

Creating an Office 365 Development Tenant

Lab Time: 45 minutes

Lab Folder: C:\Student\Modules\01_GettingStarted\Lab

Lab Overview: In this lab you will get up and running with an Office 365 and SharePoint Online development environment. You should be working with a Windows PC that has been set up according to the [Setup.docx](#) document that accompanies this course. You will perform the necessary tasks of creating a new Office 365 trial account which will create an Azure Active Directory (AAD) tenant and a SharePoint Online environment that you will use to complete your lab exercise throughout his training course. Once you have created and tested your Office 365 tenant, you can optionally create a trial subscription for Microsoft Azure (unless you already have an Azure account that you can use). Along the way, you will use PowerShell libraries for SharePoint Online and Microsoft Azure to verify you can connect to your Office 365 and Azure accounts and automate developer tasks using PowerShell scripts.

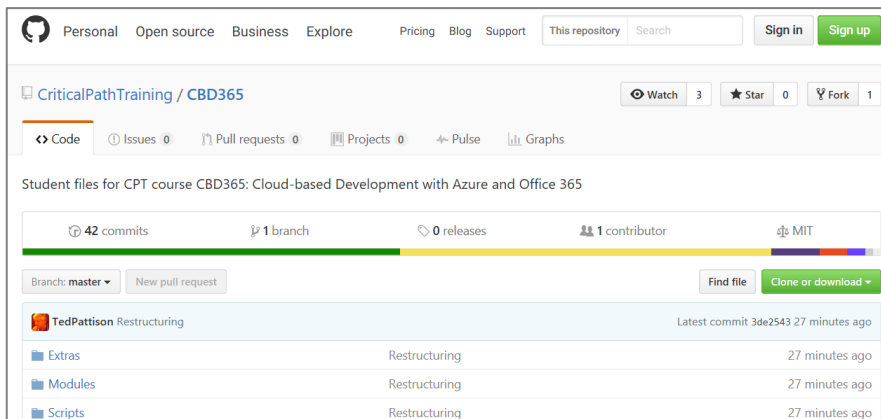
Exercise 1: Download a Local Copy of the Student Lab Files

In this exercise, you will use the GIT utility to download a local copy of the student files from the **MSD365** repository in GitHub. Note that this exercise assumes that GIT has already been installed on your PC as discussed in the setup guide for this course.

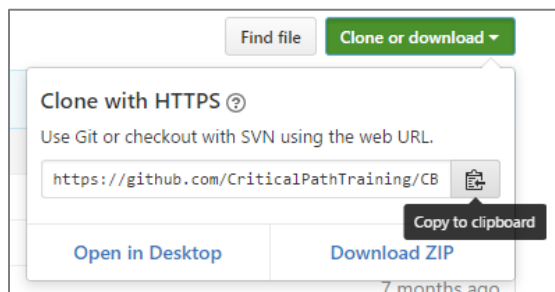
1. Launch a browser and navigate to the GitHub repository for this course at the following URL.

<https://github.com/CriticalPathTraining/MSD365>

2. You should see the home page for the repository as shown in the following screenshot.



3. Copy the URL to clone the repository.
 - a) On the home page of the **MSD365** repository, click the green **Clone or download** dropdown menu.
 - b) Click the **Copy to clipboard** button to copy the URL for cloning to the Windows clipboard.



4. Use GIT to clone the **MSD365** repository.
 - a) Open up a Windows PowerShell command prompt.
 - b) Type in and execute the following **git** command to download the student files to a local folder named **C:\Student**. Note that you copied the URL to github.com in the previous step and you can paste it from the Windows clipboard instead of typing it.

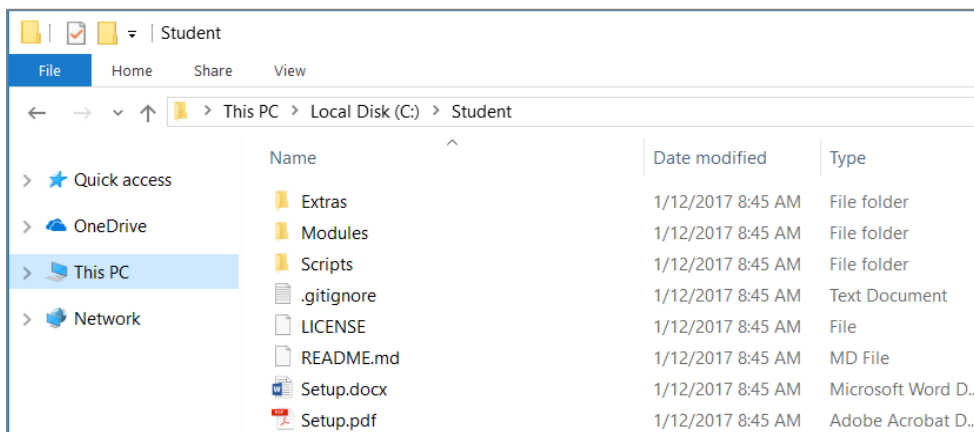
```
git clone https://github.com/CriticalPathTraining/MSD365.git C:\Student
```

- c) When the **git clone** command runs, it will create a local copy of the repository on your local machine in the **C:\Student** folder.

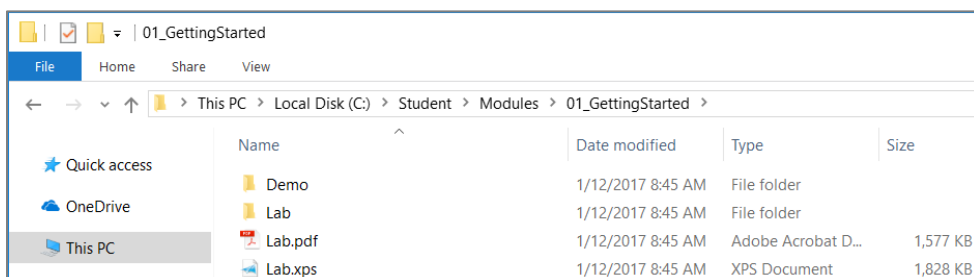
```
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\Users\Student> git clone https://github.com/CriticalPathTraining/CBD365.git C:\Student
Cloning into 'C:\Student'...
remote: Counting objects: 6032, done.
remote: Total 6032 (delta 0), reused 0 (delta 0), pack-reused 6032
Receiving objects: 100% (6032/6032), 212.51 MiB | 9.00 MiB/s, done.
Resolving deltas: 100% (2604/2604), done.
Checking out files: 100% (3678/3678), done.
PS C:\Users\Student>
```

- d) When the **git clone** command completes, open Windows Explorer and examine the **Student** folder. You should be able to see the **Student** folder has child folders named **Extras**, **Modules** and **Scripts**.



- e) Drill into the **Modules** folder and look in the folder inside named **01_GettingStarted**.



You can see that the **01_GettingStarted** folder contains two child folders named **Demo** and **Lab**.

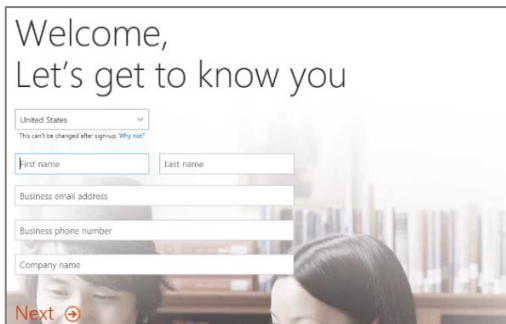
Exercise 2: Create an Office 365 Trial Account

In this exercise, you will create a new Office 365 trial account which in turn will create a new Office 365 tenant. This Office 365 tenant will allow you to create up to 25 user accounts with Enterprise E5 trial licenses. Note that the Enterprise E5 trial license provides the benefits of the Office 365, SharePoint Online and Power BI Pro. Being able to create multiple Office 365 user accounts in your cloud-based testing environment will be important so that you can test the effects working with multiple users.

1. Navigate to the following URL:

<https://go.microsoft.com/fwlink/p/?LinkID=698279&culture=en-US&country=US>

2. Fill out the form with your personal information and click **Next**.



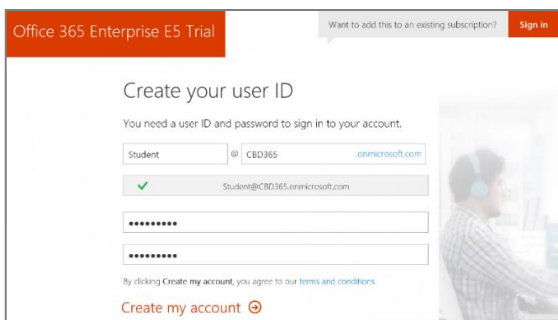
The information you provide here will be used throughout your tenant so if you do not wish to use your actual company name then you can provide a humorous and/or fictitious company name. The name you use for company name will turn out to be the name of the Office 365 tenant that you are creating.

