成为Mendix快速开发者





Start	09:00
Break	10:30 - 10:45
Lunch	12:00 - 13:00
Break	14:30 - 14:45
End	16:00

- Agenda
- Questions
- Knowledge checks (Kahoot)
- Certification

Create a Mendix account https://signup.mendix.com/

Install the version 9.5 of Mendix Studio Pro <u>https://marketplace.mendix.com/</u>



目录

- Make it w/ Mendix
- 2 Make it together
 - Make it w/ Mendix Studio
- **4** Make it dynamic
- 5 Make it automated



3

Make it w/ Mendix Studio Pro

Make it smart



Make it secure

10 Make it mobile

9

11

Go make it!



Make it w/ Mendix

学习目标

- •了解Mendix生态
- •了解如何获取Mendix相关信息
- •创建、完善、分享你的Profile











... 并上传头像



Summary

Make it together

学习目标

- •了解应用生命周期
- •在示例场景中运用应用生命周期管理
- •从Mendix Developer Portal创建新工程
- •理解Mendix使用的敏捷开发方法
- 向你的Mendix工程添加成员
- •创建User Stories
- •创建线框设计稿





应用生命周期







Image: Developer Portal Company Buzz Company Apps







软件工程方法





敏捷流程与角色



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COLLABORATE

Project Buzz

Stories

Team

Feedback

Documents

Team Server

General Settings

DEPLOY

Environments

Metrics

Logs

Backups

Alerts

Mobile App

Team





User Stories

- •拆解的产品需求
- 描述需求对于产品用户的价值
- •以Story point衡量复杂度

作为管理员,我希望能新增培训事件,以便于我及时维护培训计划.

As a <user type>, I want <what>, so that <business value>.



我们的虚拟场景: LearnNow 培训机构

Jimmy 是培训机构 LearnNow 公司的总监。他一直使 用Excel来管理公司提供的培训课程。

随着公司规模的扩大,他发觉使用现有工具管理内容 逐渐变得吃力。









添加用户故事

Developer Portal	As an administrator, I want to be able to easil can run my company more efficiently 5270228 in sprint Jimmy's ideas of LearnNow Training	y access and mai	nage my data, so I	<
COLLABORATE Project Buzz	Add a label			
Stories Team	Description	^	Done 🗸	
Feedback Documents Team Server General Settings DEPLOY	I need to be able to view and manage all my: - Courses - Locations - Teachers - Trainees		 Unassigned 5 points ✓ → Move Story 	v Label More 🔹
Environments Metrics Logs Backups	When I am at the office, I use my desktop, but when I am tra mostly use my tablet and mobile phone. Therefore, it's really me to be able to manage all of the above data from desktop, mobile.	velling for work, I important for tablet, or	Duplicate	
Alerts Mobile App	Tasks [4/A]	~	≅ History	tta 5 Done
	Comments	~	前 Delete	to do
			Create Another Story	3 To-do
				3 To-do





- •导入 user stories
- 完成 'Get Started' sprint

LearnNow Ti	raining Management 🛛 View App 🔤 Edit in S	tudio 🛛 🚾 Edit in Studio Pro
COLLABORATE Project Buzz Stories Team Feedback	Overview Sprint status	
Team Server General Settings DEPLOY Environments Metrics	Select or type your search text (press Enter to search) Q New Sprint New Story Get started Active sprint	New Label More Import / Export Manage Labels Completed Sprints
Logs Backups Alerts Mobile App	No stories yet! Add a new story to get started.	History Switch To Old UI

...

✓ Backlog 1 story



Summary

Make it w/ Mendix Studio

学习目标

- •了解 Mx Studio
- •为 LearnNow app 创建首页
- •设置页面布局
- •了解页面创建的规则
- 使用 building blocks 并设置控件属
- •理解首页与overview页面的区别与联系
- •设置导航菜单







作为管理员,我希望能够轻松访问和管理我的 数据,以便更有效地运营我的公司。



≫ 在Mendix Studio中打开应用

•••	Studio Image: Home_Web v Image: Preview Put	iblish 🗸 🦳 Ch	ecks 🧹 ?	(2) :
꿃	Show:	Toolbox	Properties	Buzz
		Search Widget	s Bui	lding Blocks
\bigcirc	Welcome to your new app	∨ Data Contain	iers	
Ø	COLUMN	Data Grid	Data View	List View
		Container	Group Box	1 Column
		2 Columns	3 Columns	4 Columns
		6 Columns	Sidebar Left	Sidebar Right
Q		Tab Container		
ð		∨ Input Elemer	nts	
ည်း		\checkmark		•
~	Layout Page	Check Box	Date Picker	Drop-Down





• Layout grid

- Containers
- Widgets







- 1. 打开 Home page
- 2. 创建页面布局
- 3. 添加按钮
- 4. 添加页面
 - Layout: Atlas_Default
 - Template: List
 - 命名规则:
 - Course_Overview
 - Location_Overview
 - Teacher_Overview
 - Trainee_Overview
- 5. 链接按钮至页面

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Summary

Make it dynamic

学习目标

- •理解动态数据
- •使用实体与属性
- •显示动态数据
- •理解并使用对象(Object)
- •理解域模型(Domain Model)
- •理解概览页与详情页的不同





实体与属性

命名规则:

- 以单数形式的名词命名
- 驼峰式大小写命名(CamelCase)







Course Entity

Attributes	Example	Attribute type
Title		
Description		
Duration (in days)		
Price		
Location Enti	ty	
Attributes	Example	Attribute type
Name		
Address		
Teacher Entit Attributes	Example	Attribute type
Name		
Email Address		
Trainee Entit	у	
Attributes	Example	Attribute type
Name		
Address		
Email Address		





