# Power BI Exercise

Hello. Welcome to the last module, Build a Basic Dashboard using Power BI, of the course, Demonstrating the Business Value of Power BI. Until now, we have primarily focused on Power BI Desktop, which can be installed on your local system, and you can build your beautiful visualizations on top of it. In this module, we shall focus on Power BI Service, which is a cloud‑based service and can be accessed by users from web browsers such as Internet Explorer, Firefox, and Chrome, which is available on Windows 10, Android, as well as iPhone. Now let us start by discussing Power BI Service. Power BI Service comes in three variants. You can use Power BI Service as a free service, which comes with some restrictions. You could also use Power BI Pro, which is again Power BI's cloud‑based version and comes at a low cost. In fact, it comes at a cost of approximately $10 per month by user. And it allows collaboration, publishing, sharing, and also ad‑hoc analysis, whereas when it comes to Power BI Premium, which is enterprise grade cloud version of Power BI, it allows advanced administration and deployment controls. However, it comes with expensive compute and storage resources with an annual subscription price of approximately $5000 per month. In fact, if you want to know more about it, you could log into Power BI page here at powerbi.microsoft/pricing and go through the details about Power BI Pro versus Power BI Premium. If you scroll down, you could also see the feature comparison between them both. For example, maximum storage which is allowed under Power BI Premium is 100 TB, whereas for Pro, it is 10 GB per user. Similarly, when it comes to AI‑powered automated machine learning, a feature which is provided as part of Azure, it is available with Power BI Premier but not available with Pro users. And, similarly, you could see more feature comparison and make a decision based on business and customer needs on this. The next component which we shall go through as part of this module is Power BI mobile apps. Power BI mobile apps is available on iPhone, iPad, Android phones and tablets. It is also available on Windows 10. In fact, there's an amazing feature of Power BI apps where you could get access to a dashboard using QR code just to let you know, since it might be cumbersome to create new reports and dashboards on mobile apps and tablets. Hence, at the moment you could not view‑‑‑hence, at the moment you could not create reports and dashboards. But you can view reports and dashboards. Whether Microsoft will allow you to build that in future, frankly, I didn't find it anywhere in Microsoft documentation or on the roadmap, and also the conferences which I have attended recently. And so I'm not sure what are the future plans for it. However, for the moment, your reports and dashboards are not allowed to be created as part of Power BI mobile apps. So with that, we come to the closure of this video. In the next video, we shall compare and contrast the major differences between Power BI Desktop, Power BI Service, which has Pro and Premium, and Power BI mobile. Welcome to this video where we shall compare the three major components, which are provided by Power BI, Power BI Desktop, Power BI service, which includes pro and premium, and the Power BI Mobile. I would just let you know that this is quite an interesting and important topic to understand. And once you go through it, you should be able to get a gist of Microsoft's Power BI ecosystem. So with that, let's jump on to the next slide to go into its details. Now you have already created visualizations in desktop. And in this module, you will also learn how to create new visualizations in Power BI services. However, note that you cannot create any new visualization in Power BI Mobile. Similarly, when it comes to dataset, you could create it in desktop and in Power BI service, but you cannot upload or create a new dataset in Power BI Mobile. Next are reports, which you would create in Power BI Desktop. But in cloud‑based Power BI service, you cannot only publish and share the reports you have created in desktop, but you could also create a new report. In Power BI Mobile, however, you cannot create a new report. Next are tiles which are available in both desktop and on Power BI service. Now this is an important thing to note. You cannot create a dashboard in Power BI Desktop. However, you can create it only in cloud‑based Power BI service and view it on mobile apps. Finally, Power BI Mobile is available as an app. Whereas for desktop, it needs a local system and cloud‑based Power BI service browser. Now there are two important things you should keep in mind as you move on to the demonstration of cloud‑based Power Bi service and Power BI Mobile. Firstly, dashboards are a summary of reports, which can only be created in cloud‑based Power BI. However, they can be viewed on Power BI Mobile apps. Next are reports created in desktop which cannot only be exported to cloud based Power BI service, but they can also be created in it. Here we shall study how to publish reports to cloud‑based Power Bi Service. We shall start by understanding how to create a PBIX file. Then we shall learn how to publish these reports to cloud‑based Power Bi Services. And, also, we