically generated password. You would need to provide this password, along with the user name to Joseph.

Click **Create**.

Refresh the **Users | All users** blade to verify the new user was created in your Microsoft Entra tenant.

#### Task2: Use the Azure portal to create a Senior Admins group and add the user account of Joseph Price to the group.

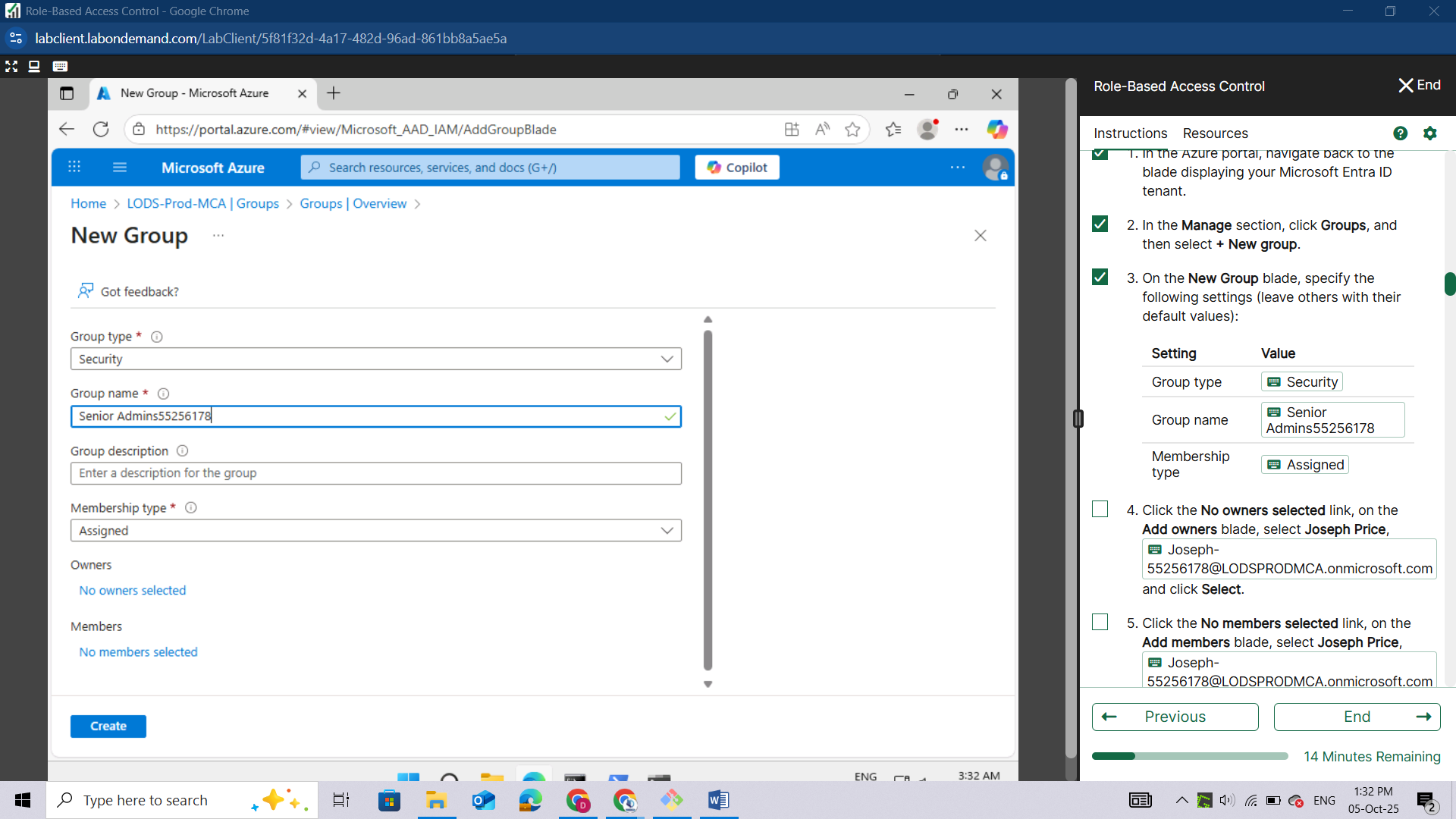
In this task, you will create the Senior Admins group, add the user account of Joseph Price to the group, and configure it as the group owner.

