

# Mendix 기본 개발 교육

Siemens Digital Industries Software / Cloud GTM APAC 강경민 프로

# Agenda:

개요

Home 메뉴 구성

생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

일별 생산관리

제품 불량관리

대시보드

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생산공정, 생산제품, 검사담당자 개발 실습

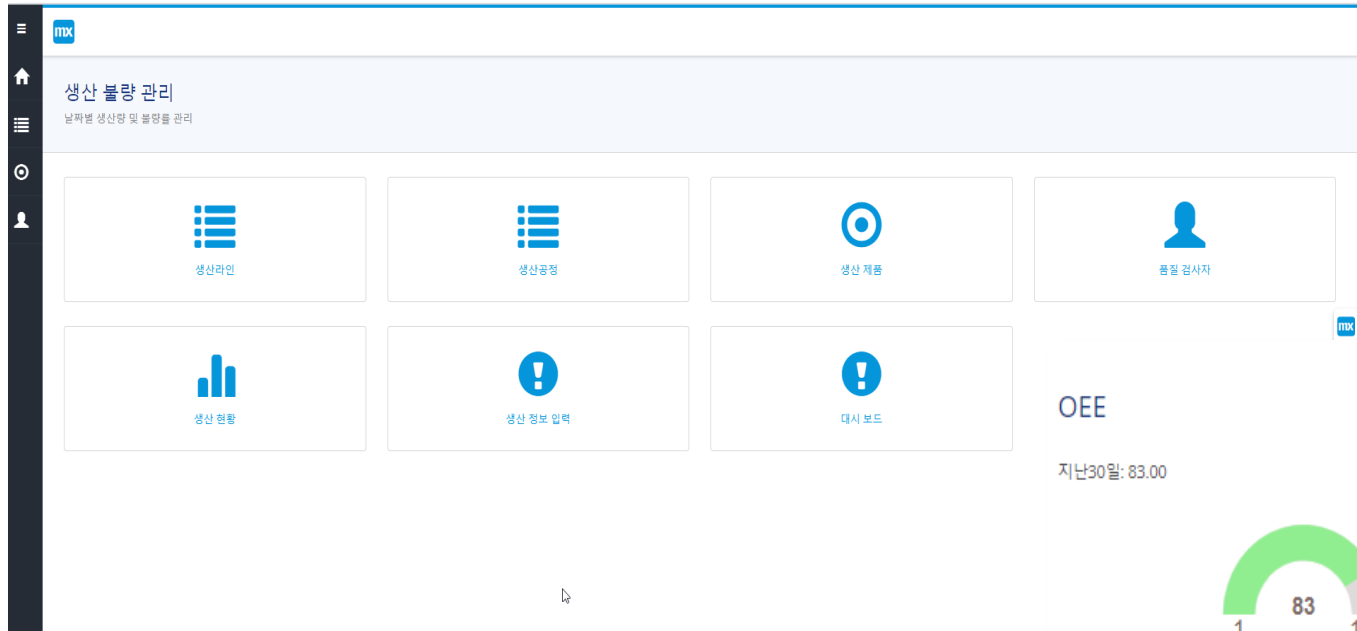
일별 생산관리

제품 불량관리

대시보드

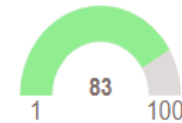
# 개요

## 개발 목표 – 생산 불량 관리 앱 개발



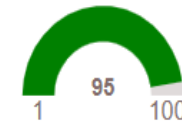
OEE

지난30일: 83.00



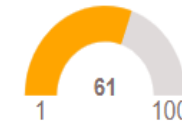
공정불량지수

지난30일: 95.00



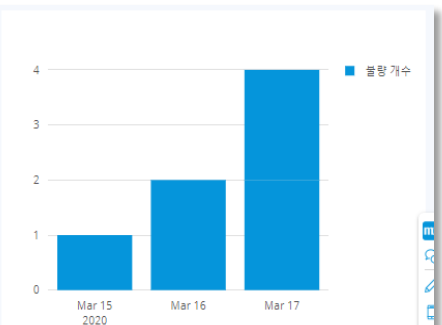
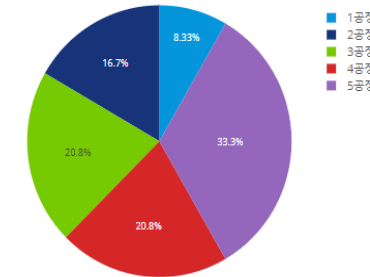
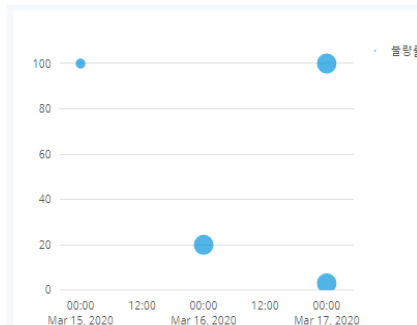
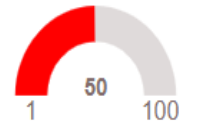
품질