3. On the next page, you are prompted to provide a user ID, company name and password.

Note that the company name you enter on this page will be used to create the tenant name for your new Office 365 trial account. For example, if you were to enter a company name of **MSD365**, it would result in the creation of a new Office 365 tenant with a domain of **MSD365.onMicrosoft.com**. The first part of this domain name (i.e. **MSD365**) is known as the *tenant name*.

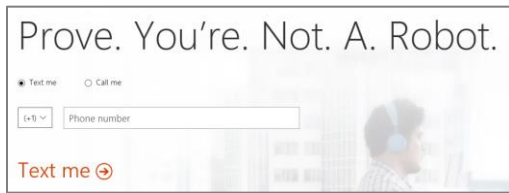
The user name you enter when creating the new trial account will be used to create the first user account in the tenant which will be created as a Global Administrator within the new tenant. If you enter a user name of **Student**, then the email address as well as user principal name for this administrative account will be **Student@MSD365.onMicrosoft.com**. You should be logged on in all lab exercises as this user account unless you are instructed to do otherwise.

4. Enter a user name and a company name (i.e. *domain name*) for your new Office 365 trial tenant. For the company name, you may wish to simply use your first and/or last name with a number which you can increment each time you have to create a new trial account (e.g. EricClapton1.onmicrosoft.com).

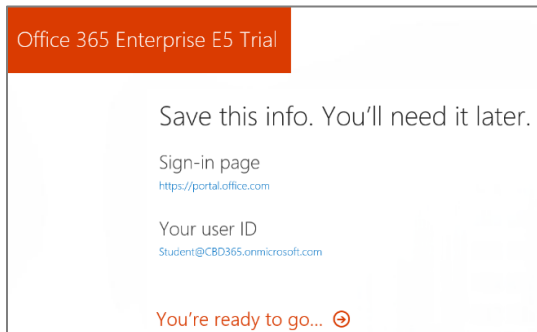


Don't use your actual company name as that may cause some conflict when your company decides to create their own official tenant. Throughout the remainder of this guide you will a tenant name such as **MSD365** which you should replace with the value specified for your tenant name.

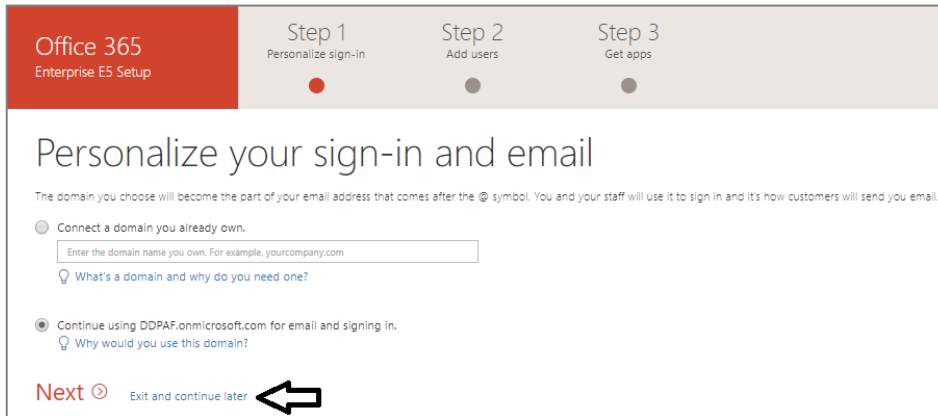
5. Complete the validation form in step 3 by proving you are not a robot.
 - a) Select the **Text me** option and provide the number of your mobile phone.



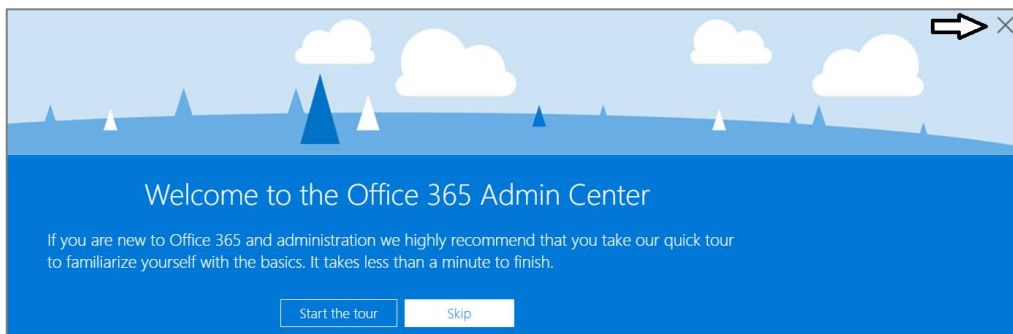
- b) When you go through this process, a Microsoft online service will send you a text message that contains an access code.
 - c) You can then retrieve the access code from your mobile device and use it to complete the validation process.
6. Once you have completed the validation process, click the **You're ready to go...** link to navigate to the portal welcome page for your new Office 365 trial tenant. Note that you should already be logged on using the user account that was created during the sign up process.



7. If you are prompted with the **Personalize your sign-in and email**, click the **Exit and continue later** link at the bottom of the page.



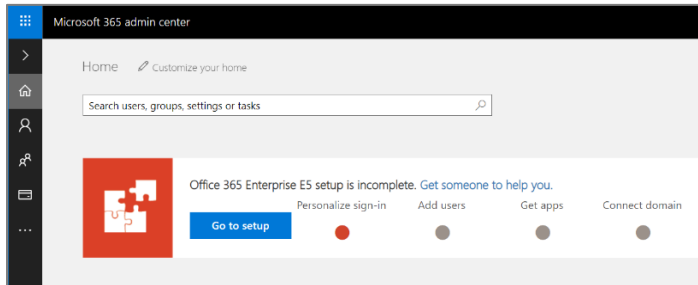
8. If you are prompted with the **Welcome to the Office 365 Admin Center** dialog, click the **X** in the upper, right corner to close it.



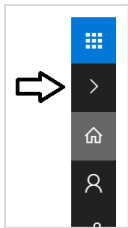
At this point, you have already created your new Office 365 tenant which can support creating up to 25 user accounts with Office 365 Enterprise E5 trial licenses. Note that some Office 365 services within your new Office 365 tenant such as the Office 365 admin center, PowerApps, Flow and Power BI can be accessed immediately. Other services in your Office 365 tenant such as SharePoint Online, OneDrive for Business and Outlook will not be ready immediately and can take some time to provision.

There is no more need to run the browser in incognito mode anymore because it's only required to get through the signup process. You can now return to using a standard browser window. However, it's always a good thing to check to see who you are logged in as because sometimes the browser may log you on using a different Office 365 account you have instead of your new trial account.

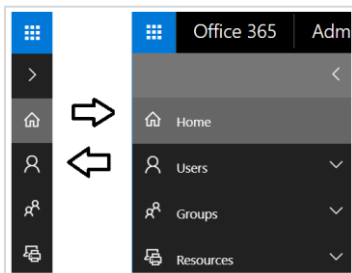
9. At this point, you should be located at the **Office 365 admin center**.
 - a) The following screenshot shows the Office 365 Admin home page.



- b) Locate the top **Menu** button for the left navigation menu. It's the second button from the top with the arrow icon which sits just beneath the Office 365 App Launcher menu button.

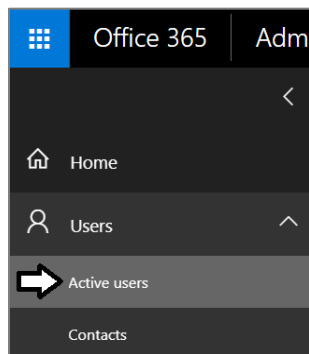


- c) Click the top **Menu** button several times and see how it toggles the left navigation between a collapsed and expanded mode.

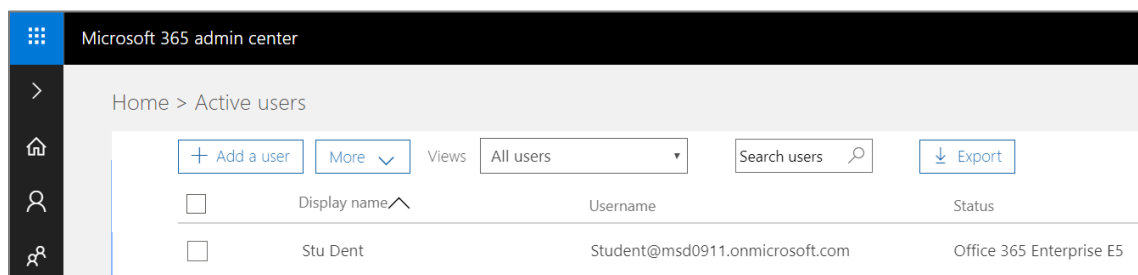


Over the next few steps, you will configure your new Office 365 tenant by creating a secondary user account that you will need later when you begin experimenting with sharing PowerApps and Flows with other users.

