TB141Ic – ICT System Engineering and Rapid Prototyping
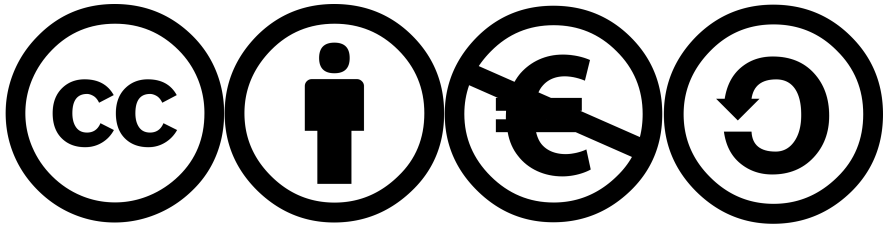
MVC in Mendix: Model - Domain Model

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22/03/2023

Licensing information

Learning objectives and related literature

Learning objectives

- Create a basic Mendix app
- Implement a basic domain model for an application
- Implement associations between elements in the domain model

Related literature

- Mendix - Build an App in Mendix Studio Learning Path
- Mendix - Become a Rapid Developer Learning Path
- Mendix - Crash Course

Mendix

Mendix

- Low-code development platform
- UML-like Diagrams → Code/Data structures
- Visual Sketches → User Interface

Mendix

- **Software Development Methodology:** Agile (with SCRUM project management)
- **SW Architecture:** MVC
- **HW Architecture:** Client-Server
- **Programming Language:** Graphical
  - Domain model ≡ Data structures → UML Class-like diagrams
  - Microflows ≡ Code → UML Activity-like diagrams
  - Pages ≡ User Interface → Graphical sketches

Mendix - MVC
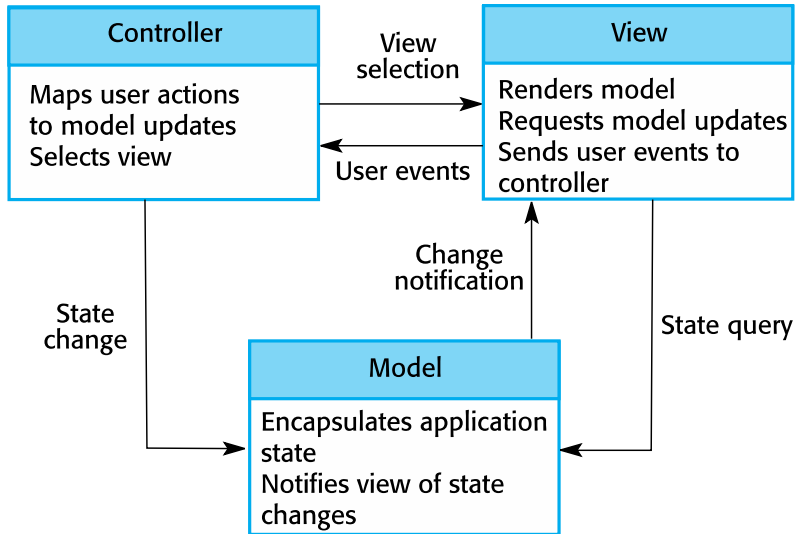
Mendix - UI Planning
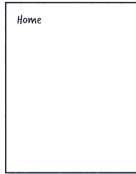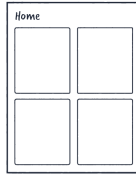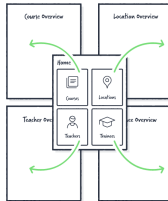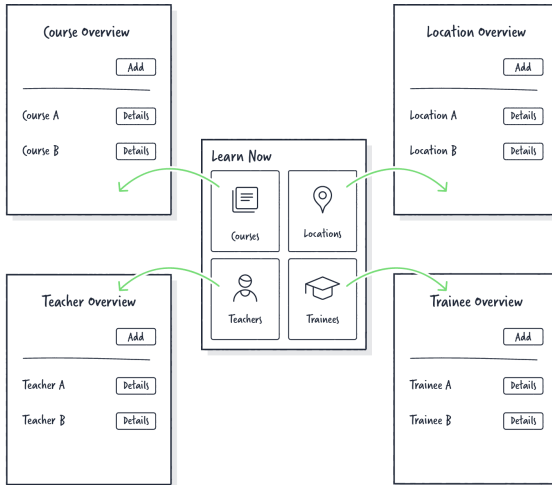
Mendix - Wireframes

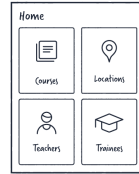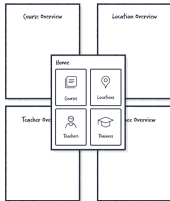# Mendix - Wireframes for different purposes
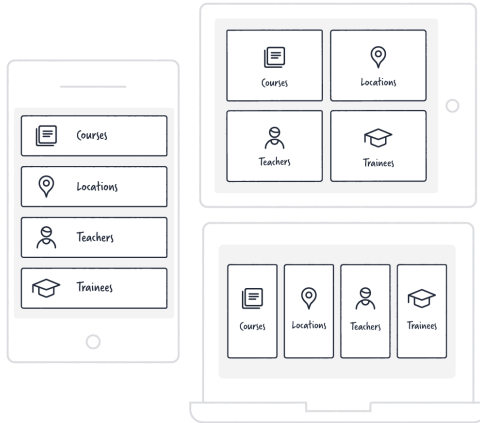
Source: Mendix Academy - Rapid Developer Learning Path