지난30일: 83.00



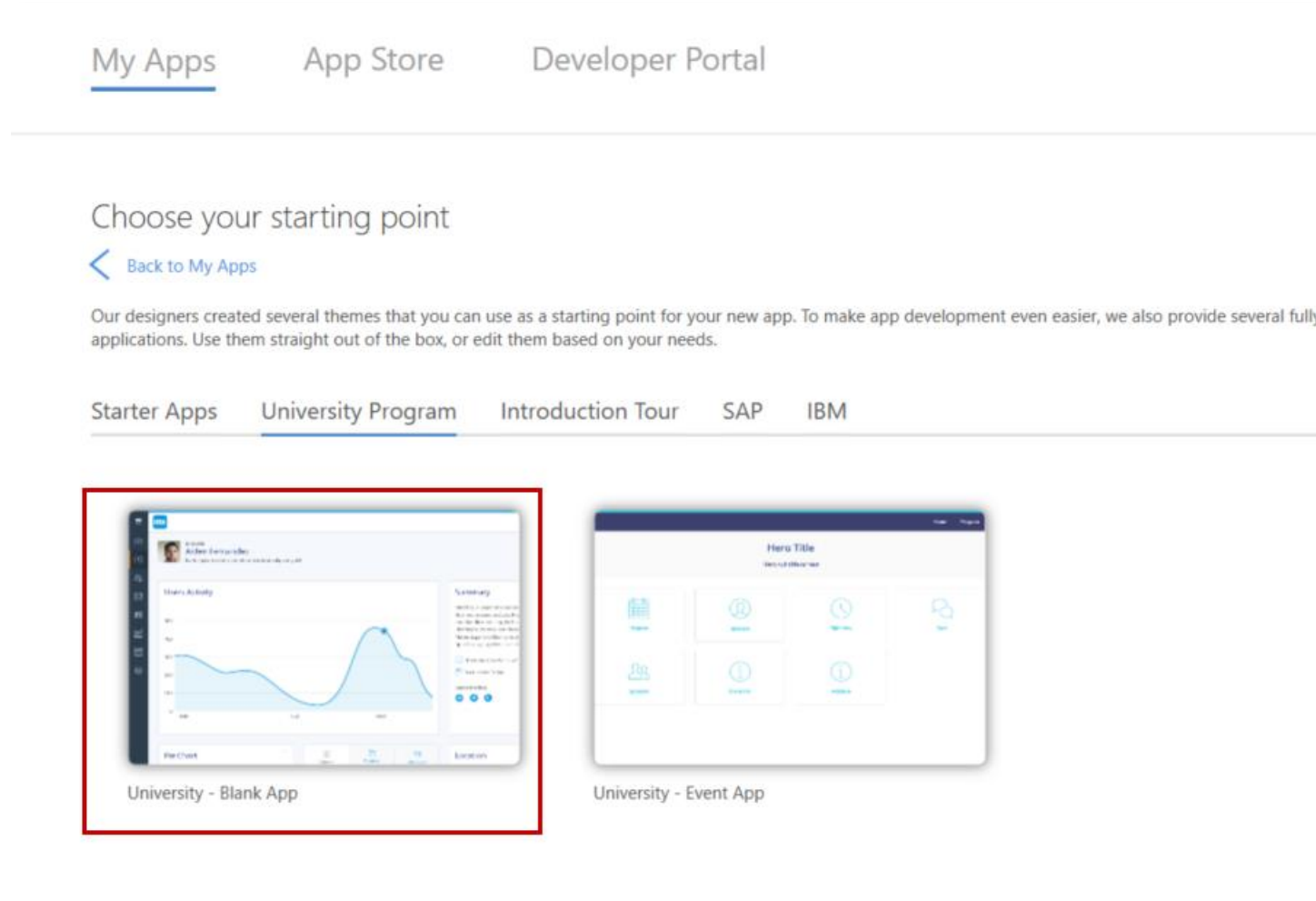
작업성과

지난30일: 50.00



# 개요

## App Store – Start Your First App 다운로드





# Agenda:

개요

Home 메뉴 구성

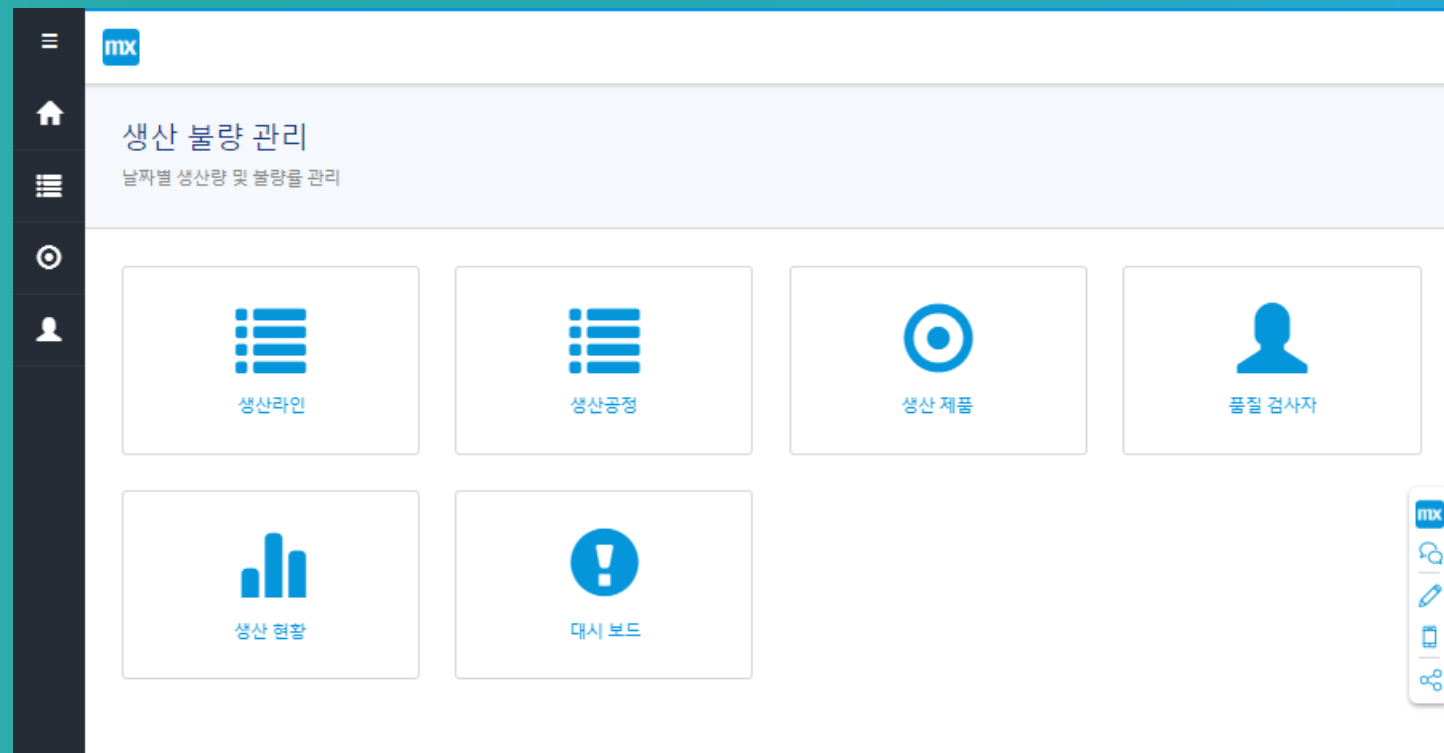
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

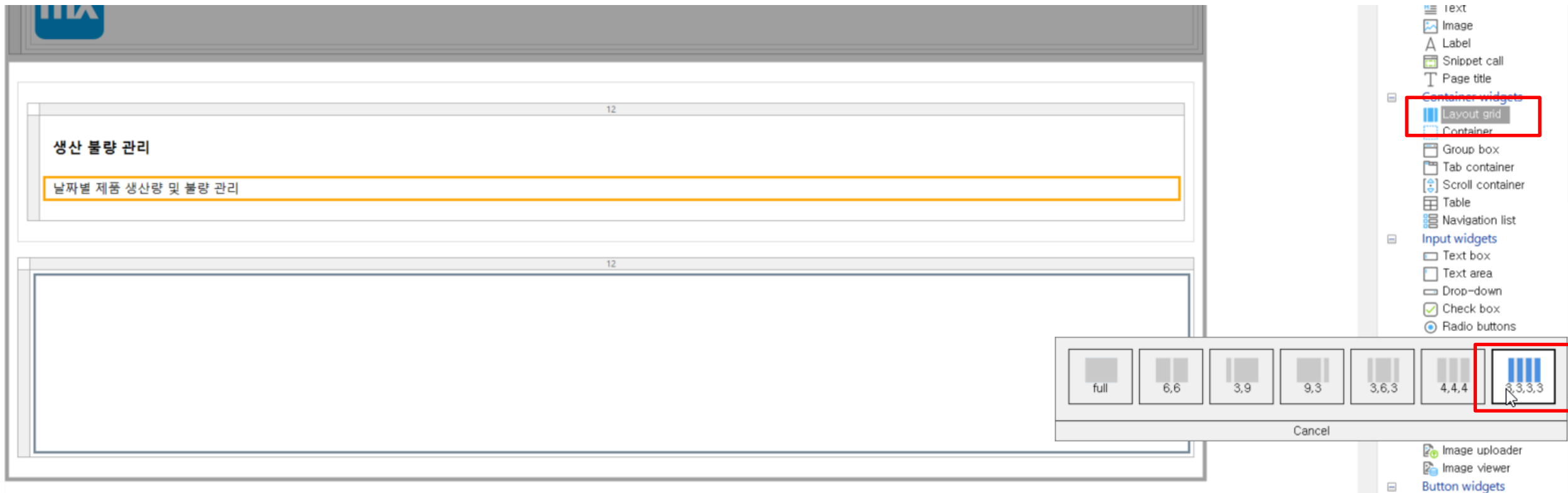
일별 생산관리

제품 불량관리

대시보드

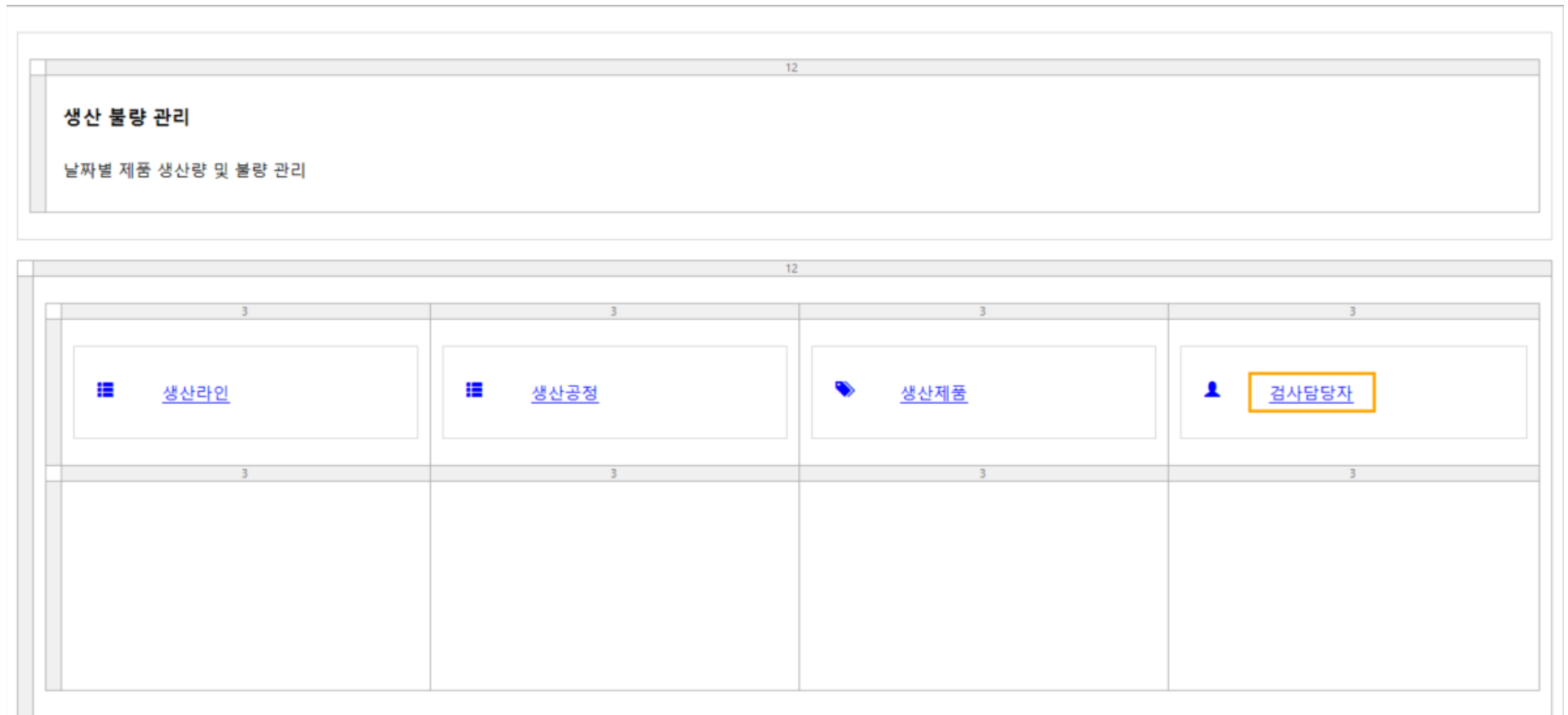
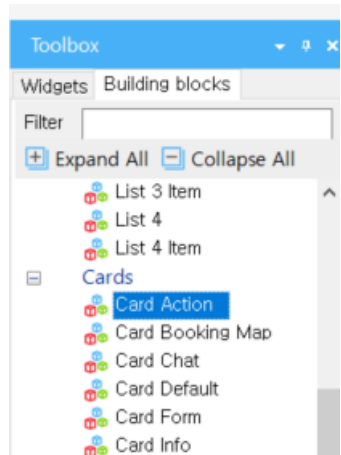