In the Azure portal, navigate back to the blade displaying your Microsoft Entra ID tenant.

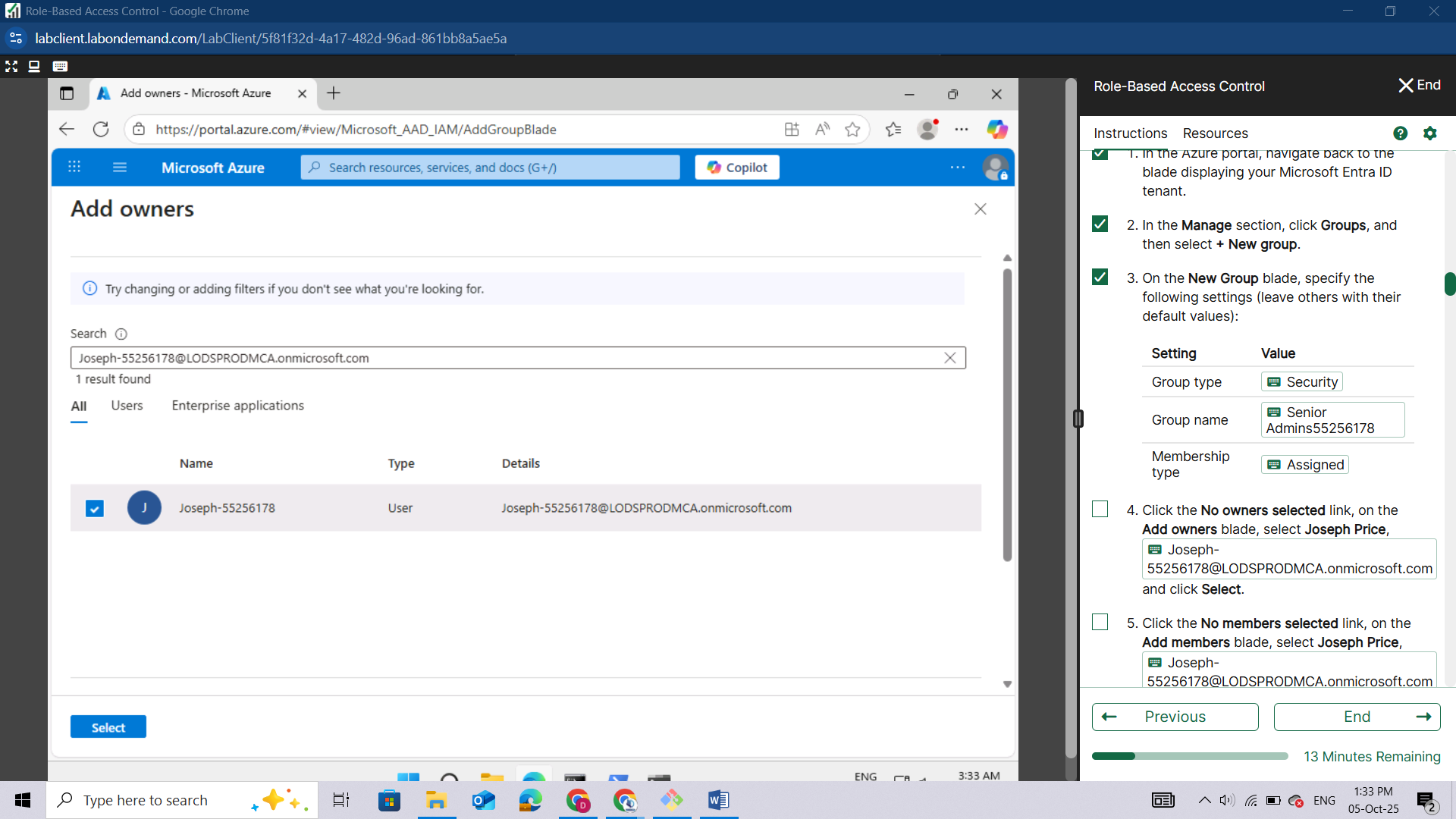
In the **Manage** section, click **Groups**, and then select **+ New group**.