shall go through what are "My workspaces" in Power Bi Services once we have published this report. So let's get started. Here now I'm at Power BI Desktop where I have built multiple visualizations in different pages. Now, in order to publish them to cloud‑based Power Bi Service, I select the Publish button on the top right. Here it shows the destination where I want to publish. You will always have My workspace as the default option, and if you have created any other workspace, then those options will come here. Since I have not created any other workspace, hence, the default workspace by the name My workspace is shown here, and let me select it, and then you could see a window pops up where it shows that it is publishing to cloud‑based Power Bi Services. Once complete, it shows success, and you could click on the link where it would open cloud‑based Power Bi Service on the browser. Now, just to give you an introduction to what does cloud‑based Power Bi Service interface look like, when you open the link, it is actually opened under your destination, My workspace. My workspace is a sandbox where you could share content. So when you click on My workspace, it shows what are the different sanctions within it. One is dashboard, and there are reports, and when you scroll down, you'll see workbooks and datasets. Now it has a report which is just imported from your desktop. And then there is the associated dataset. You could also see the objects which are part of My workspace in this tabular view. For example, here it shows I have a report and a dataset, and its owner is me. And just to give you a precursor to Power Bi Service, here is the Home section where you could see options. And just to give you a precursor to Power Bi Service, here is the Home section where you could see all of the things which are there on the left side on this pane. For example, you have Favorites, which is also there. You have Recents, which is also here on the right side, and the workspaces. So that's all we learned on this video, where we learned how to publish reports to cloud‑based Power Bi Service. Next, we shall go through how to view and build reports in Power Bi Service. We shall discuss how to access and create reports in Power BI service. So let's get started. In the cloud‑based Power BI service, you could view and access reports, which are built on Power BI Desktop, or you could build new reports from scratch. As part of the demonstration in this video, we shall explore an existing report, as well as build a new report in cloud‑based Power BI service. So let's get started. So here I am in cloud‑based Power BI service. Now, let me explore and access an existing Power BI service report. I click on Reports, and this is my Pluralsight\_Power\_BI\_Covid file, which I uploaded from my Power BI Desktop. And here you can see the pages, which I created in the previous module. There's a Bar Chart, Pie Chart, Text Table, and Global COVID Map. So this is how you could access an existing report. Now, let us create a new Power BI service report. To create a new report, I click on My workspace and here click on New. Here, it gives me an option to create a report or a dashboard and many other options. As part of the scope of this course, we shall stick on reports and dashboards. Now, to create a new report, let me select it. Next, it asks me a dataset to create a report. Now, this is the supporting dataset, which you could use, which we got when we published our Power BI report from Desktop. So let me select it, and that's it. Here, I would ask my viewers to stop the video for 30 seconds and observe the interface. Did you realize the similarity of the interface? Well, you got it. It is the same as the visualization pane in Power BI Desktop. Let me select a donut chart and add recovery and continent from the fact and dimension table. Let me do a few formatting changes such as alignment of title and font size. Let me save this report by selecting controllers and giving a name to the file. Let me give the name as Cloud Report, and click on Save, And you could see on the left side, the cloud report now appears here. And when you select the My workspace, you could see Cloud Report also appears here on the list. So now you have learned how to create visualizations in cloud‑based Power BI service. Next, we shall learn how to design a new dashboard on cloud‑based Power BI service. In this video, we shall learn how to create a new dashboard on cloud‑based Power BI service. Dashboards are nothing but single page, also called as Canvas, which tells the story through visualizations. There are few things which we need to keep in mind when we talk about dashboards. When it comes to Power BI Desktop, you cannot build, view, or share dashboards. Dashboards can only be created on cloud‑based Power BI service. They can be viewed in it, as well as shared. And when it comes to Power BI Mobile, though you cannot create a new dashboard, but you can view an existing dashboard, as well as share it. Also, to get a better understanding of dashboards, let us compare the capability with reports. When it comes to pages, dashboards are created on a single page, whereas reports are created on multiple pages. When it comes to dataset, dashboards can be created via one or more