# Home 메뉴 구성 레이아웃 구성



# Home 메뉴 구성

## 메뉴 버튼 추가





# Agenda:

개요

Home 메뉴 구성

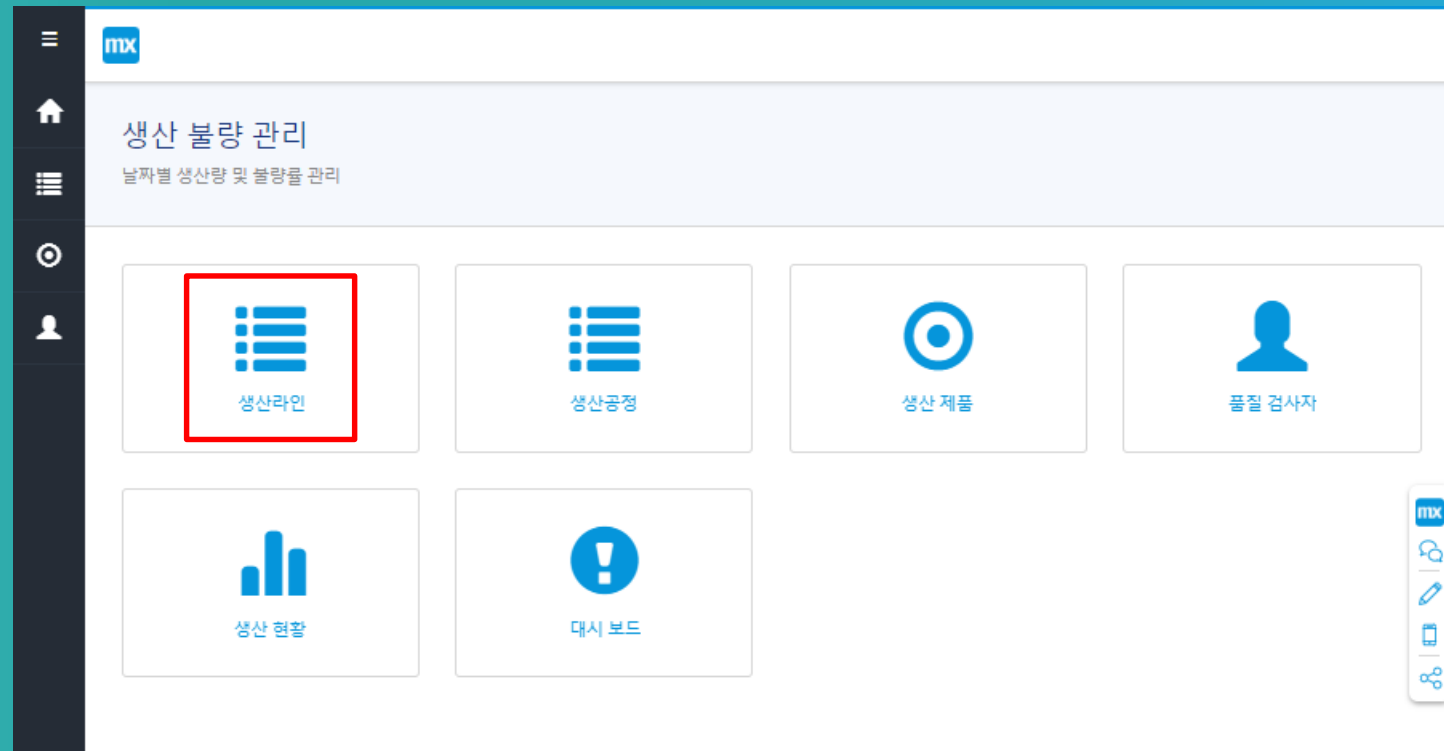
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

일별 생산관리

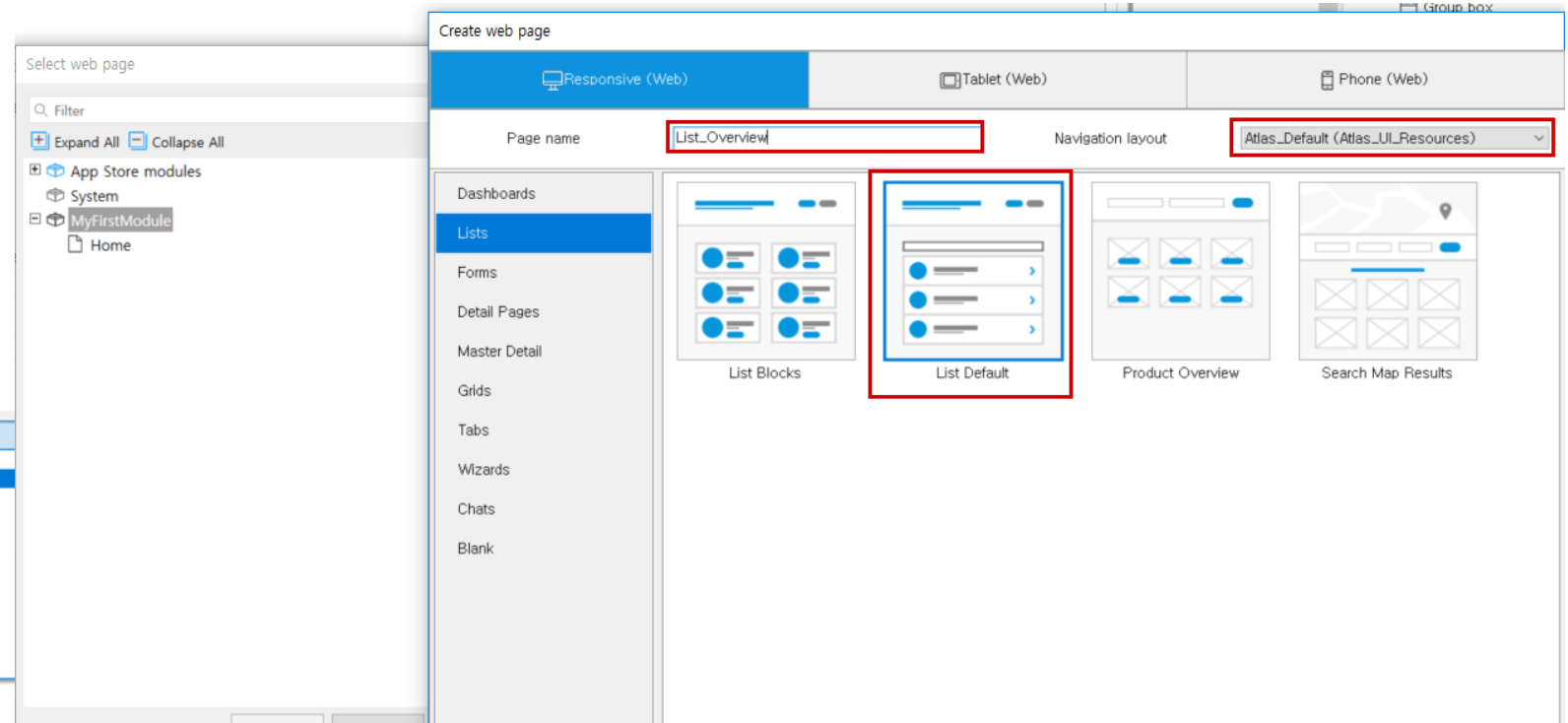
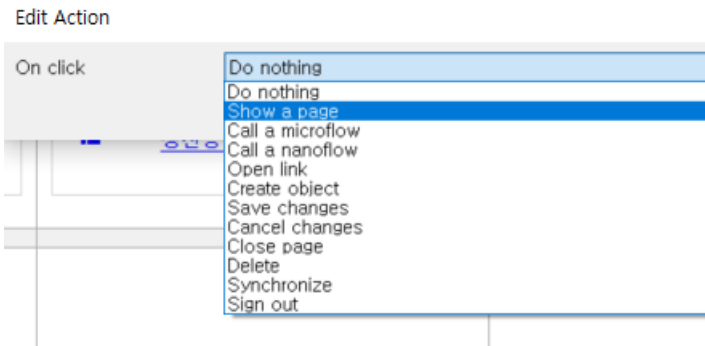
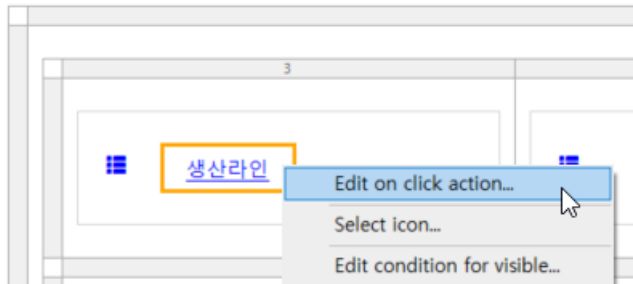
제품 불량관리