To

向页面添加动态数据

Show		•	Toolbox Properties Buzz
	mx	·	LIST VIEW
			✓ Data Source
^	Course Overview		Data Source
			₽ ₽ •••
	List View 🗟 Course 🔿		Database Microflow More
			Entity
2	{IITIE} Duration: {Duration} days	>	Course (MyFirstModule) 💮 🔿
	Price: {Price}		Filter 🛈
			0 Conditions 💮
	{Title}		Sort Order ①
	Duration: {Duration} days	>	Add Sorting Rule
	Price, (Price)		
	{Title}		✓ Events
	Duration: {Duration} days	>	On Click Astion
	Price: {Price}		
	{Title}		Nothing Page Microflow More
	Price: {Price}		∨ General
2			Page Size
	{Title}		E
1	Duration: {Duration} days	>	The editor will show up to 5 example items
	Price: {Price}		
23 <u> </u>			Delete

mx **Course Overview** Supporting text {Title} Duration: {Duration} days > Price: {Price} {Title} Duration: {Duration} days > Price: {Price} {Title} Duration: {Duration} days > Price: {Price}





↑	Home	$] \oplus$
	Course Overview	\oplus
0	Location Overview	\oplus
1	Teacher Overview	\oplus
	Trainee Overview	\oplus












- 实体 + 属性 = 蓝图
- 对象是实体的实例







- 步骤1:
 - 在页面头部添加一列
 - 在页头中添加 Create Object 按钮
 - 设置标题(Caption)为 Add
 - 设置风格(Style)为 Success
 - 链接按钮至相应实体
- 步骤 2:
 - 创建详情页
 - Layout: PopupLayout
 - Template: Form Vertical
 - 命名规则: Entity_NewEdit







- •点击预览按钮
- •在移动端预览你的应用
- •将相应的 user story 设置为完成状态



域模型与数据库







作为管理员,我希望能够随时安排培训活动,以便教师甚至可以随时查看他们的日程安排





- 1. 在域模型中添加一个新实体: TrainingEvent
- 2. 添加 StartDate 与 EndDate 属性

TrainingEvent	
StartDate	Date and Time
EndDate	Date and Time





- •1对多, One-to-Many (1 *)
- •1对1, One-to-One (1 1)
- •多对多, Reference Set (* *)

命名规则: Entity1_Entity2

















作为管理员,我希望能够直接从主页安排培训活动,以便我在这方面花费的时间尽可能少。











Summary

Make it automated

学习目标

- •了解自定义逻辑的价值
- •了解微流可包含的元素
- •学习创建微流





这是一个微流, 你能看明白它在做什么吗?









- •微流为您的应用程序添加逻辑。逻辑用于使您的应用程序更智能、自动化并使其可维护。
- •你可以用微流来:
 - •扩展或改变默认行为
 - •处理特殊的业务流程
 - •集成外部系统、数据库、web服务等







Page



从首页安排培训







Element	Туре	Graphic
Start Event	Event	
End Event	Event	
Sequence Flow	Flow	
Activity	Activity	
Decision	Decision	
Merge	Decision	
Parameter	Artifact	NewTrainer E Trainer
Annotation	Artifact	Lorem ipsum dolor sit amet consectetur adipiscing elit.
Annotation Flow	Flow	





作为管理员,我希望能够从课程概览页面安排 培训活动,并选择课程名称,以便我在这方面 花费的时间尽可能少。



>>> 从Course Overview页面创建培训事件(1/3)

(ourse Overview Add	X (ourse Rapid Developer
Rapid Developer Details (ourse X Details)	Start Date
	(ancel Save



➢ 从Course Overview页面创建培训事件 (2/3)



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从Course Overview页面创建培训事件 (3/3)

Toolbox	Properties	Buzz		
CREATE OBJECT				
∨ Data Source				
Entity 🚯				
TrainingEver	nt (MyFirstModule)	\odot		
Initialize Mem	bers			
	Add New Value			
∨ Behavior				

Select an Attribute or an	ssociation (i)	
TrainingEvent_Course Co	irse	0
\$Course		



Summary

Make it w/ Mendix Studio Pro

学习目标

- •学习使用 Studio Pro
- •了解如何使用 Team Server 协作开发
- •向 Team Server 提交更改
- •使用信息实体
- •使用数据嵌套





Studio 与 Studio Pro





Studio Pro

App Explorer	Home_Web [MyFirstModule] ×		*	Data Hub Propertie	es Toolbox Connector
C Filter	Page 🔀 🗟 Data view 🗟 Data grid 📴 Template gr	d 🚟 List view 🛛 Add widget 🖓 Add building block	Design mode 🤤	Page 'MyFirstModule.I	Home_Web'
 	Feedback & Collaboration Widget	Manu	al - 12	 ✓ Common Name Documentation Class Style Dynamic classes 	Home_Web
	L			 Designer Canvas width 	1200
 Course_Overview Home_Web 		Auto	o-fill	Canvas height General Platform 	600 Web
 Images Location_NewEdit Location_Overview Teacher_NewEdit 	LearnNow Training Management Welcome to your new app			Layout type Layout Title URL	Responsive Atlas_Default (Atlas_Core Homepage
Teacher_Overview Trainee NewEdit	Auto-fill	Auto-fill	Auto	Visible for	User
 Trainee_Overview TrainingEvent_NewEdit TrainingEvent_Overview 	Auto-fill Auto-fit content Courses >	Auto-fill Auto-fit content Locations >	Auto-fill Teachers	Mark as used	No
2	Auto-fill	Auto-fill	Auto		3
At	las_Default > Home_Web		> v		
Ste	ories 13 Changes 0 Errors 0 MxAssist Pe	rformance Bot Console Debugger 🤤			
B Sto	Refresh	pen document Stories of sprint 'J and manage my data, so I can run my company more efficie	immy's ideas' due 13/06/2021 Status Intly Done Schodule o		
t.	 As an administrator, I want to be able to schedule at As an administrator, I want to be able to schedule at As an administrator, I want to be able to schedule at As an administrator, I want to be able to schedule at 	raining event at any time, so that the teachers can see their raining event directly from the homepage, so that I spend as raining event from the course overview page with the course ions to a training event, so that my teachers know who their	s little time a Done e little time a Done e name alre Done s tudents wi		

