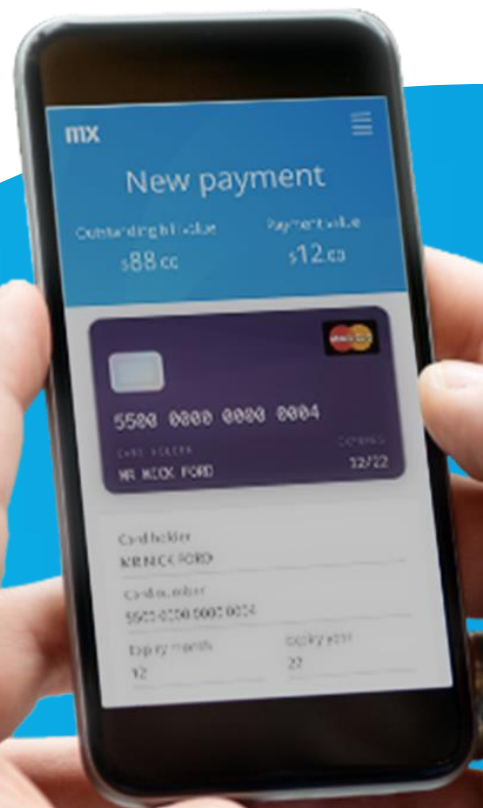![mx mendix]

Become a Rapid Developer

Module 6
From Mendix Studio to Mendix Studio Pro

6. From Mendix Studio to Mendix Studio Pro

6.1 Mendix Studio Pro

So far, you've learned how to build pages, create your domain model, build microflows, and add navigation to your app using Mendix Studio. Mendix Studio Pro is a what-you-see-is-what-you-get editor, which helps you keep the needs of your users in mind when building the basic functionalities of your app.

You could have built everything using Mendix Studio Pro as well, but then you need to use your imagination, or publish your app often, to see how a new feature would look like.

From this point on in the learning path, you will learn how to work with the more advanced features of the Studio. Time to switch to Mendix Studio Pro to access these features!

In this module you will learn:

- What Mendix Studio Pro looks like
- How the Team Server helps you work together with your team
- How to switch from Mendix Studio to Mendix Studio Pro
- How to synchronize with the Team Server

Under the **Resources** tab you will find an up-to-date version of the LearnNow app. In the last lecture of this module you will find instructions on how to use that version. That will allow you to go ahead with the assignments even if you didn't complete every assignment in the previous module.
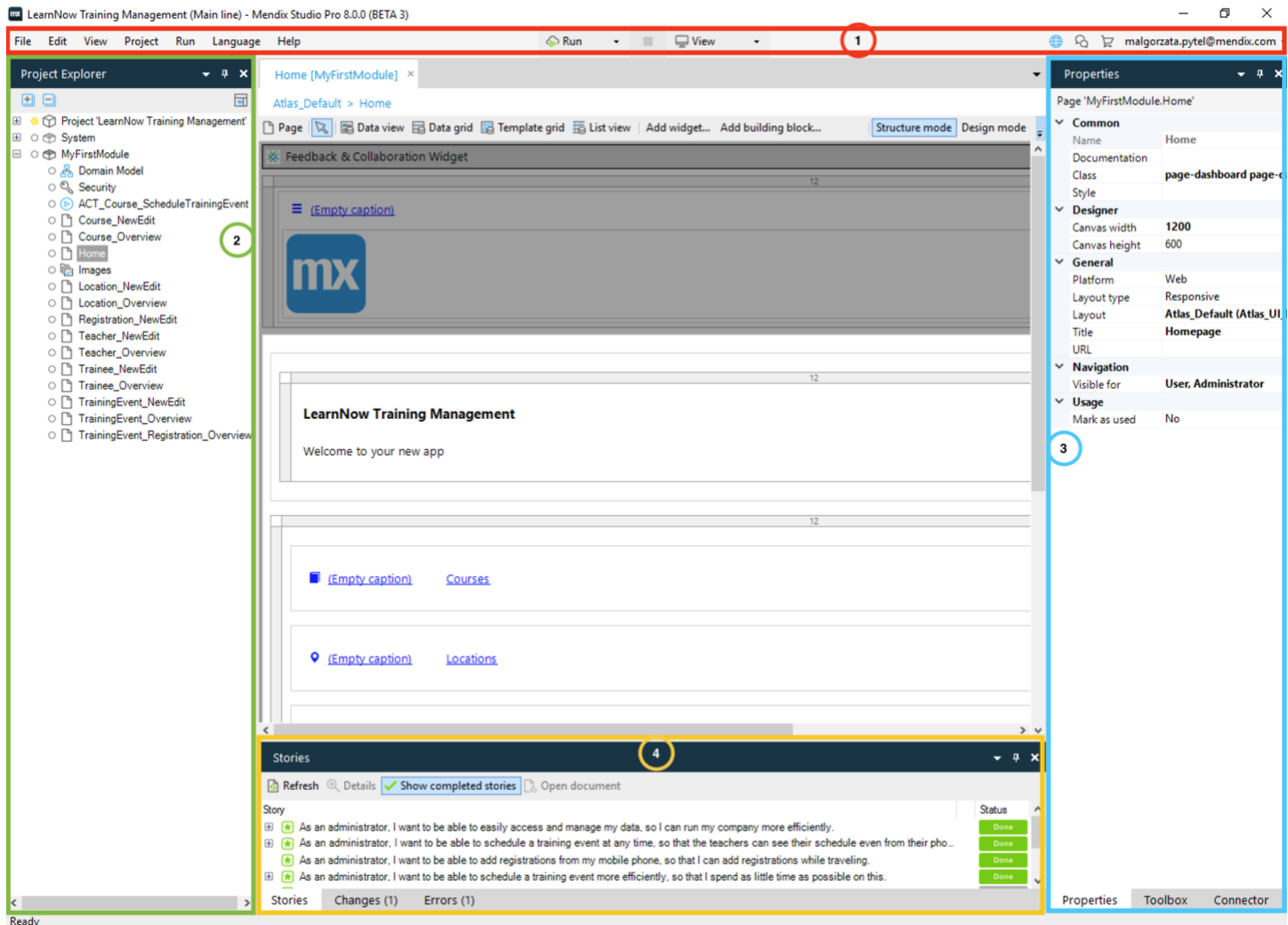
6.1.1 Exploring Mendix Studio Pro