대시보드



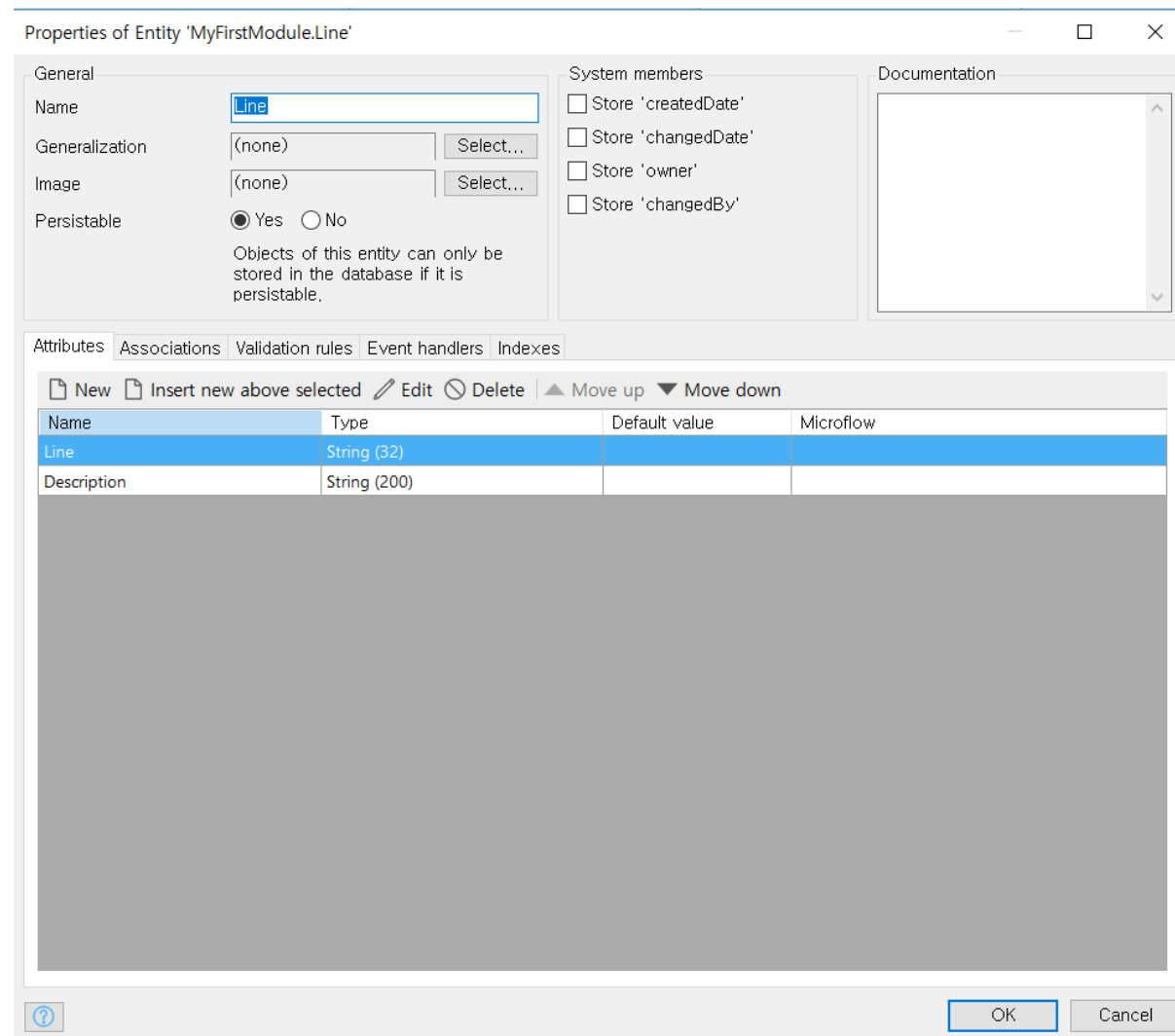
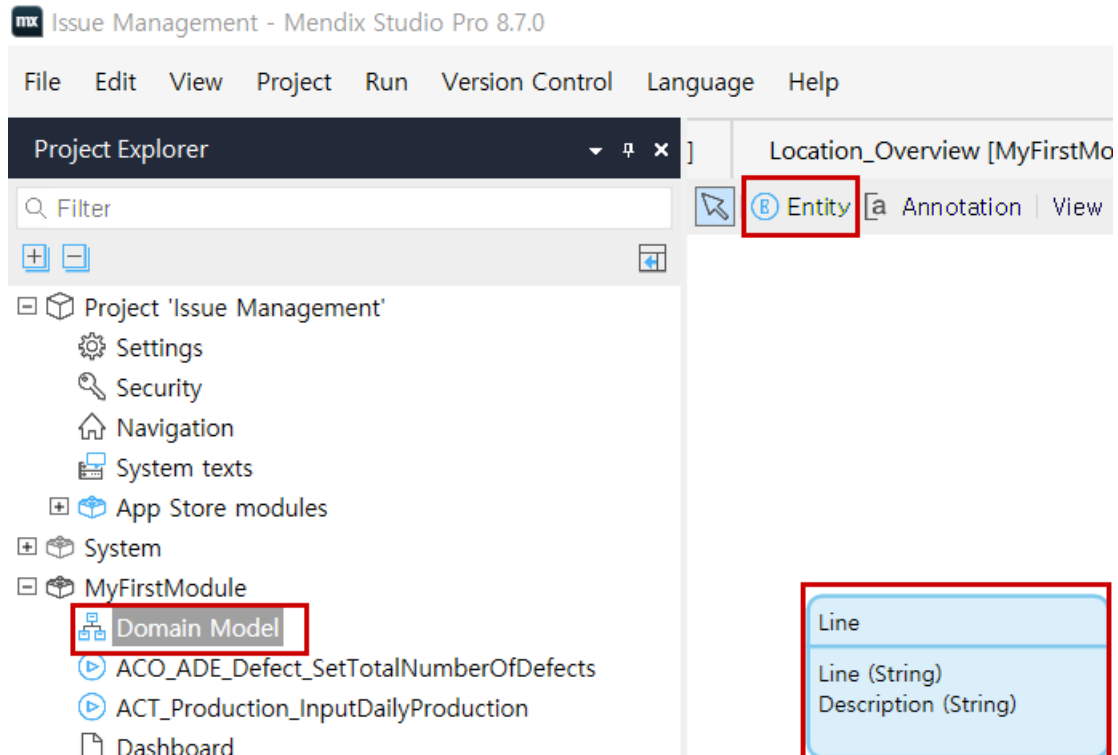
# 생산라인 관리

## 라인 조회 페이지



# 생산라인 관리

## Entity 생성 – 라인 관리 데이터 모델 및 속성 정의



# 생산라인 관리

## Entity 생성

Properties of Entity 'MyFirstModule.Defect'

General

Name: Defect

Generalization: (none) [Select...]