reports or one of more dataset part report, whereas reports are created from a single dataset. Next is when it comes to filtering and slicing, dashboard cannot filter or slice the data, whereas in reports, you can filter, as well as slice the data. Dashboards are not available on Power BI Desktop, whereas reports are available in Desktop. And finally, you can create a featured dashboard, more of which we shall study in the next few minutes, where as reports cannot be featured. So that's the difference between a dashboard and a report. Let us move on to the demonstration, where we shall learn how to build a new dashboard, how to edit an existing dashboard, and how to set a dashboard as featured. So let's get started. Here I am on cloud‑based Power BI service. To create a new dashboard, I click on My workspace, and click on New, and select Dashboard to create a new dashboard. Here, a pop up asks for the name of the dashboard. Let me give the name as Pluralsight Covid Tracker, and let me then click on Create. So on the left side, you can see under My workspace, under Dashboards, I have a new dashboard created. Let me click on it. Now this is empty, so to add in reports to it, I go in to one of my existing reports, and here I select Pin to dashboard option by clicking on these three dots and selecting Pin to dashboard. Here it asked me whether I want to pin it to an existing dashboard or to a new dashboard. Let me pin this report to an existing dashboard, and click on Pin live. Let me go to the other report, Global COVID Map, and also pin this to my existing dashboard, which is Pluralsight Covid Tracker. Now let me get back to my dashboard. Wow, You could see my two reports have been pinned to the dashboard. Next, I want to create a new dashboard. To do so, I click on the left side of My workspace, click on Pluralsight\_PowerBI\_Covid\_File, and click on Pie Chart COVID. Go to more options, select Pin to dashboard, and here I say, I want to create a new dashboard while pinning. Let me call this as Pluralsight Pie Dashboard, and select Pin live. Wow. Now, on the left side of your My workspace, you can see that you have an existing dashboard where you could see your bar chart and the map, and also the new dashboard you created while pinning, Pluralsight Pie Dashboard. And when you click on the Pie Dashboard, you can see a pie chart. Next is we could also create a featured dashboard. Well, what is a featured dashboard? They are nothing but those dashboards, which you shall see when you open your cloud‑based Power BI service. Thus, with that in mind, let me make a Pluralsight Covid Tracker as the featured dashboard by clicking on this option and selecting Set as featured. So that's it. I hope you enjoyed learning how to create a new dashboard and how to make a dashboard as featured. Next we shall study how to support, subscribe, and downward reports, as well as dashboards. Till now, we have learned how to create visualizations, reports, as well as dashboards. Next, we shall learn how to export them to PDF, PPT, Excel, and how to subscribe to the reports and how to download the reports. So let's get started. When it comes to export, subscribe, and download options as part of reports and dashboards, which are part of Power BI service, you can export reports as PPT, PDF and Excel, whereas dashboards could only be exported as PDF and not as PPT or Excel. Next, when it comes to subscribing to reports and dashboards, Power BI error service allows subscribing of both reports, as well as dashboards. Finally, when it comes to downloading the reports and dashboards, you can download a report, but you cannot download the dashboard. So with those details in mind, let us move on to a demonstration where we shall study how to export, subscribe, and download reports in Power BI. Here I am on Power BI service portal. Let me go to the Power BI report. Now if I want to export this report as a PowerPoint, I can do so by clicking on Export and PowerPoint. Similarly, I could also export as PDF, as well as Excel. All this might take a few minutes. Let me fast‑forward the video. Now here, if you could see, now this is my PDF file, which I downloaded. It has all the visualizations. Next is this PPT, which has all of the visualizations, which are part of the report. And when you download the Excel, this is how the Excel looks like. It has all the pivot table fields. What you need to do is click on it, and here you could see the dimension table, the fact table, and you can play around with it. Now this was about reports. Now if I have to export my dashboard, there is no direct option. To exporting a dashboard what you need to do is click on File, click on Print this page, and here it gives you an option, Save as PDF. Well, that's the only option you have for exporting dashboard, which is not a direct option. Now let's talk about subscribe. Let us suppose you want to get the latest dashboard on your email at regular frequency. To do so, you click on the Subscribe, click on Add new subscription, and here you can give your email ID, I already have an email ID mentioned, the subject line in which you want email to come, and below there are a host of options. What's the frequency you want, whether daily, hourly, weekly, or monthly? And what is the