On the **New Group** blade, specify the following settings (leave others with their default values):

| **Setting** | **Value** |
| --- | --- |
| Group type | Security |
| Group name | Senior Admins55256178 |
| Membership type | Assigned |

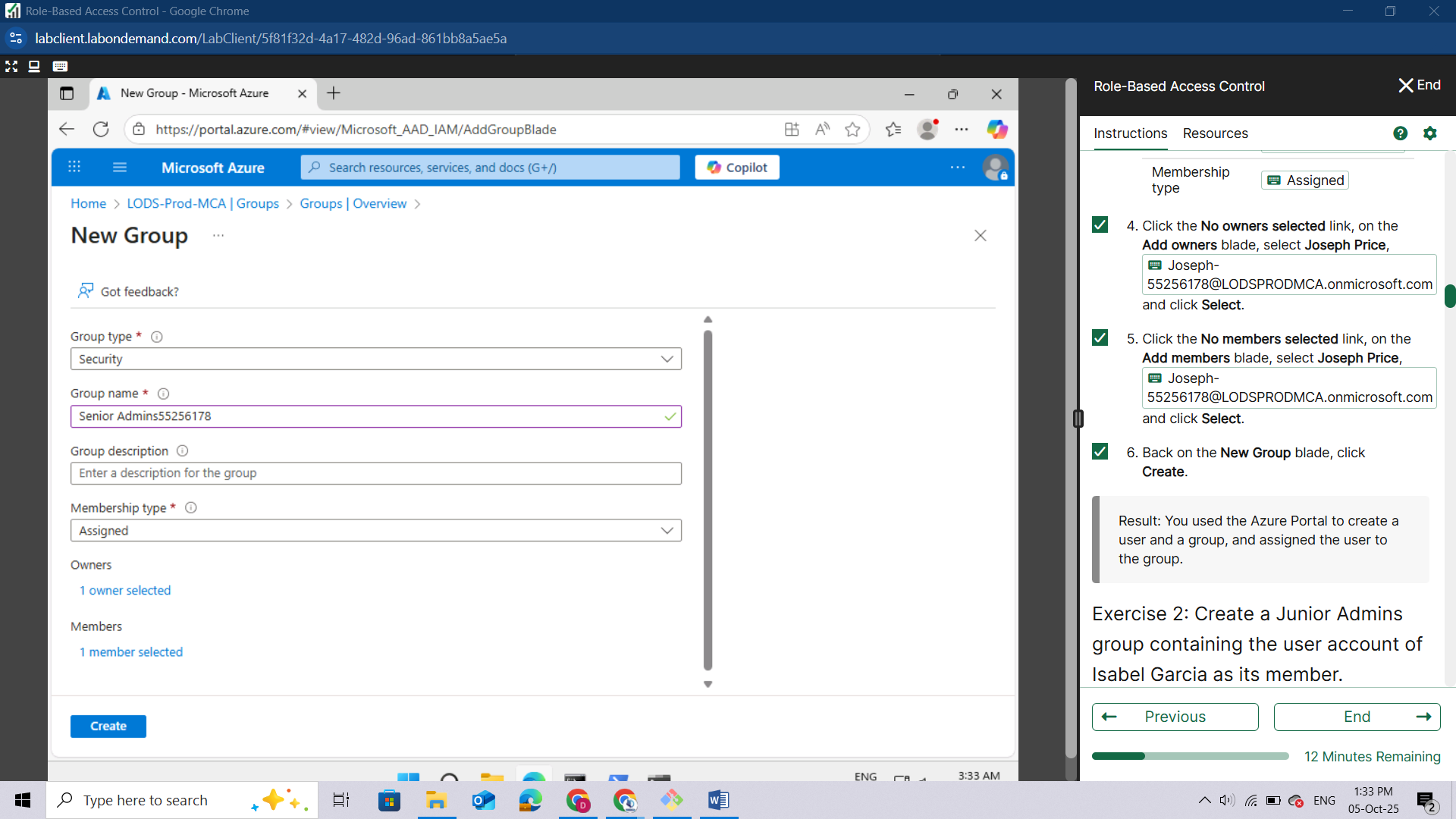


Click the **No owners selected** link, on the **Add owners** blade, select **Joseph Price**, Joseph-55256178@LODSPRODMCA.onmicrosoft.com and click **Select**.