Image: (none) [Select...]

Persistable: ☒ Yes ☐ No  
Objects of this entity can only be stored in the database if it is persistable.

System members

☐ Store 'createdDate'

☐ Store 'changedDate'

☐ Store 'owner'

☐ Store 'changedBy'

Attributes Associations Validation rules Event handlers Indexes

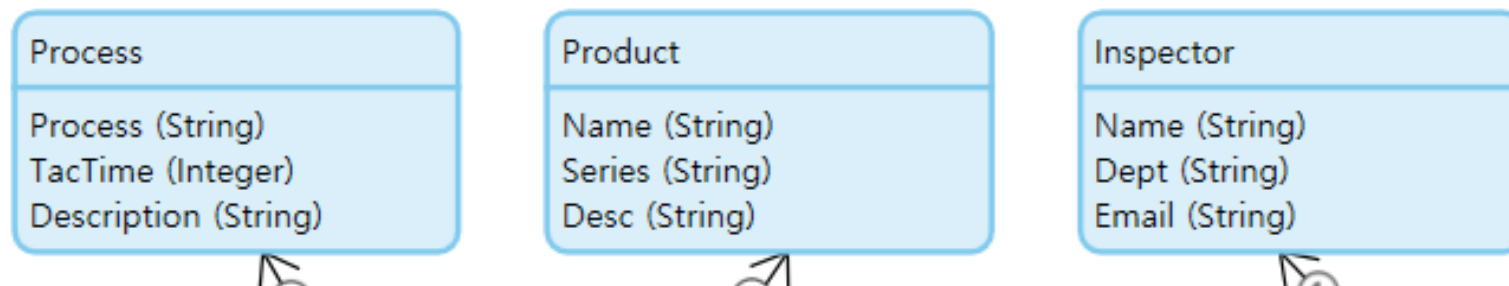
[New] [Insert new above selected] [Edit] [Delete] [Move up] [Move down]

Name	Type	Default value
Number	AutoNumber	1
DefectName	String (200)	
Desc	String (200)	
Date	Date and time	
Status	Boolean	false
Solution	String (200)	

Type	Possible values
AutoNumber	Automatically generated positive or negative whole number. The default value of the attribute determines the first number that will be generated. Each object created of the same type will have an AutoNumber that is one greater than the previous one.
Binary	Binary data (for example, an entire file).
Boolean	True or false.
Decimal	A positive or negative number that can have digits after the decimal point.
<u>DateTime</u>	A point in time that consists of a date and time component, accurate up to the millisecond.
Enumeration	A list of predefined values.
<u>HashString</u>	The string will be stored after it is hashed (encrypted). This type can be used to store a password, for example. Hash values are generated using the hash algorithm that is chosen in the Project Settings.
Integer	A whole number that can be positive (maximum $2^{31}-1$ , thus 2147483647), negative (minimum $-2^{31}$ , thus -2147483648), or zero.
Long	A whole number that can be positive (maximum $2^{63}-1$ , negative (minimum $-2^{63}$ ), or zero.
String	A text containing letters, spaces, numbers, and other characters.

# 생산라인 관리

## Entity 생성 – 데이터 모델 및 속성 정의



Properties of Entity 'MyFirstModule.Process'

General

Name:

Generalization:

Image:

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System: ☐ Store ☐ Store ☐ Store ☐ Store

Attributes Associations Validation rules Event handlers Indexes

Name	Type	D
Process	String (200)	
TacTime	Integer	0
Description	String (200)	

Properties of Entity 'MyFirstModule.Product'

General

Name:

Generalization:

Image:

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System: ☐ Store ☐ Store ☐ Store ☐ Store

Attributes Associations Validation rules Event handlers Indexes

Name	Type
Name	String (32)
Series	String (32)
Desc	String (200)

Properties of Entity 'MyFirstModule.Inspector'

General

Name:

Generalization:

Image:

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

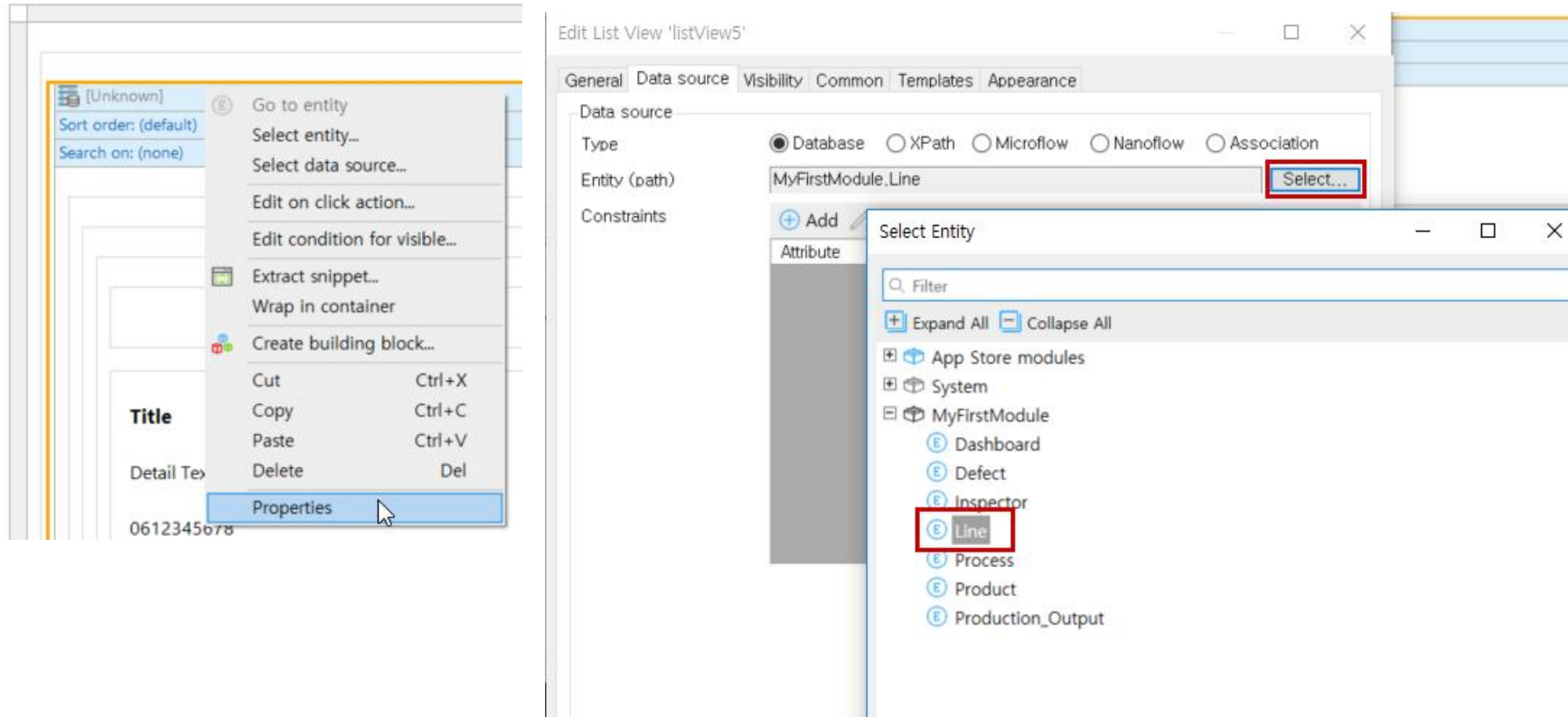
System: ☒ Store ☒ Store ☒ Store ☒ Store

Attributes Associations Validation rules Event handlers Indexes

Name	Type
Name	String (32)
Dept	String (32)
Email	String (200)