Team Server





在Studio Pro中打开应用

- •打开 Mendix Studio Pro version 9.5.0
- •找到你的应用
- •打开主分支



状态与变更

图标 含义

- 。 该元素无变化
- 该元素被修改
- 新增的元素
- 该元素在项目树中被移动
- ₀ 被删除的元素
- 与别人修改了同一个元素,版本有冲突





- •将更改发送到存储库称为提交。
- •将小的、一致的工作提交到存储库。
- Studio Pro 会自动检查您的应用程序是否存在您可能遗漏的内容,并提醒您在提交之前检查并修复这些内容。
- •只有当您的工作副本与存储库保持同步时,才可以提交。
- •不要忘记设置故事的状态!





作为管理员,我希望能够为培训活动添加注册, 以便我的老师知道他们的学生是谁。













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- 在 TrainingEvent_Overview 页面中创建一个新的"注册(Registration)"按钮。
- 使用 Atlas Default 布局的空白模板创建新页面,将其命名为 TrainingEvent_Registration_Overview 并链接到该按钮。
- 在 layout grid 上方添加数据视图(data view)并连接实体 TrainingEvent 数据源上下文
- 向其中添加 Pageheader Controls 构建块并删除 Edit 和 Delete 按钮。
- 将原始 layout grid 移动到 data view 内,位于Pageheader Controls下方。
- 在该layout grid内添加一个 List single line 构建块,并显示属性 Number 和 Trainee Name。
- 创建添加按钮以打开新的 Registration_NewEdit 页面。
- 使用 > 按钮也可以转到 NewEdit 页面。
- 使 < 返回按钮关闭页面。





ningEvent, page parameter]		Auto-fill	
Auto-fill		Registration, page parameter]	
egistrations for the {/Title} on {StartDate}	Add	Number	
		[Number]	
	Auto-fill	Trainee	
[Pagistration from database over association 'Pagistration TrainingEvent']		[Registration_Trainee/Trainee/Name]	0
rt order: (default)		Date	
arch on: (none)		[Date]	
Auto-fill		Attended	
{Number} - {/Name}	>	Ves No [Attended]	
		Save	
	Load more		



Summary

Make it smart

学习目标

- •使用小部件事件调用微流
- •使用各种微流动作来自动计算
- •了解微流的范围
- •了解两种类型的检索
- •了解存储属性和计算属性之间的区别
- •使用对象事件调用微流







作为管理员,在安排培训活动时,我希望自动 计算活动的结束日期,防止我出现计算错误。



自动填充培训事件结束日期





5个步骤

- 1. 触发微流
- 2. 填写计算的结束日期
- 3. 部署和测试
- 4. 分析错误并调整微流
- 5. 提交你的工程





- •On enter:当用户光标进入(点击) 控件时
- On change: 当用户在进行更改后离开控件时
- •On leave:当用户光标离开(关闭) 控件时(无 论他们是否改变了控件的值)

Training Event New Edit	×
(ourse	
Rapid Developer	\sim
Start Date	
01/01/2020	
End Date	
(ancel Save	





通用表达式

元素	示例	类型	表达式
方法	FunctionName (Ingredient 1 Ingredient 2)	算数	* : + -
	Trainoo/EmailAddross	关系	< > <= >= =
又里			:-
环境变量	[%CurrentDateTime%]	特殊	empty isNew
		逻辑	and or not
		条件	If then else





- 1. Retrieve associated Course
- 2. Calculate the EndDate
 - addDays(*DateTime*, *Integer*)
 - DateTime = StartDate (TrainingEvent)
 - Integer = Duration (Course)
- 3. Set the newly calculated EndDate
 - Change Object activity, change the TrainingEvent
 - Commit: No
 - Refresh client: Yes



微流的数据读取范围





获取数据

Example:

When writing a text document





获取数据

When using Mendix





由关联获取数据

Doing a retrieve from memory is called "By Association Retrieve".

Benefits:

- Faster (no connection to the database is needed)
- Information not in the database yet

Transient objects







1) Retrieve your data

2) Complete the microflow expression

3) Run Locally and Crash!

	Select Association	×
	Filter	
	🛨 Expand All 😑 Collapse All	
	Variables Variables StrainingEvent (MyFirstModule.TrainingEvent) Registration_TrainingEvent (List of MyFirstModule.Registration)	
	 TrainingEvent_Course (MyFirstModule.Course) TrainingEvent_Location (MyFirstModule.Location) TrainingEvent_Teacher (MyFirstModule.Teacher) CurrentSession (System.Session) CurrentUser (System.User) IatestError (System.Error) IatestHttpResponse (System.HttpResponse) IatestSoapFault (System.SoapFault) 	
Edit Change Item	×	
Member		
EndDate (Date and time)	~	
Type Set Add Remove		
Value	Generate	
addDays(\$TrainingEvent/StartDate, \$Course/Dur	ation) Select None	Cancel
Line Column Error		
	OK Cancel	





Add breakpoint on the OCH_TrainingEvent_CalculateEndDate microflow







Add two Decisions to check if the start date and course are selected.