scheduled time you want an option or the start date to end date? So that's how you subscribe to a dashboard. Finally, when it comes to downloading the reports, you can download it as a.pbix file by clicking on File and selecting this Download the .pbix file option. Whereas, when it comes to dashboard, you cannot download the file. Now we're going to study what are workspaces in cloud‑based Power BI and how they can be used for collaboration amongst multiple users of Power BI. In Power BI, there are two kinds of workspaces, My workspace and Other workspace. My workspace is a default workspace and is available for all Power BI users where you can share your reports and dashboards to other users. But it does not allow collaboration on My workspace with other users. Because of this limitation, Power BI allows you or admin to create a new workspace which could be accessed by multiple users, and it not only allows sharing but also collaboration amongst multiple users for sharing reports and dashboard. Let's demonstrate that in cloud‑based Power BI service, where we shall study what are My workspaces on how to create and use new workspace. Now, here I am on Power BI service, where I can have My workspace with a list of reports, dashboards, and datasets, which are already present. Now let me clear another workspace, and let me name this as Pluralsight Collaboration Workspace and click on Save. Now, in order to add content to this workspace, let me click on New and upload the .pbix file, which we downloaded in an earlier video to our local system. It might take a few minutes. In the next video, we shall discuss in detail how to view, share, and collaborate in Power BI. In the last few videos, we have discussed the difference between reports and dashboards and then moved on to compare datasets and reports and dashboards. In this video, we shall pivot and compare the difference between a report, dashboard, and workspace. In Power BI, reports are a collection of one or more pages, which itself consists of varied visualizations such as bar charts, line charts, scatter plots, pie charts, etc., whereas dashboards are static in nature, but does have visualizations, but the overall intent is to tell a story to an executive. Now, both reports and dashboards need workspaces. When it comes to workspaces, a Power BI user can view and share reports in workspaces; however, collaboration is restricted and is not allowed in my workspaces. Let us revisit the tabular format, which we created in the last video, but this time our focus is on comparing reports and dashboards with workspaces. So, when it comes to viewing reports and dashboards, you can view them on your own workspace and also on other workspaces. When I say other workspaces, these workspaces could be created by a Power BI admin or your manager which could be project specific or specific to a domain also, for example, telecom or far more, etc. Similarly, when it comes to sharing reports and dashboards, you can do both in my workspaces, as well as other workspaces, which your Power BI admin or manager might have created, which actually makes sense because sharing is something you would do once you have created a report or dashboard on your workspace and you want to expose it to your other team members. Finally, the only difference which comes in when it comes to a reporting dashboard with respect to are for collaboration. My workspaces does not allow collaboration for both views and reports, which actually makes sense as these are Power BI developers, private workspaces to build, break, and debug before exposing it to the larger world or to his or her teammates; hence, you can only collaborate on report dashboards on other workspaces, which your Power BI admin or manager might have created. So that's it in this video where we compared reports, dashboards, and workspaces. In the next video, we shall study about Power BI mobile. We shall now discuss how to view, share, and collaborate datasets, reports, and dashboards when it comes to the cloud‑based Power BI service. This is a comparison we shall demonstrate where we shall compare between my workspace and the other workspace and provide insights on what Power BI allows when it comes to viewing datasets, reports, and dashboards. Next, we shall discuss how is sharing datasets, reports, and dashboards done between my workspace and other workspaces. Finally, we'll click how to collaborate datasets, reports, and dashboards in cloud‑based Power BI. With that in mind, let us jump onto the cloud‑based Power BI tool. Here I'm on Power BI My workspace. We already know that Power BI allows us to view the dataset, reports, and dashboards as per our discussion in the previous video. Let's focus on sharing. If you click on a dataset and select Manage permissions and click on Add user, who you want to give access to and it allows those users to re‑share the artifact, as well as build on top of it, but it does not allow us to edit the dataset. Similarly, if you want to share the dashboards, you go to My workspace and you click on the Share button. And it asks you to give the email address of the person whom you want to give permission to view your dashboard. And similarly, you can do it for reports. Now, no doubt, when it comes to