Go to the Developer Portal and open the **Edit App** drop-down menu. Now, instead of clicking **Edit in Mendix Studio**, click **Edit in Mendix Studio Pro**.

Mendix Studio Pro opens and it immediately starts to download the app from the Team Server, it will already contain all the work you have done in Mendix Studio. If you haven't installed the latest version of Mendix Studio Pro yet, a screen that will allow you to download this will show first. The Team Server is the online environment where all the Mendix apps are stored. It contains all the resources (like the domain model, pages, and microflows) of an app.

Let's take a look at Mendix Studio Pro, because Mendix Studio Pro looks somewhat different than Mendix Studio. Remember, Mendix Studio Pro is not a WYSIWYG editor, so creating pages looks different than it does in Mendix Studio. However, the same basic principles apply, and your app will look the same no matter in which Studio you create it.

To make sure you have the same Mendix Studio Pro layout as the one used in this course, click **View** and then **Reset layout**.

1. First of all, at the top of Mendix Studio Pro is the control bar. These are the menus and buttons, from left to right:

    - **File** – open and close documents and projects

    - **Edit** –all the options related to editing files, finding things in your project, and setting your preferences

    - **View** – from here, you can open all available tool windows

    - **Project** –all the functions related to working with Team Server (more about this later on)

- **Run** –run and preview your app

- **Language** – manage the language settings and access to language operations

- **Help** – quick access to help environments

- **Run** – deploy your app in the cloud or locally

- **View** – preview your app

- A button for opening your app in Mendix Studio

- A button for opening the app **Project Dashboard** in the Developer Portal

- A button that will take you to the Mendix App Store

- The last dropdown menu provides access to all your apps, the Developer Portal, your profile, and the sign out button

2. At the top-left of Mendix Studio Pro, you see the **Project Explorer** (underneath the control bar). From here, you can access all the resources of the app (pages, microflows, and navigation, for example). The center of Mendix Studio Pro is the editor. This is where you will build all your resources.

3. On the right is the **Properties**, **Toolbox**, and **Connector** panes. You already know the first two. You can use the Connector to quickly connect an attribute to a widget or an entity to a list view.

4. At the bottom, you will find the **Stories**, **Changes**, and **Errors** tab. Here you can see the stories in your current sprint (and change their status). You can also see all the resources you have added or changed to the project and whether you have errors (and where they are).