<u>R</u> un Version <u>C</u> ontrol <u>L</u> anguage <u>H</u> elp	Decision				X	53
OCH_TrainingEvent_CalculateEndDate [M	Common	Course selected?				
⊘ Microflow ⓐ	Capiton					🕀 Zoom 160%
	Decision Type	Expression Rule			· ·	
	Expression					
				Expression	wizard	
	\$Course != empty	ζ.				
	Lino	Column	Error			
TrainingEvent TrainingEvent	Line	Column	Elloi			
			_			
				ОК	Cancel	
	Retrieve Course by \$TrainingEvent/ rainingEvent_Course	Start date selected?		Chang Traini EndD	ge ingEvent' (Pate)	
	Course	<u>\</u>	<u>\</u>			





- 1) Remove breakpoint
- 2) Run Locally
- 3) Find bug & fix
- 4) Commit







作为老师,我希望能够随时看到参加培训活动的学员人数,以便我知道我需要什么资源。





Stored or Calculated Attribute? 1) New attribute 2) Text widget

3) Parameter

4) Edit caption

TrainingE	ent, from data	abase]					_
Sort order: (de	fa Edit Text '	'text1'				\times	
Search on: (no	ne) General	Appearance					
	Genera	al					H
	Captio	n	Number of registrations: {1}	1	Ed	it	F
Tit	Edit Caption			_			×
Fro	Caption		Number of registrations: {1}				<
	Edit Template	e Parameter			-)		×
Regist	Attribute (path) [MyFirstModule.TrainingEvent.TotalNumberOfRegistrations			Selec	t
Hosted b	Formatting Group digits		⊖Yes ◉No			19 pt	
				OH	(Cancel	-
At: {/Na	-						
Text				OF		Cancel	





Prefixes for object event handlers:

	Before	After
Create	BCR	ACR
Commit	BCO	ACO
Rollback	BRO	ARO
Delete	BDE	ADE

In our case: ACO_ADE_Registration_SetTotalNumberOfRegistrations



计算注册人数

- 1. Retrieve the associated **TrainingEvent**
- 2. Retrieve the Registrations that belong to the **TrainingEvent**
- 3. Count the list of Registrations
- 4. Set the total number of Registrations as the new value
 - Change Object activity, change the TrainingEvent
 - Commit: Yes
 - Refresh client: Yes



计算注册人数







Summary

Make it valid & consistent

学习目标

- •了解拥有有效且一致的数据的重要性
- 识别不同类型的验证
- •使用微流应用验证
- •防止删除好的数据
- •清理过时的数据





数据校验为何重要?

不同类型的错误	如何预防?
空记录	校验规则
非法数据	正则表达式
重要数据被删除	删除保护
垃圾数据	级联删除



数据验证

验证是在对象存储在数据库中之前应该满足的条件。

您可以将验证添加到:

- 领域模型
- 微流
- 页面



数据验证的类型

类型	描述	示例
Required	属性不能为空	课程描述
Unique	属性值必须唯一	课程名称
Equals	属性值必须等于特定值	重复输入密码
Range	属性值必须处于某个范围内	课程时长
Regular expression	属性值需满足某个正则表达式	电子邮件地址 (user@something.com)
Maximum length	属性值最大长度	邮编



如何处理错误的数据?

在何处触发校验?	反馈形式
表单页面 (有输入控件)	在输入控件下方显示错误信息
页面 (无输入控件)	弹出错误信息对话框
系统	日志中的错误信息





作为管理员,我希望数据有效且一致, 所以我的数据库不会变得混乱。









在微流中验证



实体	属性或关联	验证规则
TrainingEvent	StartDate	Required
	Teacher selection	Required
	Course selection	Required
	Location selection	Required

- 将保存按钮更改为微流按钮 1.
- 2. 模在默认保存行为
- 3. 创建所有验证检查
- 创建每个字段的验证反馈消息 向用户一次性展示所有反馈



步骤1&2:创建基本微流

确保 Save 按钮触发验证微流:ACT_TrainingEvent_Save







步骤 3: 添加数据验证






步骤 4: 添加验证反馈











步骤6:添加终止标记







作为管理员,我希望能够删除没有注册 的培训活动,以防我意外删除人们已经 付费参加的培训活动。





Properties of Association	'MyFirstModule.Registration_Trair	ningEvent'	<u></u>		\times
Common					
Name	Registration_TrainingEvent				
Documentation					
Multiplicity					
O [1 - 1] One 'TrainingEv	ent' object is associated with one 'Re	gistration' object			
[1 - *] One 'TrainingEv	ent' object is associated with multiple	e 'Registration' objects			
🔘 [* - *] Multiple 'Trainin	gEvent' objects are associated with n	nultiple 'Registration' objects			
On delete of 'TrainingEve	nt' object				
O Keep 'Registration' ob	ect(s)				
O Delete 'Registration' o	bject(s) as well				
Delete 'TrainingEvent'	object only if it is not associated with	'Registration' object(s)			
Error message if 'Trainin	gEvent' object cannot be deleted				
Sorry, this training event	can't be deleted. People have alread	y registered for it!			
On delete of 'Registration	object				
Keep 'TrainingEvent' o	bject(s)				
O Delete 'TrainingEvent'	object(s) as well				
O Delete 'Registration' o	bject only if it is not associated with	'TrainingEvent' object(s)			
?			ОК	Can	icel





步骤1:添加删除按钮



步骤 2: 设置删除行为







作为管理员,我希望能够删除学员及其 所有注册信息,以便在他们不再希望成为LearnNow学生时将其从系统中删除。





Properties of Association 'MyFirs	Module.Registration_Train	ee'	-		×
Common					
Name Registr	ation_Trainee				
Documentation					^
Multiplicity					~
 [1 - 1] One 'Trainee' object is as [1 - *] One 'Trainee' object is ass [* - *] Multiple 'Trainee' objects a 	sociated with one 'Registration ociated with multiple 'Registra re associated with multiple 'R	n' object ation' objects egistration' objects			
On delete of 'Trainee' object O Keep 'Registration' object(s) Delete 'Registration' object(s) as Delete 'Trainee' object only if it i	well s not associated with 'Registra	ation' object(s)			
On delete of 'Registration' object Keep 'Trainee' object(s) Delete 'Trainee' object(s) as well Delete 'Registration' object only 	if it is not associated with 'Tra	inee' object(s)			
3			ОК	Са	ancel