Click the **No members selected** link, on the **Add members** blade, select **Joseph Price**, Joseph-55256178@LODSPRODMCA.onmicrosoft.com and click **Select**.

Back on the **New Group** blade, click **Create**.



*Result: You used the Azure Portal to create a user and a group, and assigned the user to the group.*

### Exercise 2: Create a Junior Admins group containing the user account of Isabel Garcia as its member.

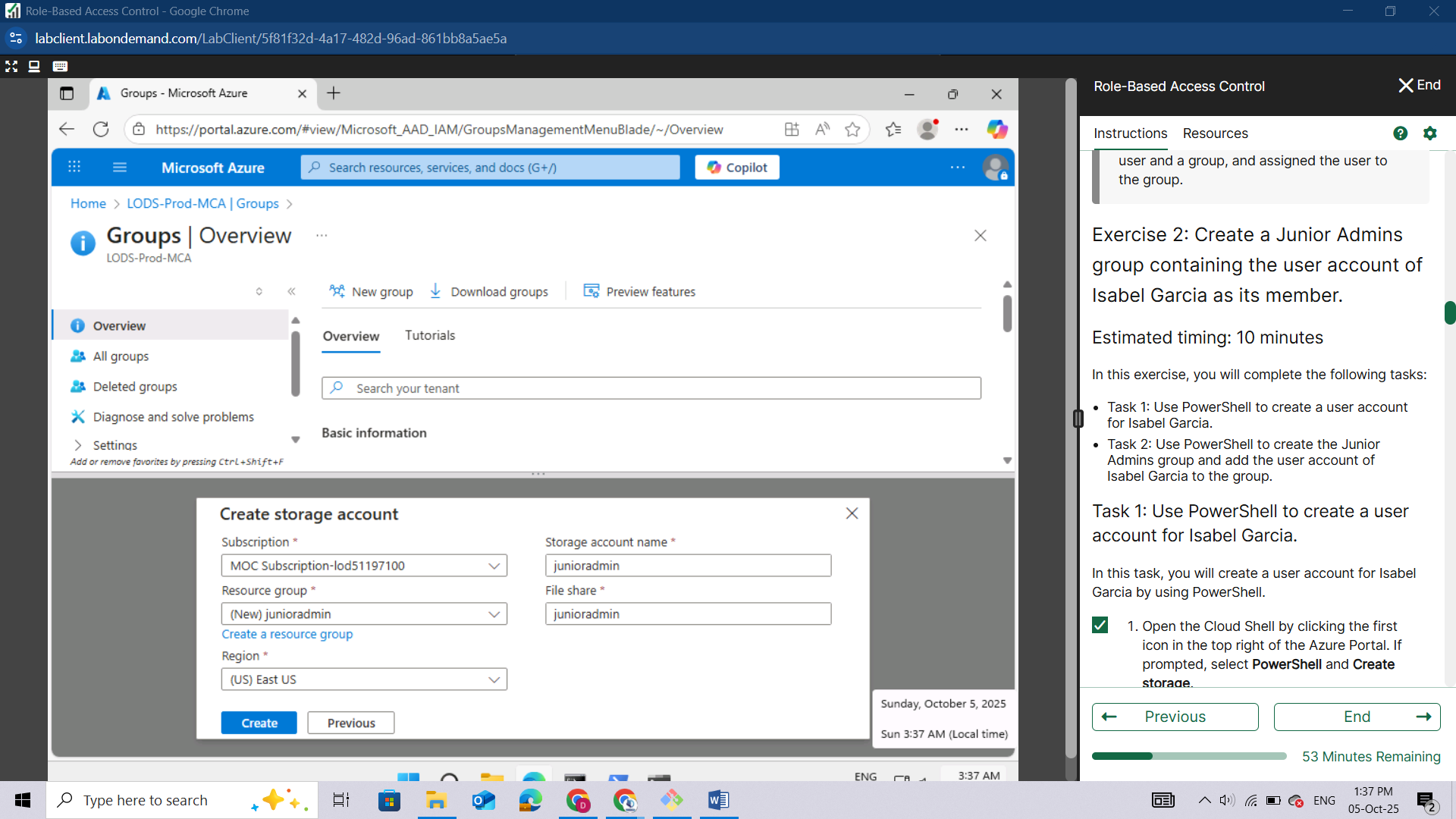
In this exercise, you will complete the following tasks:

* Task 1: Use PowerShell to create a user account for Isabel Garcia.
* Task 2: Use PowerShell to create the Junior Admins group and add the user account of Isabel Garcia to the group.

#### Task 1: Use PowerShell to create a user account for Isabel Garcia.

In this task, you will create a user account for Isabel Garcia by using PowerShell.

Open the Cloud Shell by clicking the first icon in the top right of the Azure Portal. If prompted, select **PowerShell** and **Create storage**.



Ensure **PowerShell** is selected in the drop-down menu in the upper-left corner of the Cloud Shell pane.

*To paste copied text into the Cloud Shell, right-click within the pane window and select****Paste****. Alternatively, you can use the****Shift+Insert****key combination.*

In the PowerShell session within the Cloud Shell pane, run the following to create a password profile object:

**$passwordProfile = New-Object -TypeName Microsoft.Open.AzureAD.Model.PasswordProfile**

In the PowerShell session within the Cloud Shell pane, run the following to set the value of the password within the profile object:

**$passwordProfile.Password = "Pa55w.rd1234"**

In the PowerShell session within the Cloud Shell pane, run the following to connect to Microsoft Entra ID:

**Connect-AzureAD**

In the PowerShell session within the Cloud Shell pane, run the following to identify the name of your Microsoft Entra tenant:

**$domainName = ((Get-AzureAdTenantDetail).VerifiedDomains)[0].Name**

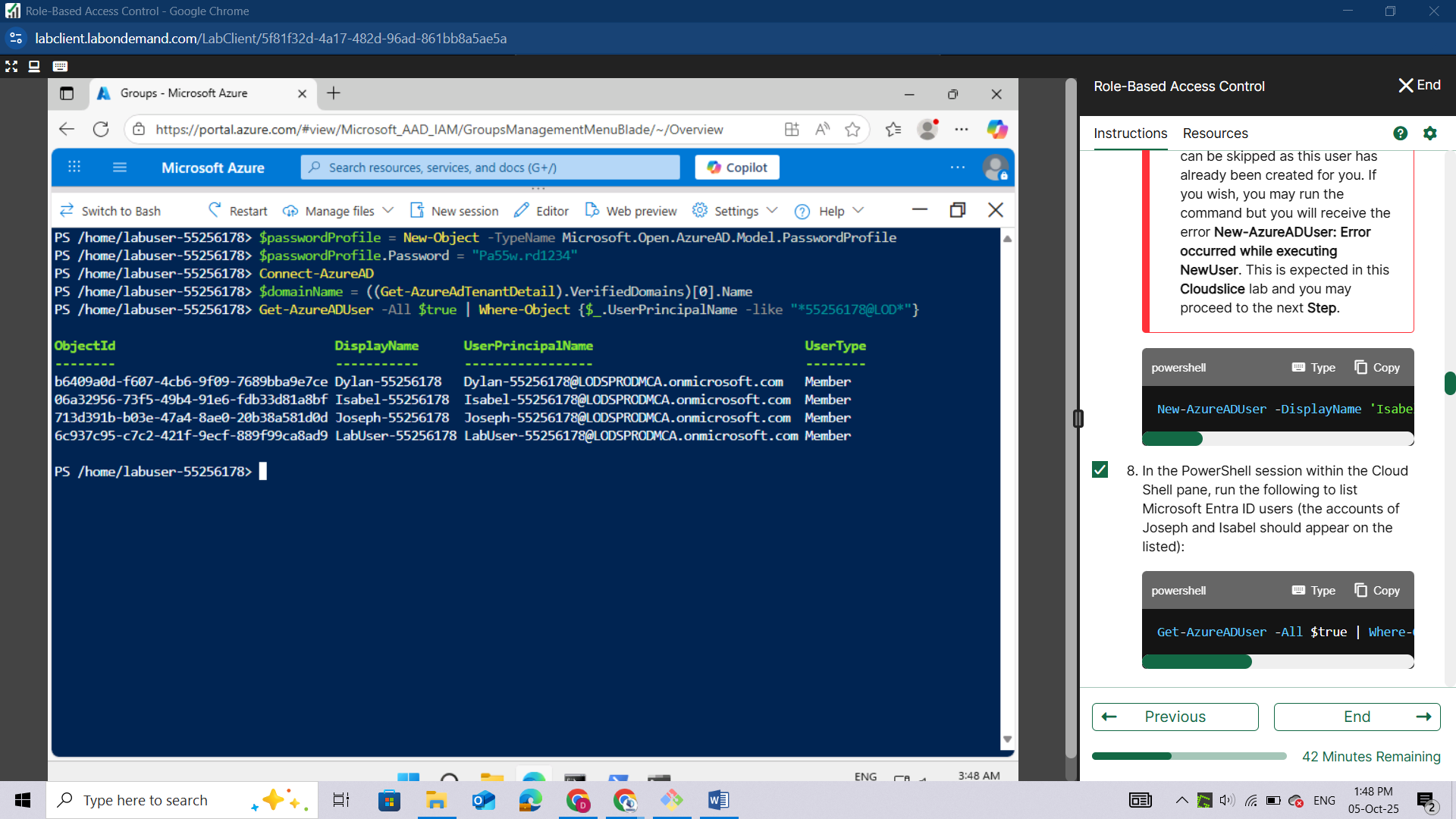
In the PowerShell session within the Cloud Shell pane, run the following to create a user account for Isabel Garcia:

***Step 7****is for reference only, and can be skipped as this user has already been created for you. If you wish, you may run the command but you will receive the error****New-AzureADUser: Error occurred while executing NewUser****. This is expected in this****Cloudslice****lab and you may proceed to the next****Step****.*

**New-AzureADUser -DisplayName 'Isabel Garcia' -PasswordProfile $passwordProfile -UserPrincipalName "Isabel@$domainName" -AccountEnabled $true -MailNickName 'Isabel'**

In the PowerShell session within the Cloud Shell pane, run the following to list Microsoft Entra ID users (the accounts of Joseph and Isabel should appear on the listed):

**Get-AzureADUser -All $true | Where-Object {$\_.UserPrincipalName -like "\*55256178@LOD\*"}**

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#### Task2: Use PowerShell to create the Junior Admins group and add the user account of Isabel Garcia to the group.