6.2 The Team Server

The Mendix Team Server is a Mendix-hosted environment that contains all your Team Server apps. It allows you to collaborate with your team and use versioning. What's that? Have you ever heard of Subversion or GitHub? How about Dropbox or Google Docs? That's exactly what the Mendix Team Server is as well, only then for apps instead of files.

When you create a new app from within the Developer Portal, Team Server is automatically enabled. You can also create apps directly from within Mendix Studio Pro, and then using the Team Server is optional. You can do this when you want to quickly test something and you don't need to collaborate. Another reason to not enable Team Server is when you want to start working on a project while working remotely and you don't have an internet connection. But usually, you will need the Team Server to be enabled so you can collaborate with your team. It's also possible to later on enable the Team Server, so no worries if you later need to collaborate on an app.

Repositories

For every Team Server app, there is an online repository that contains both the model and all the app's resources. You could compare the Team Server to a file cabinet of an architecture company, that has a folder for every building project (which is the repository for every app). Inside those folders are the building plans for each project, which the supervisors can use as a resource, so they know what the building should become (which are the app model and resources).

Team Server Access

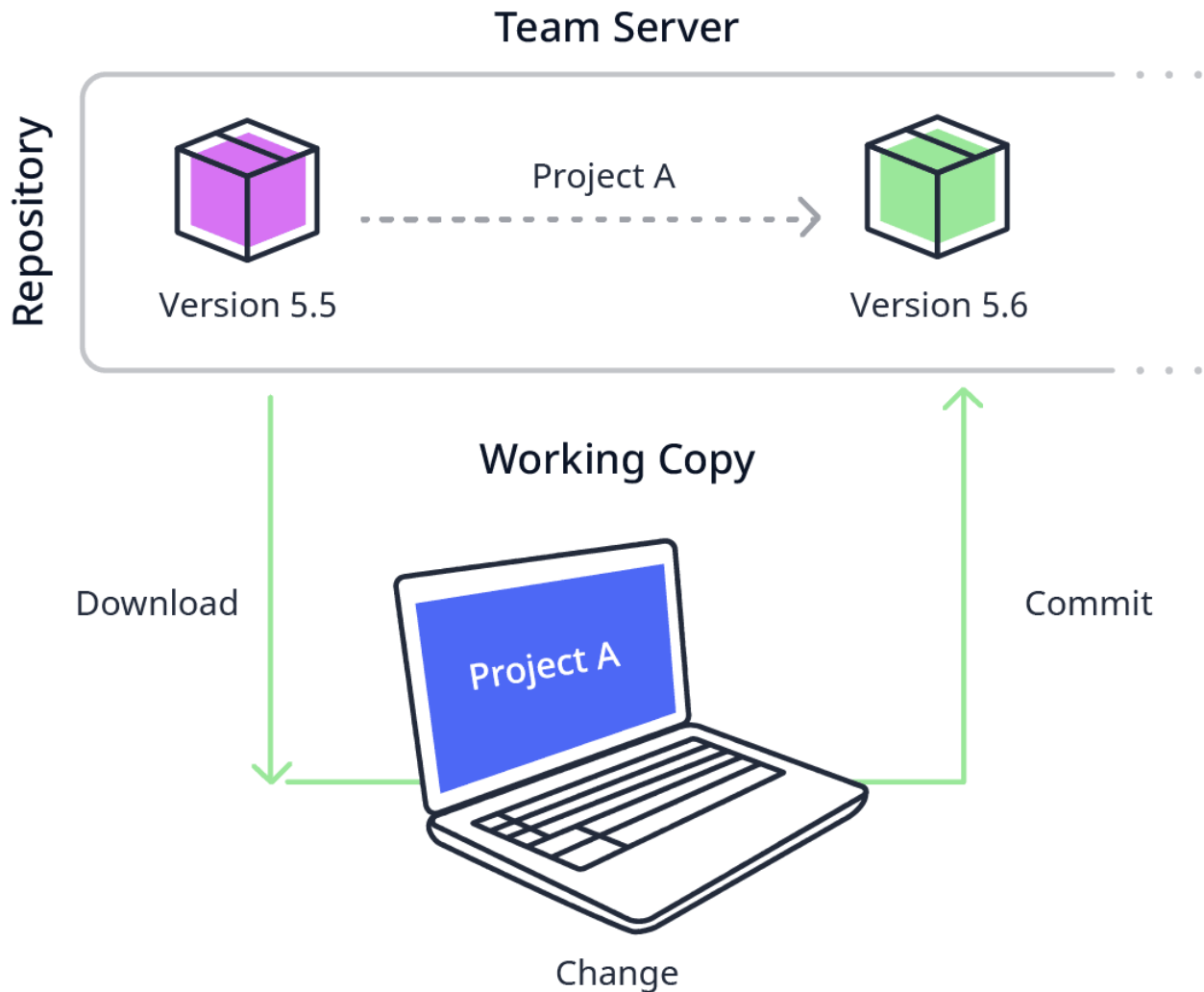There are two prerequisites for accessing a Team Server project:

- You have to be a team member of the app project

- You need a role with permissions to edit the model (by default, this is the SCRUM Master or the Business Engineer role)

If you want to refresh your memory on how to invite team members and assign project roles, have a look at lecture 2.5 of this learning path.

Only when you have access to the Team Server can you actually open the app in Mendix Studio Pro and change it. The first time you open your app in Mendix Studio Pro, it grabs the latest revision (or version) of your app on the Team Server and downloads it onto your hard drive. The app is now available on your computer as a working copy.

Working Copy

A working copy is a local copy of the project. This local copy is what you work on and where you make all your changes. When you start working on your local copy, it starts to deviate from the original, which is stored in the repository on the Team Server. Working on your local copy has no effect on the repository. Once you are done with the changes, you can commit them, resulting in a new revision in the repository.

6.3 Status and Changes

The status of your project is a summary of all the changes in your working copy compared to the latest version on the Team Server. When you work in Mendix Studio, everything you change is automatically committed to the Team Server.

When you work in Mendix Studio Pro, the changes are made locally and they show up in the **Changes** pane (discussed briefly earlier). From there on you can commit these changes to the Team Server, so the changes become available to everyone in the project that uses Mendix Studio Pro.

Mendix Studio Pro shows the status both in the **Project Explorer** as well as in the **Changes** pane.

Different kinds of changes are visualized with the following icons:

Icon	Meaning
○	Nothing happened to this item. It is unchanged with respect to the original.
●	You modified this item (meaning, a document, folder, or module).
✚	You added this item.
◆	You moved this item to another position in the project tree.
➖	You deleted this item.
❗	You and somebody else made conflicting changes to this item.

The Project Explorer shows an icon in front of the items that have been changed in some way. There is only room for one icon. If a document has been both modified and moved, it is shown as modified.

The Changes pane shows a line for each change to an item. If a document has been both modified and moved, there are two lines for that document. The pane also shows items that were deleted, which is something the Project Explorer cannot do. Click the **Show all** button in the top-right corner of the pane to filter the item list on **Status**.

6.4 Committing Changes

Sending changes to the repository is called committing. The idea is that you commit small, consistent pieces of work to the repository (for example, implementing a new feature and fixing a bug). Mendix Studio Pro automatically checks your app for things which you may have missed (for example a button which refers to a page you haven't connected yet) and reminds you to check and fix these before committing. In Mendix, these are referred to as errors, but you can see them as handy hints. Naturally, it is not recommended to commit while there are errors in your project. It is good practice to ensure that revisions in the repository are always error-free.

Committing results in a new revision in the repository. You can add a commit message and select the related user stories. The commit message should describe the changes you've made. Selecting the related user stories is also really important. Doing this add links to the stories in the commit message in the Developer Portal, so you can easily find an old user story again if you need to.

Mendix recommends keeping commits small, relating to one story at a time. Mendix Studio Pro only shows

stories that are currently running or to-do, and it will not change the state of the story. Setting the status to **Done** is the responsibility of the team and depends on the team's definition of done.

Mendix Studio Pro also attaches some information automatically:

- The author (the user who committed)
- The date and time of the commit
- The list of changed content (documents/folder/modules), along with the type of the change (modify, add, delete, etc.)
- The version of Mendix Studio Pro that was used to commit

Update

Committing is only possible when your working copy is up to date with the repository. If someone else committed a change since the last time you updated, you have to update first. The reason for this is that the revision you create with the commit should incorporate both your changes and the changes done by the other developer. Updating combines the latest changes in the repository with your changes. After reviewing the result and fixing possible problems, you can commit again.

When you work in a team and one of your teammates builds an awesome feature and commits this to the Team Server, you can also update your local working copy to get that feature in your local version of the app. That way you can incorporate into whatever you are currently building.

Note that when you want to do a commit, you don't have to manually update your app first. This will happen automatically when you try to commit your changes to the Team Server.