步骤1:添加删除按钮,Style:Danger

步骤 2: 设置删除行为

Trainee Overview Supporting text {Name} > 💼 {Address} {EmailAddress}





Summary

Make it secure

学习目标

- •了解保护应用程序的重要性
- •了解三个安全级别
- •了解两个安全位置
- •设置模块和项目安全
- •将用户角色连接到模块角色
- •设置页面、微流和实体访问权限
- •使用条件可见性来定制页面和实体访问权限





让应用更安全

- •为何重要?
- •保护对象
 - App安全
 - •模块安全
- •安全级别
 - Off
 - Prototype/Demo
 - Production









用户角色与模块角色







作为管理员,我希望应用程序是安全的,以 便我遵守公司数据保护规则。



》 创建模块角色

Security of Module 'MyFirstModule'	_		×
Module roles Page access Microflow access Nanoflow access Workflow access Entity access			
🗋 New 🧷 Edit 🚫 Delete 🗅 Duplicate			
Name Documentation			
Administrator			
Teacher			
Trainee			
	ОК	Car	ncel



创建用户角色

- App Security: Prototype/Demo 1)
- 'User' 用户角色 → 'Teacher' 2)
- 3) 新建用户角色'Trainee'
- 检查错误 4)

Err	ors										
\otimes	4 Eri	rors 🗇 0 D	eprecations 🛕 1 Warnings 🖌 Check now 🗋 Limit to cu	rrent tab							
		Error Code	Message	Element							
\otimes	2	CE0106	At least one allowed role must be selected if the microflow is used from navigation, a page, a nanoflow or a published service.								
\otimes	3	CE0557	At least one allowed role must be selected if the page is used from navigation or a button.	-		Select / deselect all					
×	4	CE0557	At least one allowed role must be selected if the page is used from navigation or a button.	-				0	К	(Cancel
\otimes	5	CE0106	At least one allowed role must be selected if the microflow is used from navigation, a page, a nanoflow or a published service.	-		Microflow 'OCH_Traini	MyFirstModule				
St	orie	s Char	ages Errors (4) Console Debugger								



Add User Role

 \times





New Edit Delete Name Module roles Administrator Administration.Administrator, System.Administrator, MyFirstModule.Administrator Teacher Administration.User, System.User, MyFirstModule.Teacher Trainee Administration.User, System.User, MyFirstModule.Trainee



访问权限

- •页面访问
- •微流访问
- •实体访问







设定页面与微流 访问权限

- 只有管理员才能创建、删除和编辑培训 活动。
- 教师和学员不应访问这些功能。

Page	Administrator	Teacher	Trainee
Course			
• NewEdit	Y	Ν	Ν
Overview	Y	Y	Ν
Home	Y	Y	Ν
Location			
• NewEdit	Y Y	Ν	Ν
Overview	Y	Y	Ν
Registration			
NewEdit	X	Ν	Ν
Teacher			
• NewEdit	Y	Ν	Ν
Overview	Y	Y	Ν
Trainee			
• NewEdit	Y	Ν	Ν
Overview	Y	Y	Ν
TrainingEvent			
• NewEdit	Y Y	Ν	Ν
• Overview	Y Y	Y	Y
Registrations	Y	Y	Ν





设置**demo** 用户

App Security							\times
Security level							
Security level	Off OPrototype / demo	Production					
	Full security is applied. Conf entities, and reports.	igure administrator and	anonymous access and define user r	oles and secu	urity for forms,	microflows,	
Check security	● Yes ◯ No						
	If there are no other errors, N to attributes and association users do not need two or mo	Mendix Studio Pro chec s that are accessible fo re roles to access func	ks per user role whether forms that ar r that same role. This assumes that e tionality in your application.	re accessible ach user role	for a certain ro is independent	le only refe and that	r
App status	O Incomplete						
Module status User roles	Administrator Demo users An	onymous users Passw	rord policy				
Enable demo users	● Yes ◯ No						
Demo users are only ava	ailable when running locally or i	n a Free App.					
🗋 New 🧪 Edit 🚫 I	Delete						
User name	Entity		User roles				
demo_administrator	Account		Administrator				
demo_teacher	Account		Teacher				
demo_trainee	Account		Trainee				_
	Edit Demo User				_		<
	User name	demo_trainee					
	Password	Passwords for dem	o users are automatically generated.	Copy pass	word to clipboa	rd.	
	Entity	Administration.Acco	ount				\sim
	User roles	Administrator Teacher Trainee					
		I∎ Select / des					
					ОК	Cancel	
(?)					ОК	Canc	el



》基于不同角色的首页

Add navigation prof	file							
Responsive web Phone w	veb offline							
	General							
	Application title	LearnNow			Edit			
<u> </u>	Application icon	Atlas_Core.Content.Mendix		Select	Show			
	Home pages							
<u> </u>	Default home page	MyFirstModule.Home_Web		Select	Show			
	Role-based home pages	Trainee			Edit			
	Progressive Web App		Role-based home pages	for responsive			_	
	 ✓ Publish as a Progressiv ✓ Allow 'Add to Home s 	ve Web App creen' prompt	🗋 New 🚫 Delete 🔺	Move up Move	down 🥖	Select target 🛛 👌 Go to target		
	Preload static resource	es	User role			Target		
	To use all Progressive W	eb App features, the app needs to be pu	Trainee			MyFirstModule.TrainingEvent_C	verview	
	Read more about Progre	essive Web Apps						
	Menu							
	🗋 New item 🗋 New s	subitem 🖉 Edit 🛇 Delete 🔿 Go to ta	a					
	Caption	Action	-					
	A Home	🕒 Open page 'My	4					
	Course Overview	🗋 Open page 'My						
	Location Overview	Open page 'M						
	L Teacher Overview	🗋 Open page 'M	X				OK	Cancel
	🗢 Trainee Overview	🗋 Open page 'M	yFirstModule.Trainee_Overvie Ad	lministrator, Teacher				
	Training Events	🗋 Open page 'M	yFirstModule.TrainingEvent Ad	lministrator, Teacher, Traine	e			





设置实 体访问 权限

mx mendix

Module Security Type 'Security'

Module roles Page access Nanoflow access Microflow access Entity access

Note: Changes you make here modify the domain model.