10. Make sure you are in the browser at the home page of the Office 365 admin center.
11. Inspect the set of Active Users in the current tenancy.
 - a) In the left navigation menu, expand the **Users** node and click **Active Users** to navigate to the **Active Users** page.

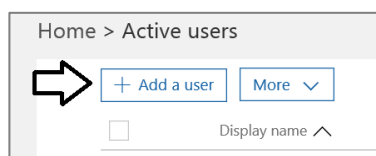


- b) Once the **Active Users** page is displayed, you should be able to verify that the user account you are currently logged on as is the only user account that exists in the current tenancy. Remember that this account has been set up as a Global Administrator to the tenant because it is the account that was used when creating your new Office 365 tenant.



12. Create a new user account.

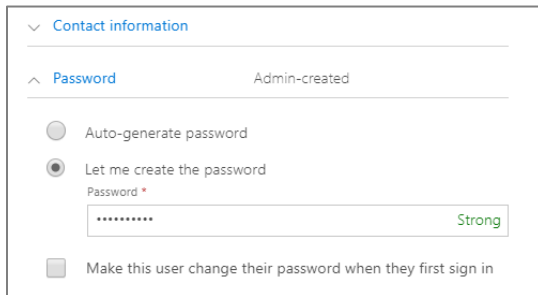
- a) On the **Active Users** page, click the button **Add a user** button to create a new user account



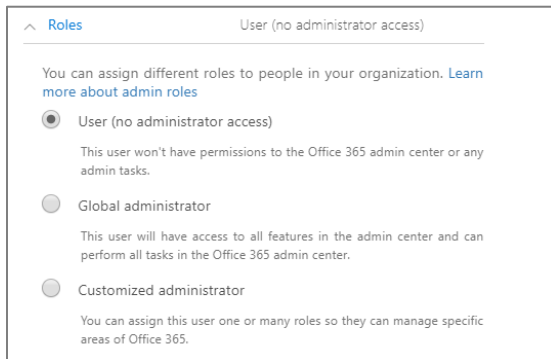
- b) Fill in the **Create new user account** form with information for a new user account. When creating this account, you can use any name you would like. These lab instructions will demonstrate this by creating a user account for a person named **James Bond** with a user name and email of **JamesB@msd0911.onmicrosoft.com**.

- c) Expand **Password** section under **Contact Information** section.
i) Select the option for **Let me create the password**.

- ii) Enter a password of **pass@word1** into the textboxes labeled **Password** and **Retype Password**.
- iii) Uncheck the checkbox for the option labeled **Make this user change their password when they first sign in**.

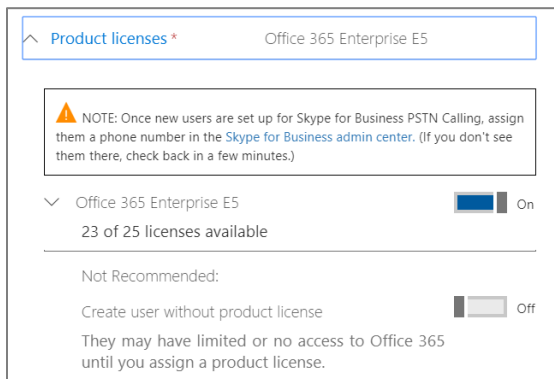


- d) Expand the roles section. You do not need to change anything in this section, although you should note that this new user account will be created as a standard user account without any administrator access or privileges.

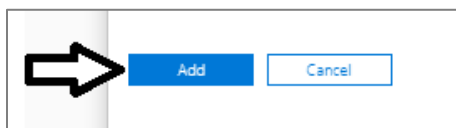


Note that the new account is usually assigned a trial license for **Office 365 Enterprise E5** plan. However, it's a good practice to check and make sure the new user has been assigned a license for **Office 365 Enterprise E5**.

- e) In the **Product licenses** section, make sure the **Office 365 Enterprise E5** license is set to **On**.



- f) Click the **Save** button at the bottom of the new user form to create the new user account.



- g) When you see the **User was added** message, click **Send email and close** to dismiss the **Add new user** task pane.

- h) Verify that the new user account has been created and is displayed along with your primary user account.

Home > Active users			
<div> + Add a user More ▾ Views All users ▾ Search users 🔍 ↓ Export </div>			
<input type="checkbox"/>	Display name ↕	Username	Status
<input type="checkbox"/>	James Bond	JamesB@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Stu Dent	Student@msd0911.onmicrosoft.com	Office 365 Enterprise E5

Now you know how to create a new Active Directory user account by hand. Next, you will accomplish the same goal using a PowerShell script to automate the task.

Exercise 3: Create New Office 365 User Accounts using a PowerShell Script

In this exercise, you will use the Azure AD PowerShell module to verify connectivity to your Office 365 tenant and to create a few new user accounts in your new Active Directory tenant..

1. Open and review the PowerShell script named **CreateUserAccountsFromCSV.ps1**.

- a) Using Windows Explorer, open the folder at the following location.

C:\Student\Modules\01_GettingStarted\Lab\CreateUsersScript

- b) You should see several files including **UserData.csv** and **CreateUserAccountsFromCSV.ps1**.

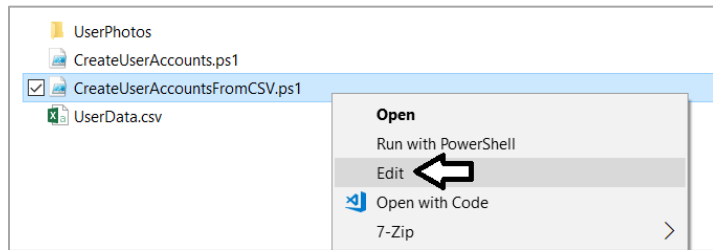
CreateUsersScript			
<div> File Home Share View </div>			
C:\Student\Modules\01_GettingStarted\Lab\CreateUsersScript			
<input type="checkbox"/>	Name	Date modified	Type
	UserPhotos	9/7/2018 5:03 PM	File folder
	CreateUserAccounts.ps1	9/7/2018 3:46 PM	Windows PowerShell Script
	CreateUserAccountsFromCSV.ps1	9/7/2018 3:47 PM	Windows PowerShell Script
	UserData.csv	9/7/2018 5:01 PM	Microsoft Excel Comma Separated Values File

- c) Open **UserData.csv** file in Notepad and examine the data inside which is formatted in a CSV format.

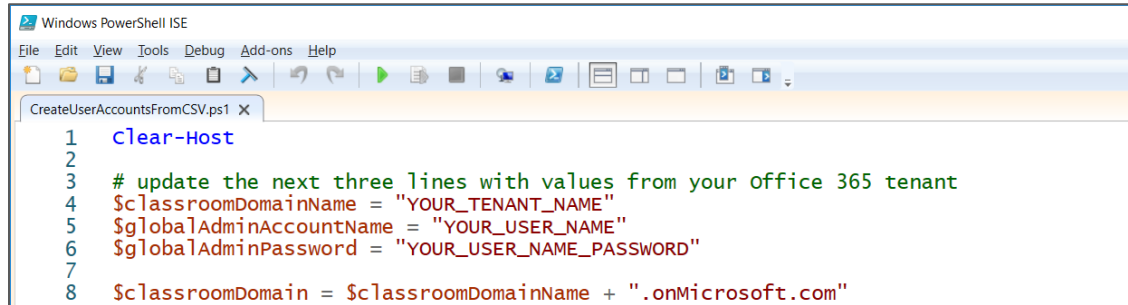
```

UserData.csv - Notepad
File Edit Format View Help
FirstName,LastName,AlternateEmail
Austin,Powers,Austin.Powers@gmail.com
Carrie,Mathison,Carrie.Mathison@gmail.com
Emma,Peel,Emma.Peel@gmail.com
Jack,Bauer,Jack.Bauer@gmail.com
Jack,Ryan,Jack.Ryan@gmail.com
Jason,Bourne,Jason.Bourne@gmail.com
Maxwell,Smart,Maxwell.Smart@gmail.com
    
```

- d) Close **UserData.csv** without saving any changes.
- e) Right click on the file named **CreateUserAccountsFromCSV.ps1** and click Edit to open the file in the PowerShell ISE.



- f) Take a moment to walk through the code in this PowerShell script.