# 생산라인 관리

## 라인 조회 페이지



# 생산라인 관리

## 라인 조회 페이지 – 제목 변경

9		3	
<div>생산라인 관리</div>		<div>Add</div>	

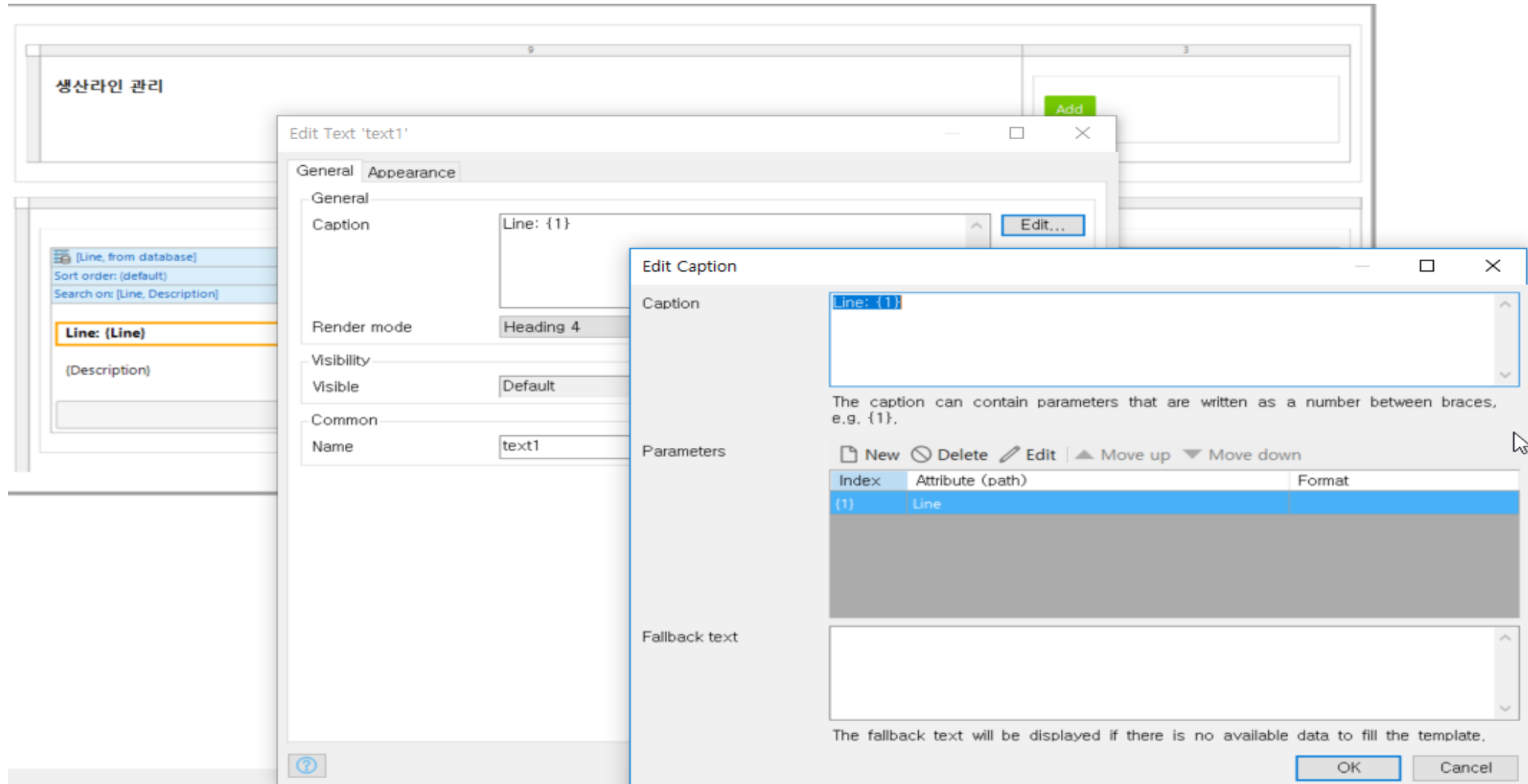
  

12	
<div>[Line, from database]</div>	
Sort order: {default}	
Search on: [Line, Description]	
<div>Line: {Line}</div>	
{Description}	
<div>Load more...</div>	



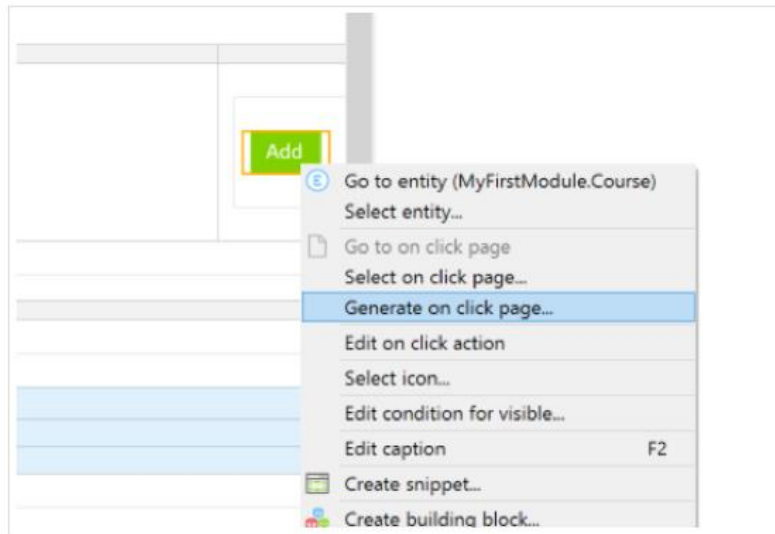
# 생산라인 관리

## 라인 조회 페이지 – DB 속성 연계



# 생산라인 관리

## 라인 정보 입력 페이지



Create web page

Responsive (Web) Tablet (Web) Phone (Web)

Page name Line\_NewEdit Navigation layout PopupLayout (Atlas\_UI\_Resources)

Forms

Form Columns Form Horizontal Form Vertical

OK Cancel

# 생산라인 관리

## 라인 정보 입력 페이지



12

[Line. page parameter]

Line

[Line]

Description

[Description]

Save

Cancel

# Agenda:

개요

Home 메뉴 구성

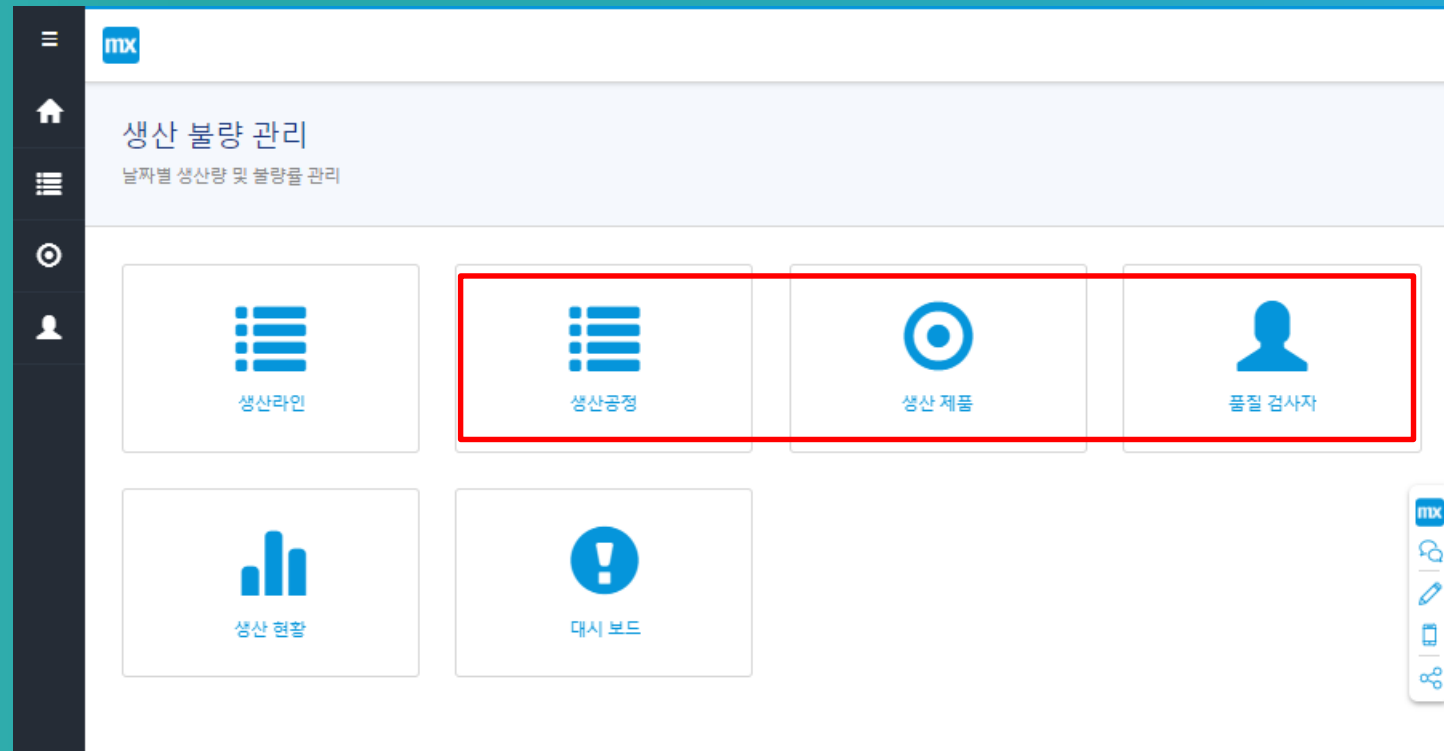
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