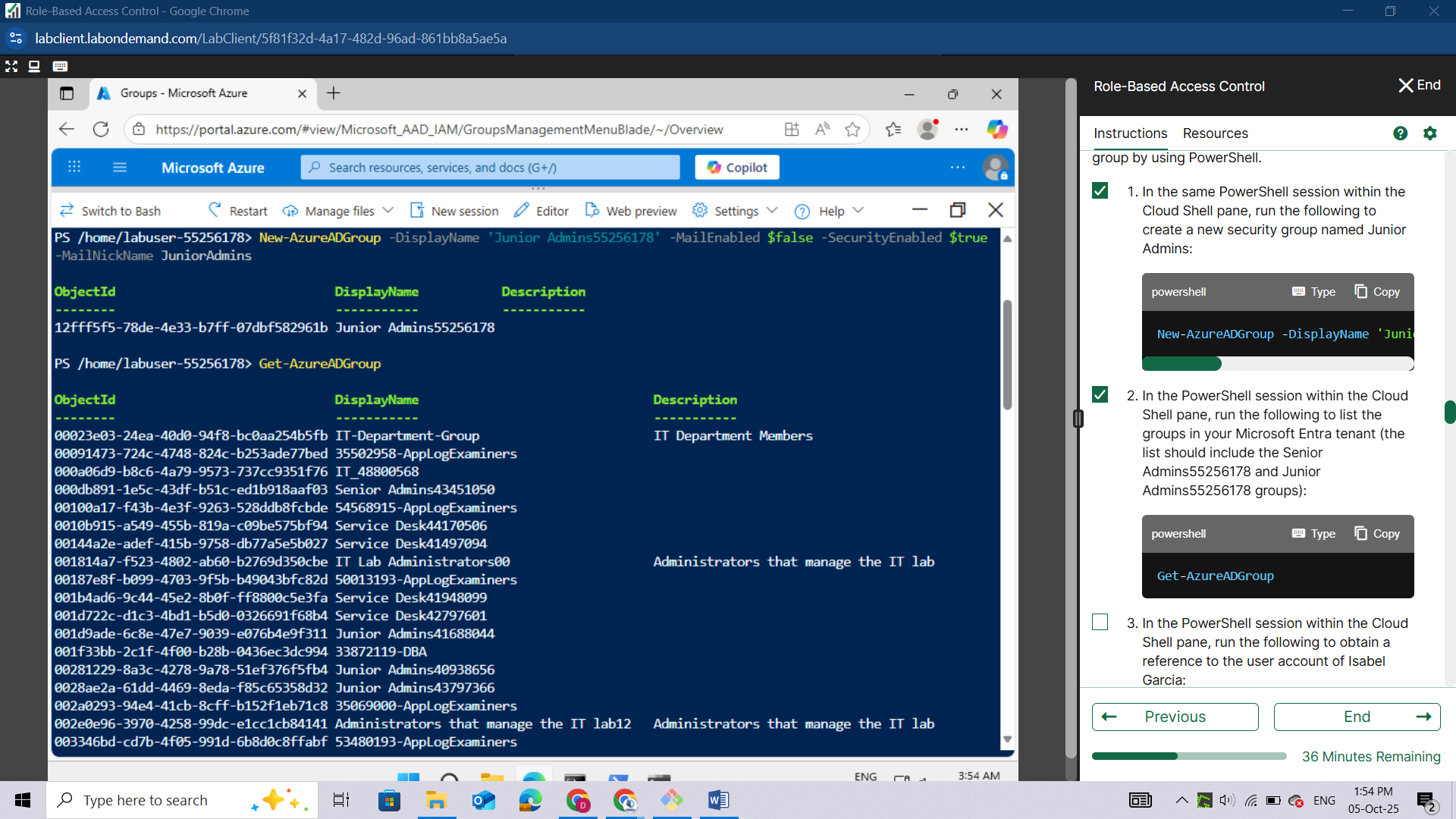
In this task, you will create the Junior Admins group and add the user account of Isabel Garcia to the group by using PowerShell.

In the same PowerShell session within the Cloud Shell pane, run the following to create a new security group named Junior Admins:

**New-AzureADGroup -DisplayName 'Junior Admins55256178' -MailEnabled $false -SecurityEnabled $true -MailNickName JuniorAdmins**

In the PowerShell session within the Cloud Shell pane, run the following to list the groups in your Microsoft Entra tenant (the list should include the Senior Admins55256178 and Junior Admins55256178 groups):

**Get-AzureADGroup**

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In the PowerShell session within the Cloud Shell pane, run the following to obtain a reference to the user account of Isabel Garcia:

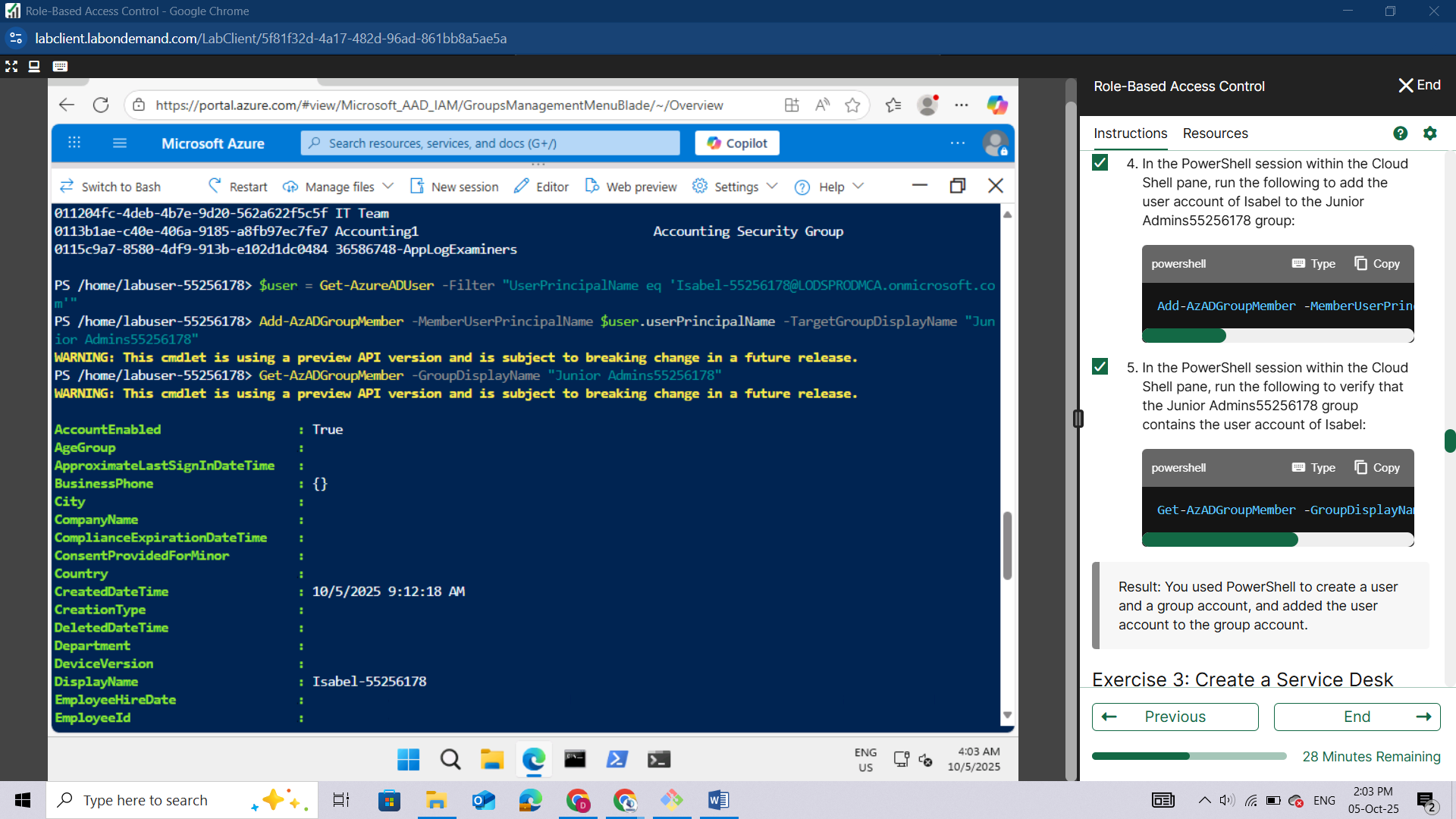
**$user = Get-AzureADUser -Filter "UserPrincipalName eq 'Isabel-55256178@LODSPRODMCA.onmicrosoft.com'"**

In the PowerShell session within the Cloud Shell pane, run the following to add the user account of Isabel to the Junior Admins55256178 group:

**Add-AzADGroupMember -MemberUserPrincipalName $user.userPrincipalName -TargetGroupDisplayName "Junior Admins55256178"**

In the PowerShell session within the Cloud Shell pane, run the following to verify that the Junior Admins55256178 group contains the user account of Isabel:

**Get-AzADGroupMember -GroupDisplayName "Junior Admins55256178"**

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*Result: You used PowerShell to create a user and a group account, and added the user account to the group account.*