- g) As you can see, the script creates new Azure AD user accounts using the **New-AzureADUser** cmdlet.

```
$password = "pass@word1"
$passwordProfile = New-Object Microsoft.Open.AzureAD.Model.PasswordProfile
$passwordProfile.Password = $password
$passwordProfile.EnforceChangePasswordPolicy = $false
$passwordProfile.ForceChangePasswordNextLogin = $false

$secureStringPassword = ConvertTo-SecureString -String "pass@word1" -AsPlainText -Force

# Create new user account
$newUser = New-AzureADUser `
    -DisplayName $displayName `
    -GivenName $firstName `
    -Surname $lastName `
    -MailNickName $mailNickname `
    -PasswordProfile $passwordProfile `
    -PasswordPolicies "DisablePasswordExpiration, DisableStrongPassword" `
    -UserPrincipalName $userPrincipalName `
    -UsageLocation "US" `
    -AccountEnabled $True
```

Note that any user account created with this script will have a password of **pass@word1**.

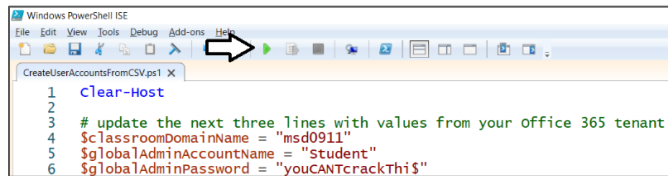
- h) Move to the top of the script and edit the script to include the details for your tenant name, user account and password.

```
# update the next three lines with values from your Office 365 tenant
$classroomDomainName = "msd0911"
$globalAdminAccountName = "student"
$globalAdminPassword = "youCANTcrackThi$"
```

- i) Save your changes to **CreateUserAccountsFromCSV.ps1**.

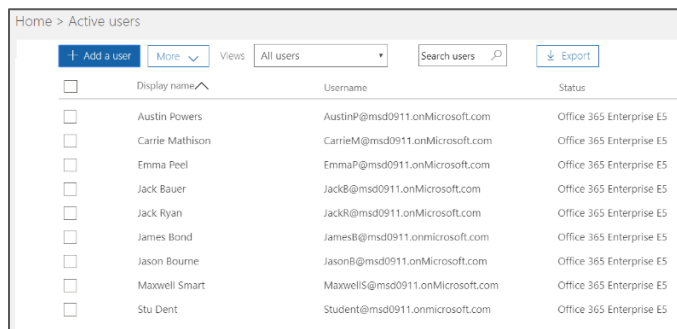
In the next step you will execute the PowerShell script which means you must have the ability to run PowerShell scripts on your Windows PC. If you are not able to run PowerShell scripts, you might need to open a PowerShell prompt as Administrator and then execute the **Set-ExecutionPolicy Bypass** command.

2. Run the PowerShell script named **CreateUserAccountsFromCSV.ps1** to create new user accounts in your new AD tenant.
- a) Inside the Windows PowerShell ISE, click the green arrow button on the toolbar to execute the script.



```
1 Clear-Host
2
3 # update the next three lines with values from your office 365 tenant
4 $classroomDomainName = "msd0911"
5 $globalAdminAccountName = "Student"
6 $globalAdminPassword = "youCANTcrackThi$"
```

- b) Once the script executes, return to the **Active users** view in Office 365 admin center to verify new users have been created.



	Display name	Username	Status
<input type="checkbox"/>	Austin Powers	AustinP@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Carrie Mathison	CarrieM@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Emma Peel	EmmaP@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Jack Bauer	JackB@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Jack Ryan	JackR@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	James Bond	JamesB@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Jason Bourne	JasonB@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Maxwell Smart	MaxwellS@msd0911.onmicrosoft.com	Office 365 Enterprise E5
<input type="checkbox"/>	Stu Dent	Student@msd0911.onmicrosoft.com	Office 365 Enterprise E5

Note, there are user photos in the folder at **C:\Student\Modules\01_GettingStarted\Lab\CreateUsersScript\UserPhotos** if you want to upload photos for each of these users. Uploading user photos is not required so we leave this as an optional exercise for the reader.

Exercise 4: Navigate to the Root SharePoint Site for Your Tenant

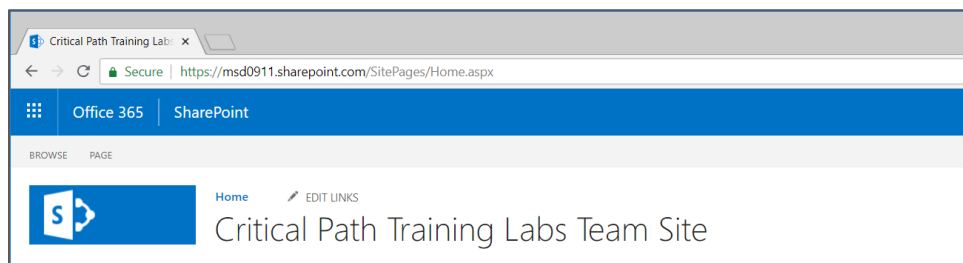
In this exercise, you will navigate to the root SharePoint site for your new Office 365 tenant. You will not do much with this site in this lab. However, you will be using this SharePoint site in later labs as you develop SharePoint Framework webparts.

NOTE: When you create an Office 365 trial tenant, it takes a certain amount of time to provision the standard SharePoint sites that are automatically created. In many cases, the SharePoint sites will be ready within 5 minutes. However, it is not uncommon for the provisioning to take as long as 10-20 minutes. In less common scenarios, it might take over an hour for the sites to be created. If the SharePoint sites in your tenant are still being provisioned, you must wait for them to be ready before you can work on this exercise.

1. Navigate to your root SharePoint site in your new Office 365 tenant.
 - a) Take the following URL and replace **YOUR_TENANT_NAME** with the name of your new Office 365 tenant.

https://YOUR_TENANT_NAME.sharepoint.com

- b) Paste the URL into the address bar of the browser to navigate to your root SharePoint site.
- c) When prompted, log in with your new Office 365 user account credentials.
- d) At this point, you should see the home page of the SharePoint team site which is the root site for your tenant.



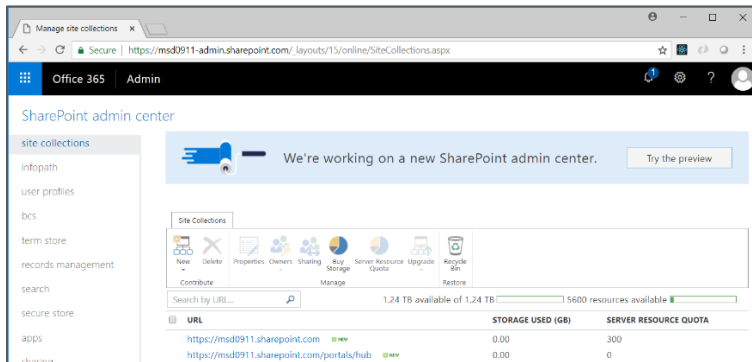
Take a moment to navigate around in this SharePoint team site. You will find that this is a standard team site that includes the standard lists and document libraries included with every new team site. You might consider adding a bookmark to this site because you will be returning when you begin the labs which work with the SharePoint Framework.

Exercise 5: Create a New SharePoint Site using the SharePoint Admin Center

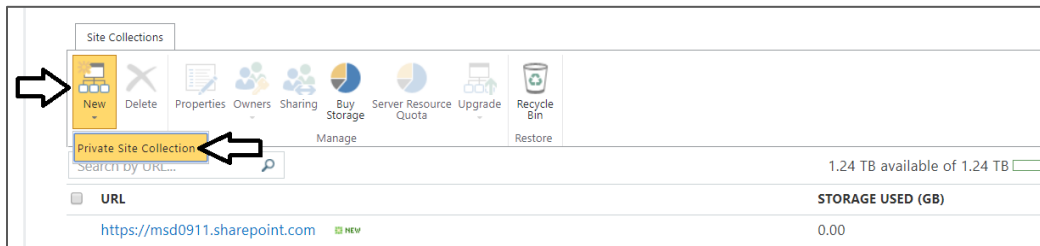
In this exercise, you will navigate to the SharePoint admin center where it is possible to administer the SharePoint sites within the current Office 365 tenant. You will also go through the process of manually creating a new SharePoint team site.

1. Navigate to the SharePoint admin center for your new Office 365 tenant.
 - a) Take the following URL and replace **YOUR_TENANT_NAME** with the name of your new Office 365 tenant.

`https://YOUR_TENANT_NAME-admin.sharepoint.com`
 - b) Paste the URL into the browser to navigate to the SharePoint site collection which is the SharePoint admin center.
 - c) At this point, you should see the site collection page of the SharePoint admin center.