일별 생산관리

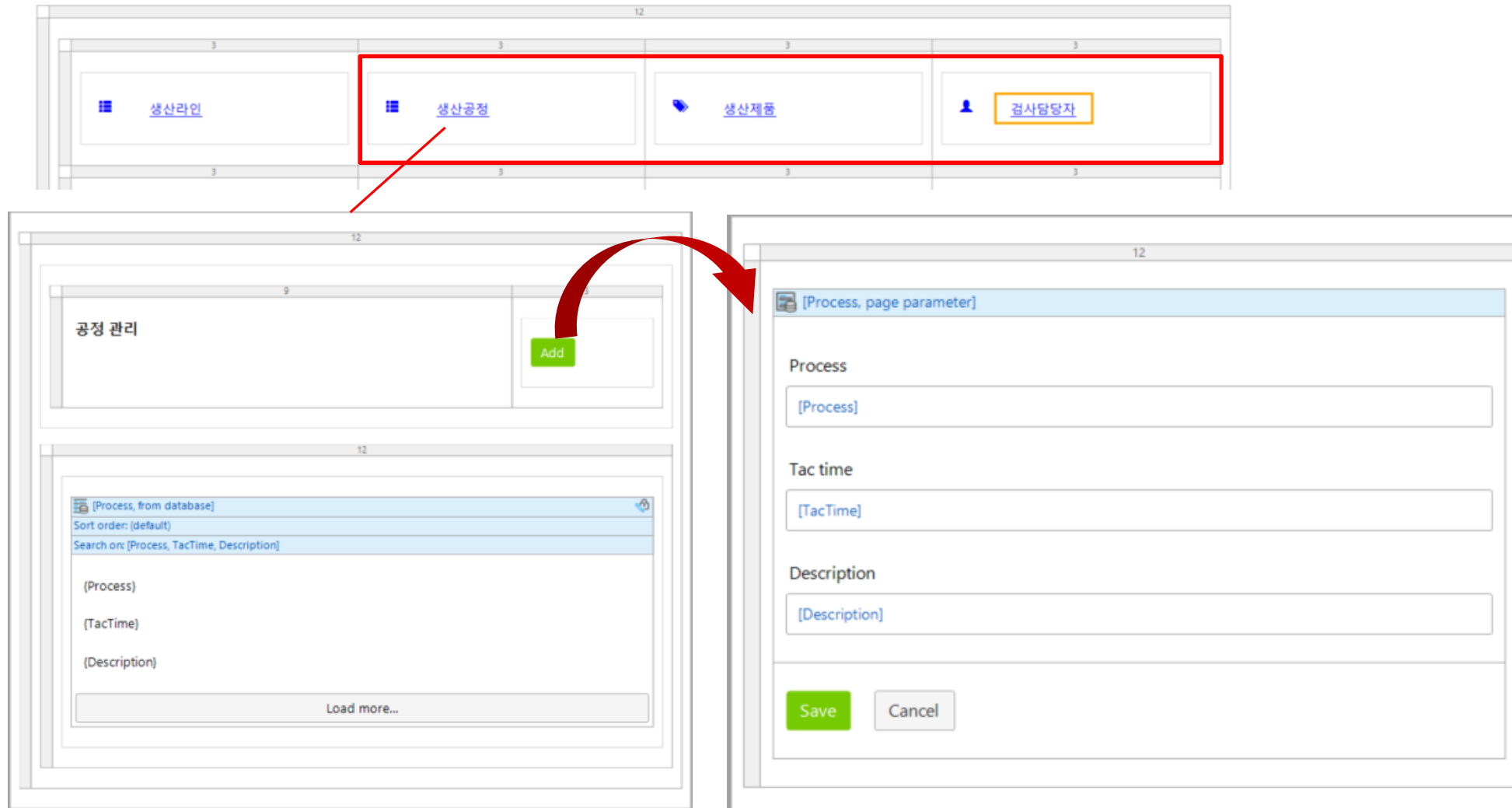
제품 불량관리

대시보드



# 생산공정, 생산제품, 검사담당자 개발 실습

생산공정, 생산제품, 검사담당자 – 메뉴별 조회, 입력 페이지 생성



# Agenda:

개요

Home 메뉴 구성

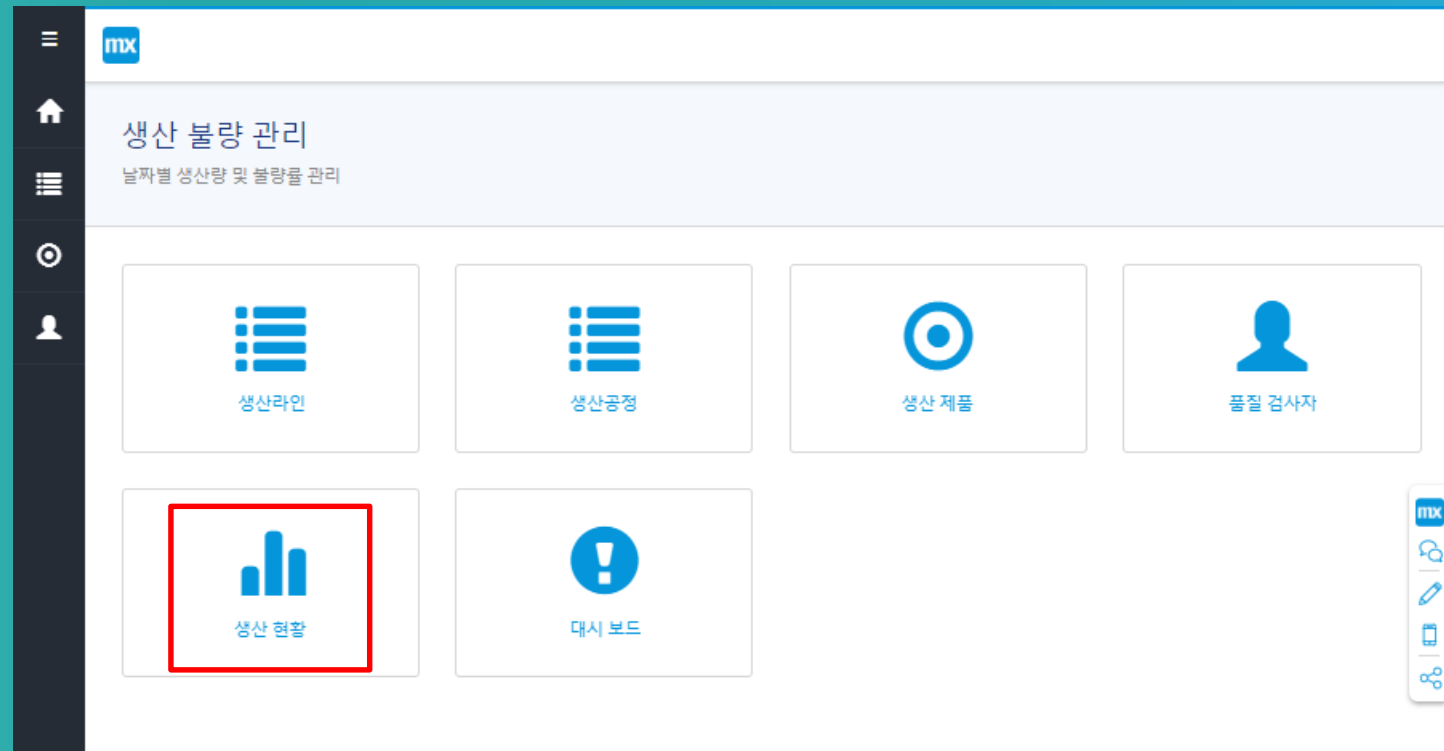
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