🗋 New 🧷 Edit 🚫 Delete 🖺 Duplicate

Entity 🔺	Module roles	Create	Delete	Member access
Course	Administrator	Yes	Yes	Full Read, Full Write
Course	Teacher	No	No	Full Read, No Write
Course	Trainee	No	No	Limited Read, No Write
Location	Administrator	Yes	Yes	Full Read, Full Write
Location	Teacher	No	No	Full Read, No Write
Location	Trainee	No	No	Limited Read, No Write
Registration	Teacher	No	No	Full Read, No Write
Registration	Administrator	Yes	Yes	Full Read, Full Write
Teacher	Administrator	Yes	Yes	Full Read, Full Write
Teacher	Trainee	No	No	Limited Read, No Write
Teacher	Teacher	No	No	Full Read, No Write
Trainee	Teacher	No	No	Full Read, No Write
Trainee	Administrator	Yes	Yes	Full Read, Full Write
TrainingEvent	Teacher	No	No	Full Read, No Write
TrainingEvent	Trainee	No	No	Limited Read, No Write
TrainingEvent	Administrator	Yes	Yes	Full Read, Full Write

应用安全性设置

Α

- Administrator 标签页
- Demo Users 标签页
- Anonymous Users 标签页
- Password Policy 标签页

pp Security									×
Security level									
Security level	Off	O Prototype / den	no 💿 Production	n					
	Full se entities	curity is applied. C s, and reports.	onfigure administ	rator and anonym	ous access and de	efine user roles an	d security for forn	ns, microflows	,
Check security	• Yes	No							
	If there to attril users o	are no other error outes and associat do not need two or	s, Mendix Studio ions that are acco more roles to acc	Pro checks per us essible for that sar cess functionality in	er role whether fo ne role. This assu n your application.	rms that are acces mes that each use	ssible for a certair r role is independ	role only refe ent and that	r
App status	O Co	mplete							
Nodule status Use	er roles Administ	rator Demo users	Anonymous user	rs Password policy	1				
/ Edit module	e security								
Module	Page	Microflow	Nanoflow	OData	REST	Workflow	Entity	Data set	



Summary

Make it Mobile

学习目标

- •了解移动应用程序的价值
- •创建特定于移动设备的页面
- •学习使用纳流
- •设置基于角色的主页





响应式,原生,与渐进式(PWA)移动应用

AppStore-based



Native Mobile Optimal user experience, best device integrations & security options



Hybrid Leverage large libraries of existing web capabilities

Browser-based





PWA Native like, user adoption without AppStore dependencies **Responsive Web** Web apps (not optimized for mobile)



为什么使用 PWA?

- 可安装
- 可靠
- 功能强大



移动应用

您需要面向移动设备的解决方案吗?

移动应用专有功能:

- ●导航Profile
- •移动页面布局
- (原生)移动组件





作为一名学员,我想查看即将举行的培训活动, 包括他们的地理位置,以便我可以选择最接近 的。



方法

• 导航:

- 新建 PWA 导航 profile.
- 指定默认首页.
- 为 Trainee 配置基于角色的首页,展示培训事件列表(包括地点)
- 布局: Jimmy 希望为移动设备优化应用.
- **原生功能**: Jimmy 希望应用能使用手机上的地图.





添加Responsive Web navigation profile

Responsiv

- •在 App Explorer 中打开导航
- •选中 Progressive Web App 下的三个 框。
- •将应用程序标题更改为 LearnNow。

web Phone we	b offline				
	General				
	Application title	LearnNow			Edit
Ē	Application icon	Atlas_Core.Content.Mendix		Select	Show
	Home pages			-	
<u> </u>	Default home page	MyFirstModule.Home_Web		Select	Show
	Role-based home pages	Trainee			Edit
	Progressive Web App				
	Publish as a Progressive	Web App			
	Allow 'Add to Home scr	een' prompt			
	✓ Preload static resources				
	To use all Progressive Web	App features, the app needs to be published to the cloud.			
	Read more about Progress	ive Web Apps			
	Menu				
	🗅 New item 🗋 New sub	oitem 🧷 Edit 🚫 Delete 🖙 Go to target 🕀 Expand all 😑 Col	lapse all 🙎 Role-based view		
	Caption	Action	User Roles		
	A Home	Dpen page 'MyFirstModule.Home_Web'	Administrator, Teacher		
	Course Overview	Dpen page 'MyFirstModule.Course_Overview'	Administrator, Teacher		





添加 Phone Web Offline navigation profile

- 添加导航配置文件: Phone web offline
- 选中允许"添加到主屏幕"提示框
- 将默认主页设置为新页面 TrainingEvent_Overview_Mobile
 - 1. 布局选项: Phone (Web)
 - 2. 模板: List Double Line.
 - 3. 导航布局: Phone_Topbar。

Responsive web							
	General						
	Application title	Mendix					Edit
Ē	Application icon	Atlas_Core.Content.Mendix				Select	Show
	Home pages						
	Default home page	MyFirstModule.Home_Web				Select	Show
	Role- Add Navigation F	Profile	Edit tent.Mendix Edit tent.Mendix Edit Select Show Select Show Edit rur application. Profiles can only be added once. ive web ive web ive web ive web ive web ive boffline eb				
	Add another navigat Progr Pu All Pre To us Read Copy settings fro	tion profile type to your application. Profiles can only be added once.			×		
				OK	Cancel		
	Caption	Action	User Roles				
	A Home	Open page 'MyFirstModule.Home_Web'	Administrator, Teacher				
	Course Overview	Open page 'MyFirstModule.Course_Overview'	Administrator, Teacher				
	II A	TK					