2. Create a new SharePoint site by hand using the SharePoint admin center.
 - a) On the ribbon in the **Site Collections** tab, drop down the **New** button and click **Private Site Collection**.



- b) In the **new site collection** dialog, enter a **Title of My Test Site**.
- c) Enter a **Web Site Address** of **https://YOUR_TENANT_NAME.sharepoint.com/sites/testsite**.
- d) Under **Select a template**, click the **Enterprise** tab and select **Team Site - SharePoint Online configuration**.
- e) Enter the **Time Zone** for where you live.
- f) Assign yourself as the new site owner using your new Office 365 user account.
- g) Adjust the **Server Resource Quota** to a value of **0**.

- h) Click the **OK** button to begin the process of creating the new site.
- i) You should be able to see the new site you've just created in the list of site collections.

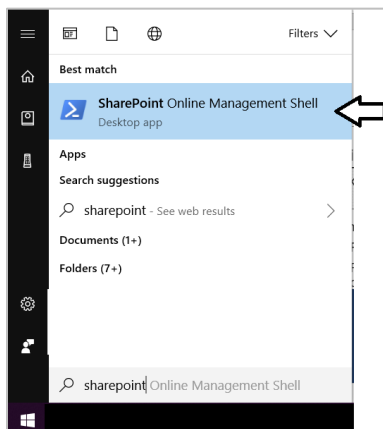
URL	STORAGE USED (GB)	SERVER RESOURCE QUOTA
https://msd0911.sharepoint.com	0.00	300
https://msd0911.sharepoint.com/portals/hub	0.00	0
https://msd0911.sharepoint.com/search	0.03	0
https://msd0911.sharepoint.com/sites/testsite	0.00	0
https://msd0911-my.sharepoint.com	0.00	0

Note that you can see the new SharePoint site with a spinner icon to the right which means the site is still being provisioned. It usually takes between 3-4 minutes for the site to be fully created. Once the site has been created, you can navigate to it.

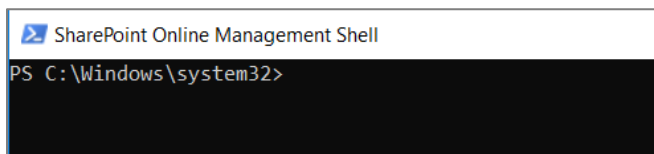
Exercise 6: Create a New SharePoint Site using PowerShell

In this exercise, you will use the SharePoint Online PowerShell module to connect to your Office 365 tenant. Note that this exercise assumes you have already installed the SharePoint Online Management Shell as discussed in the lab setup document.

1. Connect to SharePoint Online and sign in using PowerShell.
 - a) From the **Windows Start** menu, open **SharePoint Online Management Shell**.



- b) You should now see a new console window for the SharePoint Online Management Shell.

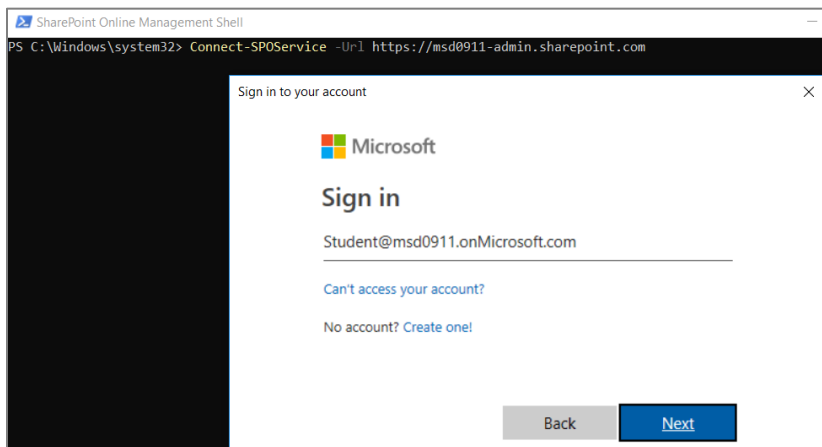


- c) Run the following command to connect to your SharePoint Online tenant. Be sure to replace **[your tenant]** with the value you provided when creating your Office 365 tenant (this will be the same value that is preceding **onmicrosoft.com** in your login).

```
Connect-SPOService -Url https://[your tenant]-admin.sharepoint.com
```

When the **Connect-SPOService** cmdlet begins to execute, you will be prompted to sign in.

- d) Enter the credentials of your primary Office 365 user account and click **Sign In**.



Once you have established a login session by calling **Connect-SPOService**, you can now begin to use the other SPO cmdlets.

2. Execute SharePoint Online PowerShell cmdlets to view information about existing site collections in your Office 365 tenant.

- a) Type and execute the following command.

```
Get-SPOsite
```

- b) You should see that the call to **Get-SPOsite** displays the set of site collection in your Office 35 tenancy.

```
SharePoint Online Management Shell

PS C:\Windows\system32> Connect-SPOService -Url https://msd0911-admin.sharepoint.com
PS C:\Windows\system32> Get-SPOSite

Url                                Owner                                Storage Quota
---                                -
https://msd0911.sharepoint.com/sites/testsite  student@msd0911.onmicrosoft.com  26214400
https://msd0911.sharepoint.com/portals/hub      26214400
https://msd0911.sharepoint.com/                  26214400
https://msd0911-my.sharepoint.com/                26214400
https://msd0911.sharepoint.com/search             26214400
https://msd0911.sharepoint.com/portals/Community  26214400
```

3. Create a new Site Collection using the **New-SPOSite** cmdlet.

- a) Execute the following lines of code to set up a few variables for the new site. Be sure to replace **[Your tenant]** and **[Your User Account]** with the value you provided when creating your Office 365 tenant

```
$url = "https://[Your Tenant].sharepoint.com/sites/testsite2"
$owner = "[Your User Account]@[Your Tenant].onMicrosoft.com"
$quota = 0
$siteTitle = "Test Site 2"
$template = "EHS#1"
```

- b) Execute the **New-SPOSite** cmdlet to create a new SharePoint site in SharePoint Online.

```
New-SPOSite -Url $url -Owner $owner -Title $siteTitle -StorageQuota $quota -Template $template
```

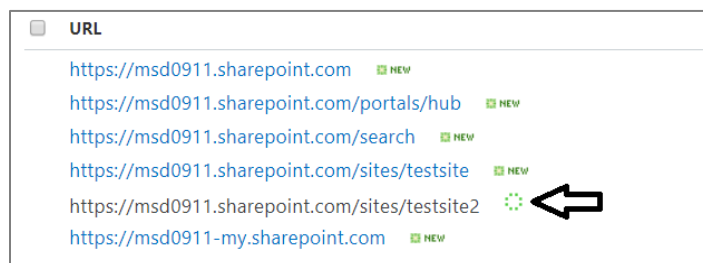
- c) The **New-SPOSite** cmdlet will block while the site is being created.

```
SharePoint Online Management Shell

PS C:\Windows\system32> $url = "https://msd0911.sharepoint.com/sites/testsite2"
PS C:\Windows\system32> $owner = "student@msd0911.onMicrosoft.com"
PS C:\Windows\system32> $quota = 0
PS C:\Windows\system32> $siteTitle = "Test Site 2"
PS C:\Windows\system32> $template = "EHS#1"
PS C:\Windows\system32> New-SPOSite -Url $url -Owner $owner -Title $siteTitle -StorageQuota $quota -Template $template
```

Note that the **New-SPOSite** cmdlet provides a **-NoWait** parameter for scenarios where you want your PowerShell code to continue running while the site is being provisioned.

- d) If you move back to the SharePoint admin center, you can see that the site is being provisioned.