Let's get all your hard work into Mendix Studio Pro so you can continue on with the LearnNow app!

6.4.1 Return to the LearnNow App

Time to get back to building the LearnNow app. Do you remember what you have to do next? In the Developer Portal, find the user story you are currently working on (which should be, "As an administrator, I want to be able to schedule a training event more efficiently, so I spend as little time as possible on this.") and click 3 **Tasks** to see the related tasks.

Set the first two tasks to Done by checking their checkbox. The third task is automatically calculating the end-date of a training event, based on the start-date of that training event and the duration of the course. A task

only has two statuses, To-do and Done. So, leave the task on To-do and go back to Mendix Studio Pro.

After you've built the last task for this user story (in Module 7), you will learn how to commit your work to the Team Server.

6.5 Get the Latest Version of the LearnNow App

In the next module, you are going to learn how to build microflows in Mendix Studio Pro. If everything is working well for you so far, you can mark this activity as **Completed** and continue to the next module. Otherwise, under the **Resources**, you can find a small gift from us: the latest version of the LearnNow App! You can either start from scratch with a new project or keep your own project and update your model. Assignments for both options are presented below.

Option 1: I am now starting with the learning path

If you're starting from scratch, follow the instructions below to prepare the training project and content.

Import the Project Package

We've provided a project package that you can use to create a new project. It contains all the required development content up to this point.

1. Download the **Project package** from the **Resources** tab.
2. In Mendix Studio Pro, select **File** > **Import Project Package**.
3. Select the downloaded package **Project_Package_Module7**.
4. Select a **Location** on your drive to store the project files.
5. On the **Import Project Package** dialog box, select **Team Server** and upload to a **New repository**.
6. Enter *LearnNow Management* for the **App name**, and click **OK**.

Import the User Stories

1. Download the **User stories** from the **Resources** tab in the training environment.
2. In Mendix Studio Pro, click **Project Dashboard** to go to your project's dashboard in the Developer Portal.
3. Select **Collaborate** > **Stories** in the sidebar menu.
4. Click **More**.
5. Select **Import/Export**.
6. Select **Update stories from Excel** and then click **Browse**.
7. Select the **User stories** Excel file and click **Import**.
8. Click **Next** to import the sprint and user stories:
9. Click **Develop** > **Planning** in the sidebar menu.

10. Mark the **Get started** sprint as completed.

Option 2: I already have a project and I want to Update My Module

If you want to make sure your model is up to date for the assignments in this module, you can update your model with a specific module we've provided. Follow the instructions below to update your existing model.

Import the Module Package

1. Download the **Module package** from the **Resources** tab of module 7 in the training environment (in this case, it is called **MyFirstModule-Module 7**).
2. Open your **LearnNow Management** project in Mendix Studio Pro.
3. Go to the **Project Explorer**, right-click on the project name and select **Import module package**.
4. Select the downloaded **MyFirstModule-Module 7** module.
5. Select **Replace existing module** for the **Action**, and then select **LearnNow Management** for the **Module to replace** (or **MyFirstModule** if you haven't renamed it).
6. Click **Import**.

Set Up Your Navigation

1. Open the project **Navigation**.
2. Add the following navigation items:

Caption	Target Page
Courses	Course_Overview
Locations	Location_Overview
Teachers	Teacher_Overview
Trainees	Trainee_Overview
TrainingEvent	TrainingEvent_Overview

That's it! You're all set to do the assignments. Go ahead and continue with the next module.

6.6 Summary

In this module you learned:

- What Mendix Studio Pro is and what it consists of
- What the Team Server is and how it helps you collaborate with your team
- How you can switch from Mendix Studio to Mendix Studio Pro
- How to import a project or a module as your starting point

Looking forward to start working with Mendix Studio Pro? Then, follow the next module to learn how you can do that!

6.7 Knowledge Check

1. Mendix Studio Pro is a WYSIWYG editor.

a) True
b) False

2. In Mendix Studio Pro, you can access the Domain Model of your app from:

a) The Project Explorer
b) The Project Dashboard
c) The Connector
d) The Domain Model tab

3. Only users with the SCRUM Master role have access to the Team Server.

a) True
b) False

4. You downloaded the latest version of the project from the Team Server, and did some changes to the app. What do you need to do next for your team members to be able to view your changes?

a) Commit your changes to the Team Server
b) Publish your app to the cloud
c) Update the user story from Running to Done
d) Synchronize with the Team Server

Answers:
1-b, 2-a, 3-b, 4-a

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