Mendix - Navigation Layout
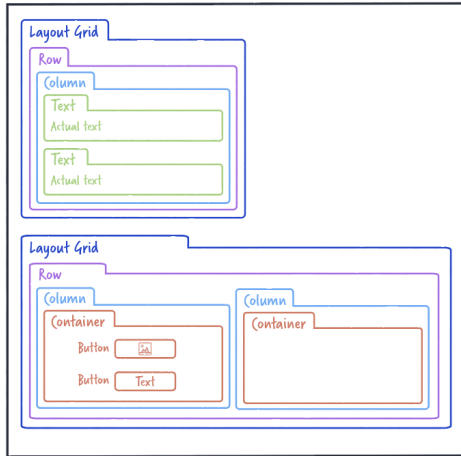
Mendix - Development

Now it is your turn to develop...

Mendix - Development - Exercise 1

Register/Login to Mendix and explore the platform. Create a new app from a blank template and explore the Mendix platform.
Can you describe what the role of the following elements are?

- Project Buzz
- Stories
- Team
- Feedback
- Documents
- Team Server
- General Settings

Mendix - Development - Exercise 2

In the app created in **Exercise 1**, create a form to support the loading of the data from **User Story 1**:

Businesses can register on the platform using a form asking at least for the name of their business, their address, their VAT number and an official telephone number.

In order to do so, you need to create a new page, and create the corresponding domain model, through the dedicated Mendix features. Finally, you can proceed to link the form with the domain model.

OK, but what about the domain model?
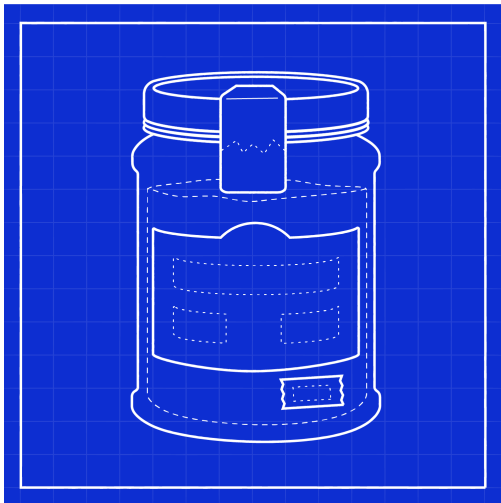
Mendix - Development - Domain Model

Source: Mendix Academy - Rapid Developer Learning Path

Mendix - Development - Domain Model

Jar Material
• Glass
• Plastic
• Metal
(Enumeration)

Seal
Sticker

Seal Broken
Yes or No?
(Boolean)

Name
(String)

Production
Number
(AutoNumber)

Strawberry Jam

- ex. 09/2020   #014698

Expiration Date
(DateTime)

€1,99

Price
(Decimal)

Source: Mendix Academy - Rapid Developer Learning Path

Mendix - Development - Domain Model

Developer creates entities

A database table is created based on the entities
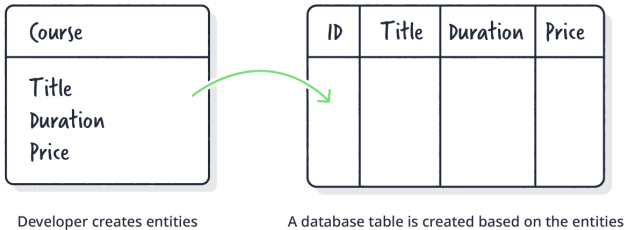
Source: Mendix Academy - Rapid Developer Learning Path

Mendix - Development - Exercise 3

Adapt the application so that the form created in **Exercise 2**, can be accessible from the homepage.
In order to do so, you need to add a button or a card widget and link it to the previously created page. Add the check mark on Create New Object to solve the consistency error.

Mendix - Development - Exercise 4

With the newly found knowledge of **Exercise 2** and **Exercise 3**, create a new page showing an overview of Business Data.
In order to do so, you need to create a new page, selecting a list template, and adapting to display the relevant information.

Mendix - Development - Exercise 5

Finally, add a direct link to the page created in **Exercise 4** on the home page and adapt the navigation bar to have a quick access to all the created pages.

Create a new Mendix app and define the domain model for an application managing training events. A training event needs to have a connection to a course, location, and trainer. This way, you can store in the system what course will be given, where it will be hosted, and who will teach it. A training event will always be for only one course, at one location, and hosted by one teacher. However, over time, a course will be scheduled more than once, locations will be used more than once, and teachers will host several training events. A course is characterized by a title, a duration a price and a description, a location by its name and address and a trainer by its name and e-mail address.