- e) Return to the SharePoint Online Management Shell and wait until the call to **New-SPOSite** completes.
f) Execute another call to **Get-SPOSite** and make sure you see the new site collection you just created.

```
SharePoint Online Management Shell
PS C:\Windows\system32> $url = "https://msd0911.sharepoint.com/sites/testsite2"
PS C:\Windows\system32> $owner = "student@msd0911.onmicrosoft.com"
PS C:\Windows\system32> $quota = 0
PS C:\Windows\system32> $siteTitle = "Test Site 2"
PS C:\Windows\system32> $template = "EHS#1"
PS C:\Windows\system32> New-SPOSite -Url $url -Owner $owner -Title $siteTitle -StorageQuota $quota -Template $template
PS C:\Windows\system32> Get-SPOSite

Url                                     Owner                                Storage Quota
---
https://msd0911.sharepoint.com/sites/testsite  student@msd0911.onmicrosoft.com  26214400
https://msd0911.sharepoint.com/portals/hub      26214400
https://msd0911.sharepoint.com/                 26214400
https://msd0911-my.sharepoint.com/              26214400
https://msd0911.sharepoint.com/sites/testsite2  student@msd0911.onmicrosoft.com  26214400
https://msd0911.sharepoint.com/search           26214400
https://msd0911.sharepoint.com/portals/Community 26214400
```

- g) Execute the following PowerShell command to get more information about the new site.

```
Get-SPOSite -Identity $url | select *
```

- h) You should see a list of properties similar to what you can see in the following screenshot.

```
SharePoint Online Management Shell
PS C:\Windows\system32> Get-SPOSite -Identity $url | select *

LastContentModifiedDate      : 9/8/2018 12:30:13 PM
Status                       : Active
ResourceUsageCurrent         : 0
ResourceUsageAverage         : 0
StorageUsageCurrent          : 2
LockIssue                    :
WebsCount                    : 1
CompatibilityLevel           : 15
DisableSharingForNonOwnersStatus :
HubSiteId                    : 00000000-0000-0000-0000-000000000000
IsHubSite                    : False
Url                          : https://msd0911.sharepoint.com/sites/testsite2
LocaleId                     : 1033
LockState                     : Unlock
Owner                        : student@msd0911.onmicrosoft.com
StorageQuota                  : 26214400
StorageQuotaWarningLevel     : 25574400
ResourceQuota                 : 0
ResourceQuotaWarningLevel    : 0
Template                      : STS#0
Title                        : Critical Path Training Labs Team Site
AllowSelfServiceUpgrade      : True
DenyAddAndCustomizePages    : Disabled
```

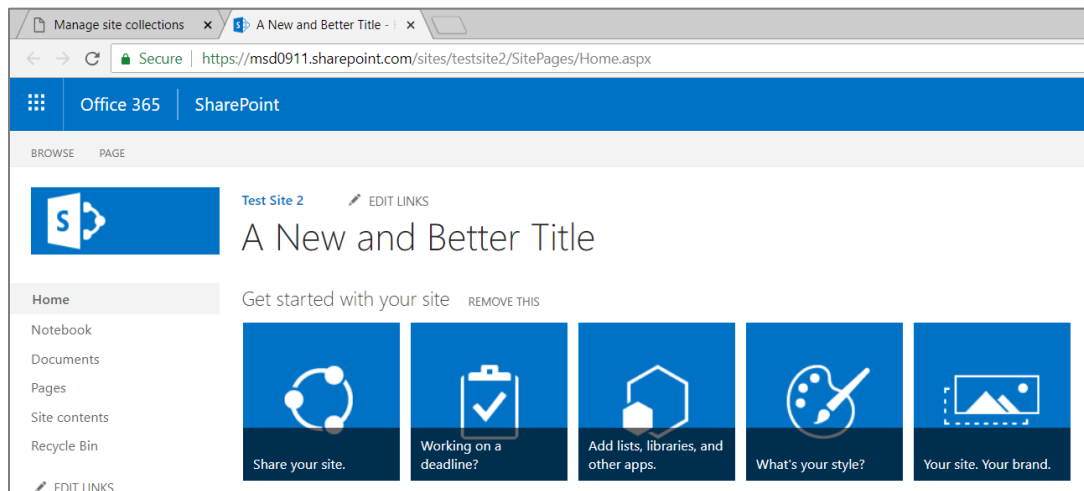
- i) Execute the following PowerShell command to write back to SharePoint by modifying the title for a SharePoint site.

```
Set-SPOSite -Identity $url -Title "A New and Better Title"
```

- j) Run the following PowerShell command to open the new SharePoint site in the browser.

```
Start-Process $url
```

- k) Take a moment to inspect your new SharePoint Online site.



You have now reached the end of this exercise.

Exercise 7: Creating SharePoint Lists with the Client-side Object Model (CSOM)

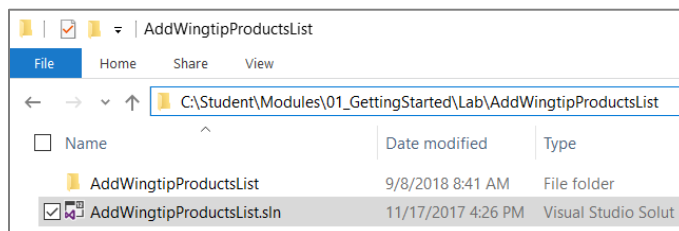
In the following exercise, you will open and run a Visual Studio solution with a C# console application that uses CSOM to create site columns, a content type, a picture library and a list of data for a set of products. You will configure the C# console application to add these SharePoint site elements to the new site collection you created in the previous lab exercise.

1. Open the Visual Studio project named **AddWingtipProductsList.sln**.

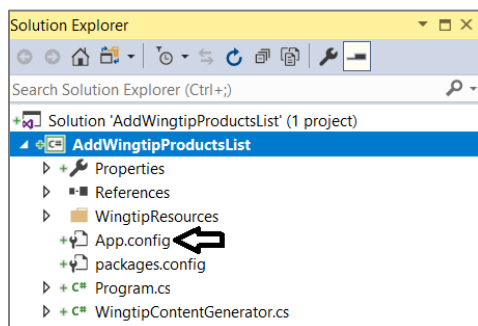
- a) In Windows Explorer, navigate to the following folder.

C:\Student\Modules\01_GettingStarted\Lab\AddWingtipProductsList

- b) In this folder you should see a Visual Studio solution file named **AddWingtipProductsList.sln**.



- c) Double click on **AddWingtipProductsList.sln** to open the solution in Visual Studio 2017.
- d) When the solution opens in Visual Studio, click the **App.config** file to open it in an editor window



- e) The **App.config** file contains three **appSetting** values named **targetSiteUrl**, **username** and **password**.


```
App.config
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
    <!-- update these settings for your environment -->
    <add key="targetSiteUrl" value="https://YOUR_TENANT_NAME.sharepoint.com/sites/TestSite2" />
    <add key="userName" value="YOUR_USER_ACCOUNT" />
    <add key="password" value="YOUR_PASSWORD" />
  </appSettings>
</configuration>
```

- f) Update the **AppSetting** values with the site URL you created in earlier and with your Office 365 user account details.

```
App.config
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <appSettings>
    <!-- update these settings for your environment -->
    <add key="targetSiteUrl" value="https://msd0911.sharepoint.com/sites/TestSite2" />
    <add key="userName" value="student@msd0911.onmicrosoft.com" />
    <add key="password" value="youCANTcrackThis" />
  </appSettings>
</configuration>
```

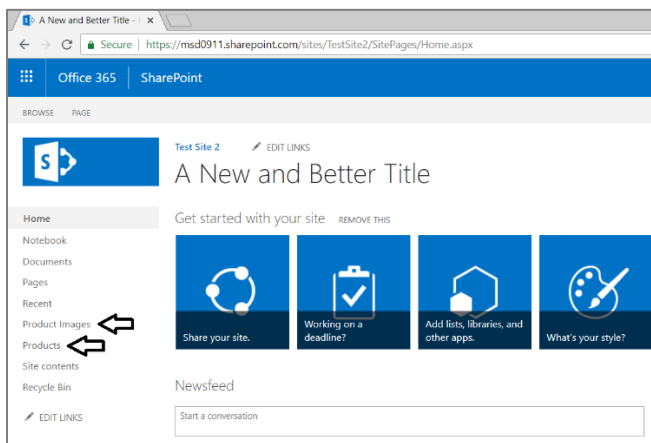
- g) Save your changes to **App.config**.

At this point, you are ready to run the application and execute the CSOM code against the new site you created earlier.