Ret

•为学员设置基于角色的首页以打开 TrainingEvent_Overview_Mobile 页面。

dd navigation prof	ile								
nsive web Phone w	eb offline								
	General								
	Application title	earnNow							
Ē	Application icon	Atlas_Core.C	ontent.Mendix						
	Home pages								
0	Default home page	MyFirstMod	ule.Home_Web						
	Role-based home pages	frainee							
	Progressive Web App	Ro	le-based home page	s for responsive			8	- [×
	Publish as a Progressive	Web Ap [New 🛇 Delete	▲ Move up ▼M	ove down 🧷 Selec	t target [🔓 Go to	target		
	Allow 'Add to Home scre	en' pror	User role		1	larget			
	Preload static resources) Trainee		N	lyFirstModule.Trainin	gEvent_Overviev	_Mobile	
	To use all Progressive Web	App fea							
	Read more about Progressi	ive Web							
	Menu	- 11							
	🗋 New item 🗋 New sub	oitem /							
	Caption								
	•						Ol		Connel

mendix m


- •页面名称: TrainingEvents_Overview_Mobile
- •使用 Properties 窗格将页面标题设置为 Training Events
- •将列表视图连接到 TrainingEvent 实体
- •是否要自动填充列表视图的内容? -选择是
- •添加具有两列的布局网格小部件来构建页面
- •将文本小部件移动到左列
- •在文本小部件之间添加容器组件
- •删除列表视图中的搜索约束

[TrainingEvent, from database]	100 M
rt order: (default)	
arch on: [TotalNumberOfRegistrations]	
Auto-fill	Auto-fill
{/Title}	
{StartDate}	
{EndDate}	
{/Name}	
{/Name}	
Load more	



什么是纳流(Nanoflow)?

- 允许表达您的应用程序的逻辑
- 移动端优势:
 - 直接在浏览器/设备上运行(速度优势)
 - 可以在离线应用程序中使用



Nanoflow Commons 模块

- □ NanoflowCommons
 - 0 🚠 Domain Model
 - 0 🔍 Security
 - 🗉 🛛 🚞 ClientActivities
 - 🗉 🛛 🚞 ExternalActivities
 - Js CallPhoneNumber
 - ᠾ DraftEmail
 - 🔙 NavigateTo
 - ᠾ OpenMap
 - Js OpenURL
 - Js SendTextMessage
 - Js Share
 - 🗉 O 🛅 Geolocation
 - 🗉 🛛 🚞 LocalStorage
 - 🗉 🛛 🚞 OtherActivities
 - 0 ቬ Icons
 - π Nanoflow_Commons_Version



>>> 添加地点图标与展示地点的纳流

•添加按钮:

标题: empty 图标: Map

•连接到纳流 ACT_TrainingEvent_ShowLocation

	Auto-fill					Auto-fill		
/Title}	Edit Action Button 'ad	tionButton1'						
	General Appearance							
	General							
	Caption					Edit		
artDate}	Tooltip							
	Icon	Glyphicon 'map m	arker'			Select		
	Render mode	O Button Lini	¢					
dDate)	Visibility		Select Nan	oflow			_	
idDate}	Visible	Default						
	Events		Q Filter					
	On click	Call a nanoflow	🛨 Expans	All 📃 Collapse	e All			
/Name}	Common		🕀 😁 App	Store modules				
	Name	actionButton1	🕆 Sys	tem				
v	Tab index	0 🗘	₩y	rstModule				
				Add Nanof	low			×
				Name	ACT TrainingEv	ent ShowLocation		
/Name}				- Tanto			OK	Canaal
,							UK	Cancel
	0							
			-		Select	New	None	Cancel



➢ 配置 ACT_TrainingEvent_ShowLocation 纳流

•将 Location 设置为 \$TrainingEvent/MyFirstModule.TrainingEvent_Location/MyFirstModule.Location/Address





>>> 添加显示路线按钮并绑定纳流

•添加按钮:

Caption: Show Route

Style: Primary

•连接到纳流

ACT_TrainingEvent_ViewRoute

Auto-fill	Edit Action Button 'a	actionButton2'	Select Nanoflow			- [
{/Title}	General Appearance General		Q Filter					
			🛨 Expand All 📃	Collapse All				
	Caption	View Route	💷 💎 Marketplace	modules				
	Tooltip		🐡 System					
{StartDate}	lcon	Glyphicon 'road'	MyFirstModule					
	Render mode	Button Link	ACI_Irain	ingEvent_ShowLocation				
	Button style	Default						
{EndDate}	Visibility		-				_	
	Visible	Default	Add Nanoflov	oflow			×	
	Events			ACT TrainingFrank \/feur	Deute		_	
((Alama)	On click	Call a nanoflow	Name	ACT_frainingEvent_view	Route			
{/INdITIE}	Common		OH			Cancel		
•	Name	actionButton2	_					
	Tab index	0						
{_/Name}								
(,								
A View Route								
	-							
	0			Select	Now	None	Cancel	



配置 ACT_TrainingEvent_ShowRoute 纳流

• 设置 Location 参数为:

\$TrainingEvent/MyFirstModule.TrainingEvent_Location/MyFirstModule.Location/Address