datasets, reports, and dashboards for my workspaces, Power BI does not allow collaboration because my workspaces are for a single user. Now, let me move on to another workspace, which is the Pluralsight workspace collaboration. Now, here you could say you have a report, dataset, and dashboard, and there are similar ways to share and view these types. However, when you share a report from my workspace or a dashboard from my workspace, it gets available generally on a collaboration workspace. Thus, if I have to summarize, my workspaces does not allow collaboration, but other workspaces allow collaboration, and it is generally for multiple users. So with that knowledge in mind, if I have to summarize it, you could view your datasets, reports, and dashboards on both my workspace, as well as other workspaces. You can also share your datasets, reports, and dashboards on both mine and other workspaces; however, you cannot collaborate on datasets, reports, and dashboards, which are on my workspace because my workspace is for single users, whereas when you share the reports and dashboards, they are available on other workspaces, and that's what you could collaborate and on reports, as well as dashboards in other workspaces. Wow, that's a whole lot of knowledge to ingest. And it's fine if you want to pause your video for next 15 to 30 seconds and look at this mind map. I hope you like it. Next, we shall compare it with a Power BI mobile platform. In this video, we shall discuss the last component in the journey of Power BI developer, the Power BI Mobile. Please note that Power BI Mobile, as discussed earlier, is available on Windows 10, Android, and iPhone operating system app. Let us demonstrate Power BI Mobile. Please note that as part of this demo, I have already downloaded the Power BI Mobile app on my Android phone. Hence, if you want to download this app, you can go to this website, enter your email ID and your country, and you shall get a link to download the app on your email. Hello, this is my Power BI Mobile app. I have already installed it on my Android phone and entered my login credentials. What you could see is the Home screen with frequent and recent panes. Under Frequents pane, you could see reports and dashboards, which are part of it. Let me open the report, and the first page it opens up is a bar chart. If I have to select other charts, I click on top, scroll down, and let me select Global COVID Map. Wow, isn't it amazing? You could see Global COVID Map or any other chart on your mobile handset. Now, apart from Home button, you see three more options on the bottom of the app. Favorites tell you if you have any favorite app. Apps tell you if you have downloaded any template apps, about which we'll study in the next video. And finally, you have Workspaces that you could see your reports, as well as dashboards. So that's it about Power BI Mobile. Now, let us compare how does Power BI Mobile does in comparison to Power BI Pro. Firstly, you cannot view the dataset on Power BI Mobile; however, you could view the report and dashboard. When it comes to sharing, you could share the reports and dashboards, whereas when it comes to collaboration, Power BI Mobile is not a collaboration platform, but truly a consumption platform. Hence, it does not allow collaboration of dataset, reports, and dashboard. So I hope you liked above comparison. In the last topic of this module, we shall discuss what are template apps. We shall understand what are apps, how we can get apps, which are published by other organizations such as Microsoft, Uber, etc., as well as how you can publish your own apps on AppSource, also called as template apps. Please note that we are talking about publishing app to AppSource, and AppSource is Microsoft's ecosystem promoting SaaS apps. So let's get started. Here I am on Microsoft cloud‑based Power BI platform. On the top left to get different apps from AppSource, click on Apps. Here this is empty because we haven't got any app yet. Let us get an app by clicking on Get apps. When I click on it, it pops up with these details. Its pricing is free. Its publisher is Microsoft. Let me install it by clicking on getting it now, and your app is installed. Now let us build an app on workspace Pluralsight COVID on which we were working till now. Let me go to my Pluralsight collaboration workspace, and let us click on Create an app. I have already given the name Pluralsight Collaboration Workspace. Let me give a description. And under Navigation if you observe, you can add in your dashboard, as well as report link, which gets embedded to this app and any permissions which you want to give it. Let me give entire organization will have access to this app. And let me click on Publish app and click on go to the app. And when you go back to apps, this is where your app has come back. When you click on it, it shows the different bar chart, pie chart, the COVID map, which you built on Power BI Desktop. So that's it. I hope you liked this video. And finally, I must say congratulations to complete this video and this course. You have put some fantabulous effort in learning about Power BI, its common components, and how businesses around the world could use this award‑winning tool to get insights. Good luck using this tool.