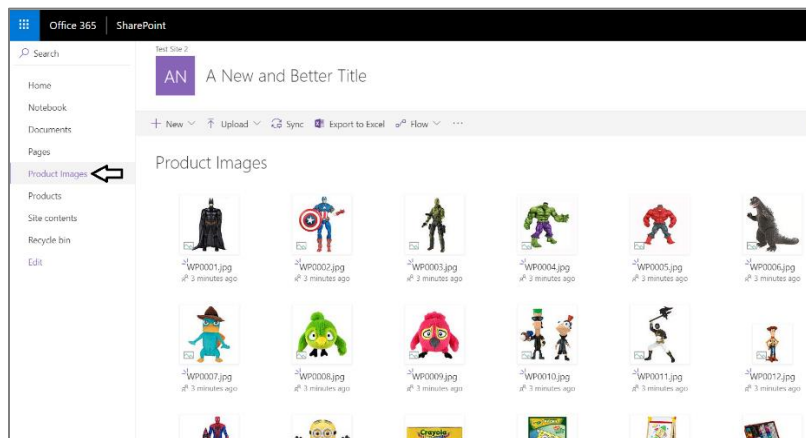
- h) Press the {F5} key in Visual Studio 2017 to run the **AddWingtipProductsList** program.
i) You will see output in the console window as the program runs.

```
C:\Windows\system32\cmd.exe
Adding Team Site Content
Creating Product Category Termset
Deleting existing Product Images list...
Deleting existing Products list...
Creating Product Images library...
Uploading Product Images...
  uploading WP0001.jpg
  uploading WP0002.jpg
  uploading WP0003.jpg
```

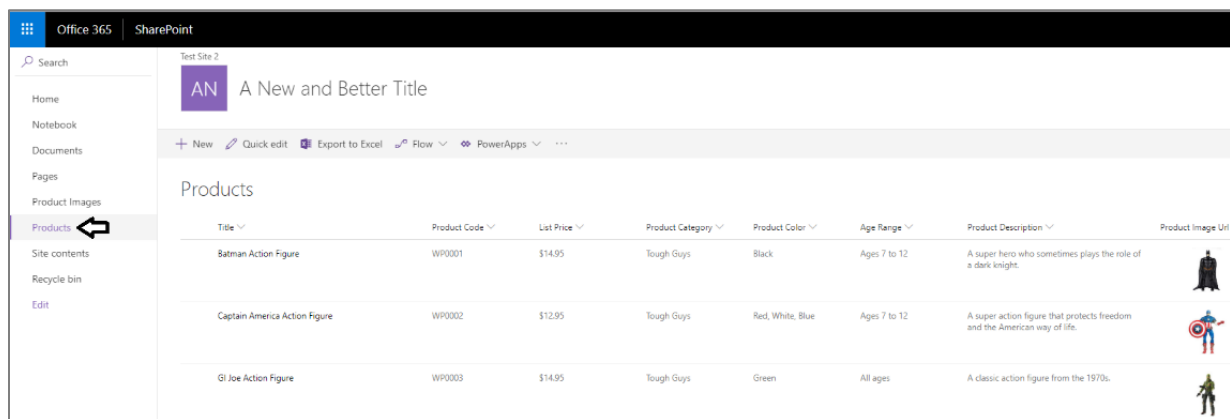
- j) Wait until the program completes and then navigate to the SharePoint site to the changes.
k) You should see that there are two new links in the left navigation for **Product Images** and **Products**.



- l) Click on the **Product Images** link to see the Picture Library that was created and the images uploaded by the CSOM code.

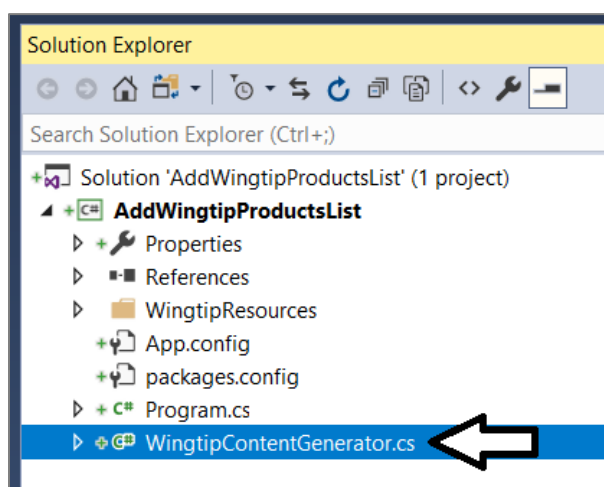


m) Click on the **Products** link to see the custom list and product items that were created by the CSOM code.



n) Return to the **AddWingtipProductsList** solution in Visual Studio 2017.

o) Open the file named **WingtipContentGenerator.cs**.



p) Take a few minutes to examine the CSOM code that was used conduct the provision of SharePoint site items.

q) When you are done, close Visual Studio.

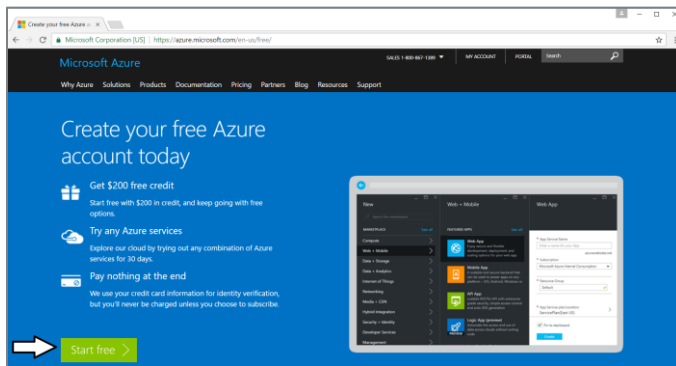
Exercise 8: Getting Started with an Azure Subscription

In this exercise you will create a trial Azure subscription using the primary account that was created in your Office 365 tenant.

IMPORTANT: Over the steps of this lab exercise, it is critical that you authenticate using the primary Office 365 user account that was created for you when you created the Office 365 tenancy earlier in this lab. Make sure you do not log into any site on the Internet using any personal account or organization account other than your primary Office 365 user account. If you have logged on to any site using another account, then you should close all browser instances and then launch a new browser session for this exercise.

If you have an Azure subscription, skip ahead to **Exercise 9: Connect to Your Microsoft Azure Subscription using PowerShell**.

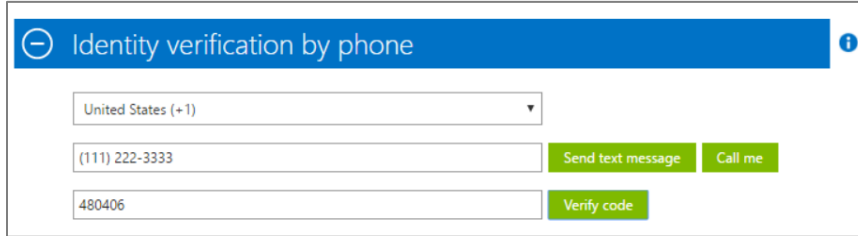
1. Sign up for a free Microsoft Azure trial account using your primary Office 365 account.
 - a) Navigate to <https://azure.microsoft.com/en-us/free/>.
 - b) Click the **Start Free** button to go to the sign up screen to navigate to the **Free trial sign up** page.



- c) Once you get to the **Free trial sign up** page, start by looking at the logged in user name in the top right corner of the page and verify that you are logged in under the identity of your primary Office 365 user account. Also verify that the **Country/Region** setting is correct. Fill in the rest of the information requested in the **About you** section and then click **Next**.

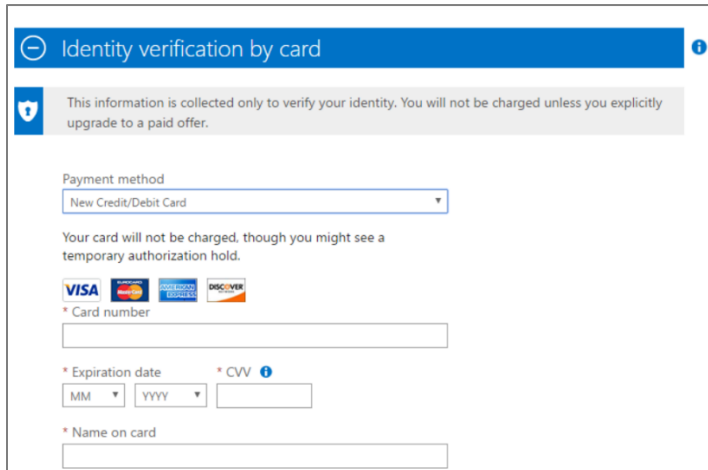
- d) In the **Identity verification by phone** setting, enter the phone number of your mobile phone and click the **Send text message** button. Wait until you receive a text message with your access code.

- e) Once you receive the text message with the access code, enter the access code in the bottom textbox and click the **Verify code** button.



The form is titled "Identity verification by phone" in a blue header bar. It contains three input fields: a dropdown menu for "United States (+1)", a text box for "(111) 222-3333", and a text box for "480406". To the right of the first two fields are buttons labeled "Send text message" and "Call me". To the right of the third field is a button labeled "Verify code".

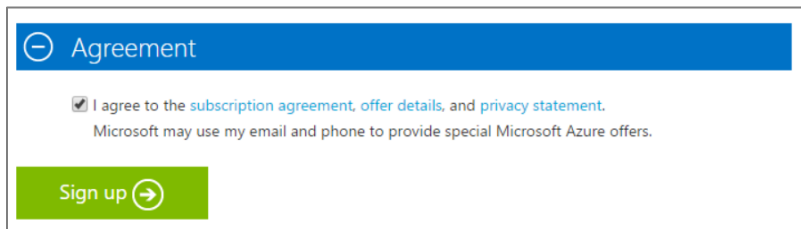
- f) In the **Identity verification by card** section, you must enter the information for a valid credit card. This is a required step. Once you have entered the credit card information, click the **Next** button to verify the credit card information.