作为管理员,我希望学员能够分享有关培训活动的信息,以推广LearnNow应用程序的产品。



>添加分享按钮并绑定纳流

- •添加按钮:
 - Caption: Share
 - Icon: Share
- •连接到纳流: ACT_TrainingEvent_Share

			4		
rder: (default)					
n on: (none)		Edit Action Button 'a	ctionButton3'		
Auto-fill		O mart i			
(/Title)		General Appearance			_
{/ Inte}	🖸 🖾 Share	General	Share	P	Edit
		Capiton	Silale		Edit
		Tooltip		I r	
{StartDate}		Icon	Glyphicon 'share'		Select
		Render mode	Button Link		
		Button style	Warning		~
		Visibility			
{EndDate}		Visible	Default		Edit
		Events			
		On click	Call a nanoflow		~
(/Namo)		Com Select Nano	flow	- 0	X
/Names		Nam			
•		Tab C Filter			
		🛨 Expand A	II 📃 Collapse All		
		🕀 💎 M Ad	d Nanoflow	×	
		S Na	me ACT_TrainingEvent_Share		
{/Name}				OK Cancel	
A View Route		► AC	I IrainingEvent ViewRoute		
			Entropy Entrop		



➢ 配置 ACT_TrainingEvent_Share 纳流

•设置 Url 为 'https://academy.mendix.com/link/path/31/Become-a-Rapid-Developer/'

- •设置 Text 为 'Check out the offerings from the Mx Academy!'
- •设置 Title 为 'Mendix Academy'







- •打开 TrainingEvent_Overview_Mobile 页面
- •将 List view 的数据源类型设置为 Xpath
- •添加 Xpath 约束

[EndDate >= '[%BeginOfCurrentDay%]']

	Auto-40				
ainingEvent, by XPath] rder: (default)			1		
on: [TotalNumberOfRegistrations]					
Edit List View 'listView1	с	– 🗆 🗙			
General Data source Vi	sibility Common Templates Appearance				
Data source					
Туре	O Database XPath O Microflow O Nanoflow Associat	tion	Select Entity	<u></u>	
Entity (path)	MyFirstModule.TrainingEvent	Select	0.00		
XPath constraint	[EndDate>= '[%BeginOfCurrentDay%]']		C Filter		
			Expand All Coll	apse All	
			E 😁 App Store modu	lles	
			E C System		
			(E) Course		
			E Location		
			E Registration		
			(E) Teacher		
			Trainee	-	
	Line Column Error	_	(E) TrainingEven	t	
			Select	None	C
			Select	Hone	





更新模块安全设定:页面访问权限

Security of Module 'MyFirstModule'

- -

OK

Cancel

 \times

Module roles Page access Microflow access Nanoflow access Workflow access Entity access

Note: Changes you make here modify the corresponding pages.

	Page	Administrator	Teacher	Trainee	Туре
\square	Course_NewEdit	\checkmark			Page
\square	Course_Overview	\checkmark	\checkmark		Page
\square	Home_Web	\checkmark	\checkmark		Page
\square	Location_NewEdit	\checkmark			Page
\square	Location_Overview	\checkmark	\checkmark		Page
\square	Registration_NewEdit	\checkmark			Page
\square	Teacher_NewEdit	\checkmark			Page
\square	Teacher_Overview	\checkmark	\checkmark		Page
\square	Trainee_NewEdit	\checkmark			Page
\square	Trainee_Overview	\checkmark	\checkmark		Page
\square	TrainingEvent_NewEdit	\checkmark			Page
\Box	TrainingEvent_Overview	\checkmark	\checkmark	\checkmark	Page
D	TrainingEvent_Registration_Overview	\checkmark	\checkmark		Page
D	TrainingEvent_Overview_Mobile	\checkmark			Page

 Show usage

 Document

 Object





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》 更新模块安全设定: 纳流访问权限

Security of Module 'MyFirstModule'				_	×
• Module roles Page access Microflow access	Nanoflow access Wo	rkflow access Entity	access		
Note: Changes you make here modify the c	orresponding nanoflow	s.			
🖉 Open nanoflow					
Nanoflow	Administrator	Teacher	Trainee		
ACT_TrainingEvent_Share			\checkmark		
ACT_TrainingEvent_ShowLocation			\checkmark		
ACT_TrainingEvent_ViewRoute			\checkmark		
Show usage					
Document		Object			

发布到云端

- •运行和发布
- •在响应式浏览器中预览
- •使用 demo_administrator 数据登录,创建用户和基本数据
- •复制应用链接并在手机上打开,以 demo_trainee 身份登录



Knowledge checks

Go to kahoot.it



Summary

Go make it!

认证考试

Certifications

The Mendix Developer Certification Program will help to boost your career by validating your knowledge, skill level, and contributions to the Mendix community. A certification obtained at the Rapid Developer, Advanced Developer, and Expert Developer levels contributes to your ranking and visibility, and it will be directly visible to the Mendix community.



Rapid Developer This certification shows you understand the fundamentals of the Mendix Platform and how, when, and where to use them.





Intermediate Developer

This certification shows you are able to apply knowledge into practical scenarios and be a great addition to Mendix projects.





Advanced Developer This certification exam is a practical assignment that will test your Mendix Platform skills and knowledge.





Expert Developer

Certified Expert Developers have proven capabilities in taking the lead when delivering Mendix applications to their customers.



mx mendix

https://academyportalcloud.mendixcloud.com/index.html



希望持续精进?

0)

Learning Paths

When you want to pioneer a way forward, it's good to start with a path. These Learning Paths guide you through modules that build your skills.

▲ Find Your Learning Path

Your Role		Your Level	Tags		
Architect	Developer	Basics	Administration	Collaboration	Commits
Operations	Product Owner	Rapid	Data	Desktop Modeler	Domain Model
Scrum Master	UX Designer	Advanced	Errors	Integration	Logging
			Microflows	Pages	SAP
			Security	Translation	User Experience

Web Modeler







Rapid Developer Course

Rapid | 3 Days

Learn the fundamentals of the Mendix platform and how, when, and where to use them.

View Classroom