The form is titled "Identity verification by card" in a blue header bar. Below the header is a grey box with a shield icon and text: "This information is collected only to verify your identity. You will not be charged unless you explicitly upgrade to a paid offer." Below this is a "Payment method" dropdown menu set to "New Credit/Debit Card". A note states: "Your card will not be charged, though you might see a temporary authorization hold." Below this are logos for VISA, MasterCard, American Express, and Discover. The form includes fields for "Card number", "Expiration date" (with MM and YYYY dropdowns), "CVV" (with an info icon), and "Name on card".

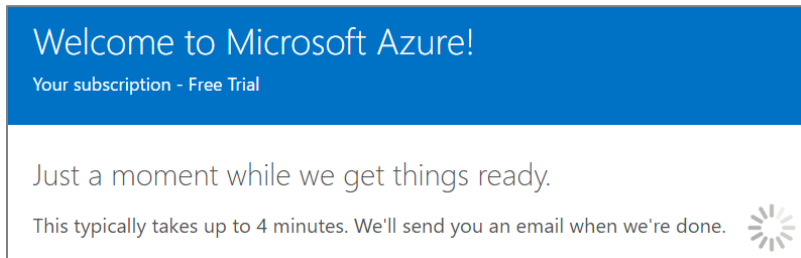
Note that Microsoft will not charge your credit card for any type of Azure usage as you work with new your free trial subscription. However, your credit card information is retained by Microsoft in case you upgrade your free trial to a pay-as-you-go subscription.

- g) Complete the final step in the **Agreement** section by checking the **I agree** checkbox and clicking the **Sign up** button.



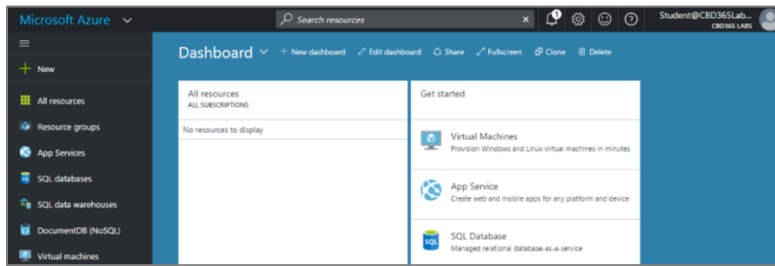
The form is titled "Agreement" in a blue header bar. It contains a checkbox labeled "I agree to the [subscription agreement](#), [offer details](#), and [privacy statement](#)." Below the checkbox is the text: "Microsoft may use my email and phone to provide special Microsoft Azure offers." At the bottom is a green button labeled "Sign up" with a right arrow icon.

- h) You should now see a page that indicates your free trial Azure subscription has been created.

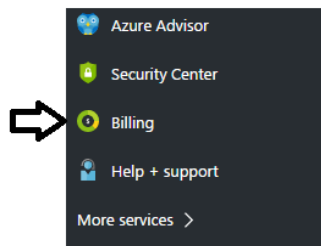


The page has a blue header bar with the text "Welcome to Microsoft Azure!" and "Your subscription - Free Trial". Below the header is a white box with the text: "Just a moment while we get things ready." and "This typically takes up to 4 minutes. We'll send you an email when we're done." To the right of the second line of text is a loading spinner icon.

- i) Once the setup process completes, click on the big button on the page to navigate to the new Azure portal.
- j) You should now see the main page of the Azure portal which displays the dashboard and the left navigation menu.



- k) Locate and click the **Billing** link which is down toward the bottom of the left navigation menu.



- l) When you click Billings, the Azure portal will display a pane which shows your subscriptions at the bottom. Note that this view allows you to see and copy the GUID associated with your subscription. Note that you should copy this GUID and save it to a local text file because you will need it in later lab exercises.

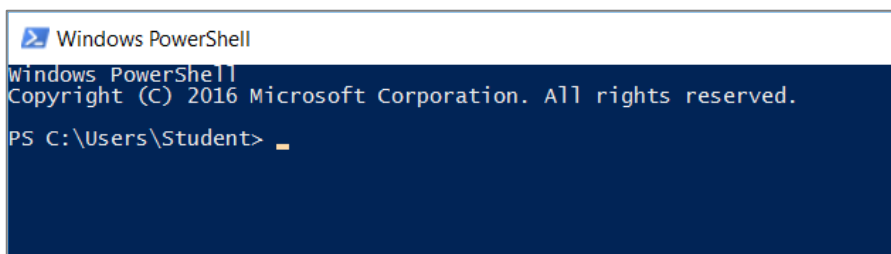
Subscription costs				
Active subscriptions you've created				
1 Subscriptions				
SUBSCRIPTION ID	NAME	OFFER	LAST BILLED (USD)	
47af29b8-c1d7-47de-ab78...	Free Trial	Free Trial	0.00	

Now that you have an active Azure subscription, it's time to test out this subscription by using a few Azure PowerShell commands.

Exercise 9: Connect to Your Microsoft Azure Subscription using PowerShell

In this exercise, you will use the Azure ARM PowerShell module to verify PowerShell connectivity to your Azure subscription. Note that this exercise assumes you have already installed the Azure PowerShell modules as discussed in the lab setup document.

1. Open up a PowerShell command prompt.



2. Use PowerShell to establish a login to Microsoft Azure

- a) Type and execute the following PowerShell command to establish a login to Microsoft Azure.

Login-AzureRmAccount

- b) The first time you execute the **Login-AzureRmAccount** cmdlet, you might be prompted as to whether you want to allow Azure PowerShell to collect data. If you see this prompt, you can answer with either a Y or an N.

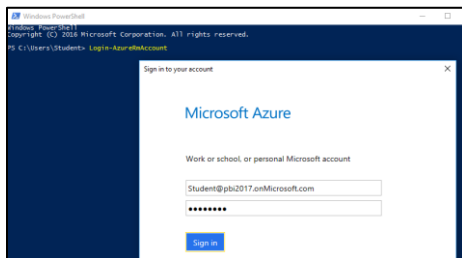
```
PS C:\Users\Student> Login-AzureRmAccount
WARNING: Microsoft Azure PowerShell collects data about how users use PowerShell cmdlets and some problems they
encounter. Microsoft uses this information to improve our PowerShell cmdlets. Participation is voluntary and when you
choose to participate your device automatically sends information to Microsoft about how you use Azure PowerShell.

If you choose to participate, you can stop at any time by using Azure PowerShell as follows:
1. Use the Disable-AzureDataCollection cmdlet to turn the feature off. The cmdlet can be found in the
AzureResourceManager module
To disable data collection: PS > Disable-AzureDataCollection

If you choose to not participate, you can enable at any time by using Azure PowerShell as follows:
1. Use the Enable-AzureDataCollection cmdlet to turn the feature On. The cmdlet can be found in the
AzureResourceManager module
To enable data collection: PS > Enable-AzureDataCollection

Select Y to enable data collection [Y/N]:
```

- c) When the **Login-AzureRmAccount** cmdlet begins to execute, you will be prompted to sign in. Enter the credentials for the user account associated with your Azure subscription and click **Sign In**.



- d) When the **Login-AzureRmAccount** cmdlet executes successfully, it displays the information shown in the following screenshot. You should be able to see the GUIDs for your Azure subscription and for its associated Azure AD tenant.

```
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.

PS C:\Users\Student> Login-AzureRmAccount

Environment      : AzureCloud
Account          : Student@pbi2017.onmicrosoft.com
TenantId         : d9a1b89e-6d90-4aa9-ad2e-472840e09214
SubscriptionId   : 6f28b023-7e49-4f74-b53e-46a0966ea67c
SubscriptionName : Free Trial
CurrentStorageAccount :
```

Make sure you see a **SubscriptionId** value for your Azure subscription. If you have more than one Azure subscription, you might need to make one of them the active subscription by calling the **Set-AzureRmContext** with the **SubscriptionName** parameter.

- e) Type and execute the **Get-AzureRmADUser** cmdlet to display the users in your Office 365 tenancy.

Get-AzureRmADUser

- f) When **Get-AzureRmADUser** executes, it should display information about the user accounts the Azure AD tenant associated with your Azure subscription.

```
PS C:\Users\Student> Get-AzureRmADUser

DisplayName      Type      ObjectID
-----
Ted Pattison    User      03d0f4a0-7d28-4bc9-946a-811f6fe3b653
```

You have now completed all the exercise in this lab.