일별 생산관리

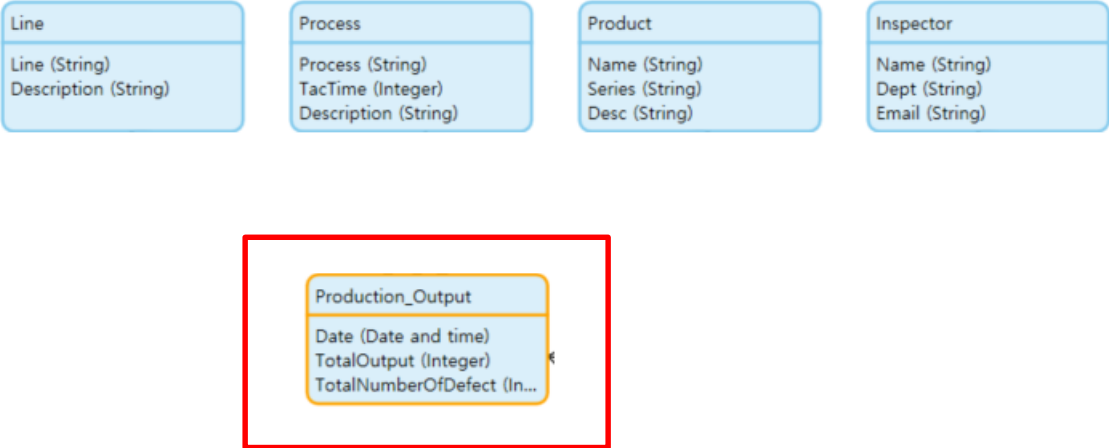
제품 불량관리

대시보드



# 일별 생산관리

## Entity 정의 – 일별 생산량 관리 DB 테이블 생성



Properties of Entity 'MyFirstModule.Production\_Output'

**General**

Name: Production\_Output

Generalization: (none) [Select...]

Image: (none) [Select...]

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

**System members**

- ☐ Store 'createdDate'
- ☐ Store 'changedDate'
- ☐ Store 'owner'
- ☐ Store 'changedBy'

**Attributes** | Associations | Validation rules | Event handlers | Indexes

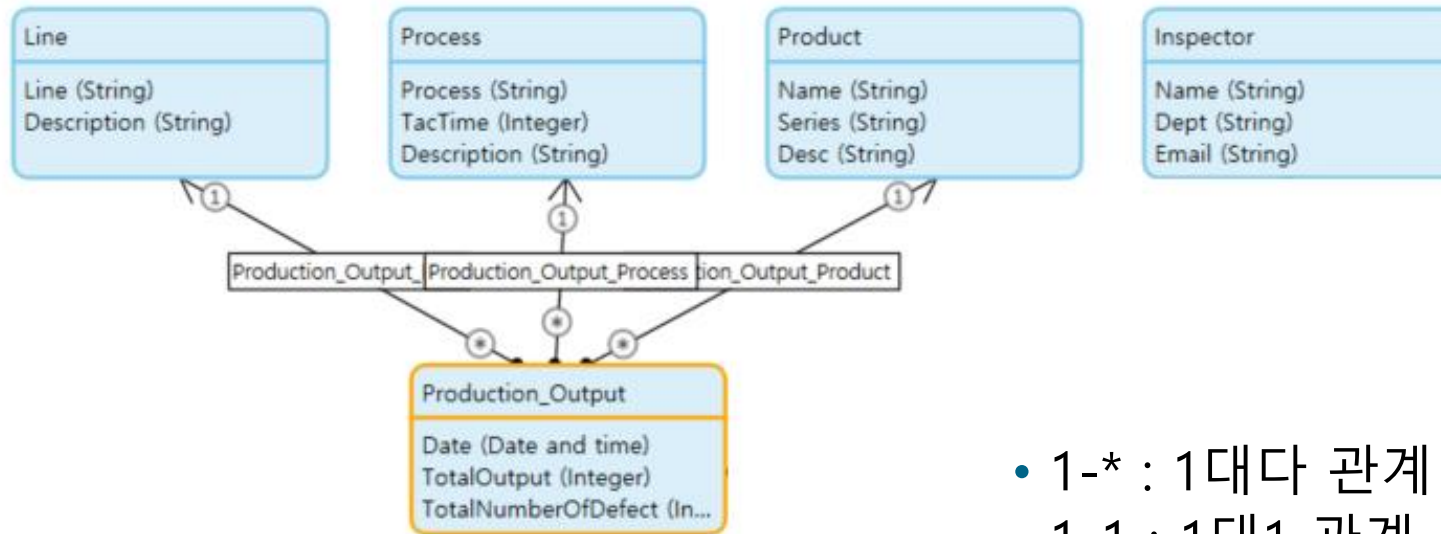
[New] [Insert new above selected] [Edit] [Delete] [Move up] [Move down]

Name	Type	Default value	M
Date	Date and time		
TotalOutput	Integer	0	
TotalNumberOfDefect	Integer	0	



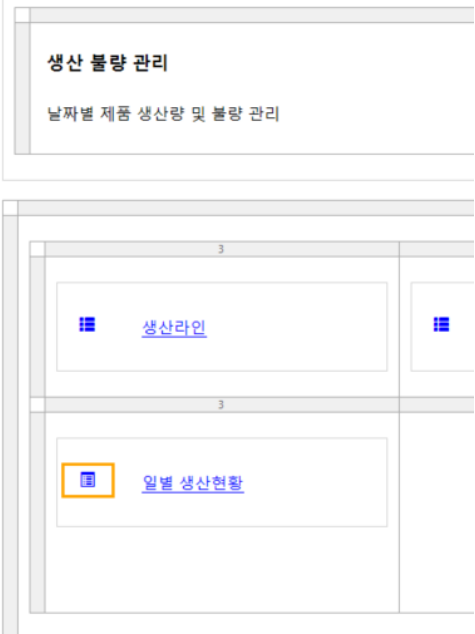
# 일별 생산관리

## Entity Association 정의 – DB 테이블 연계

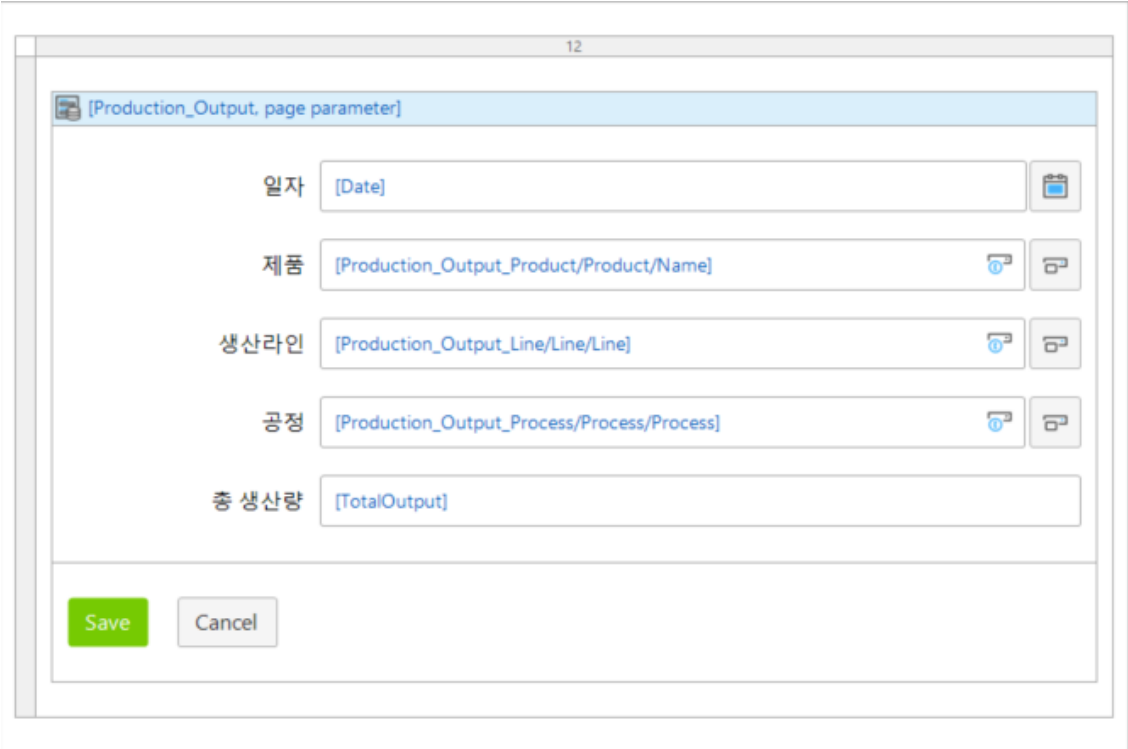
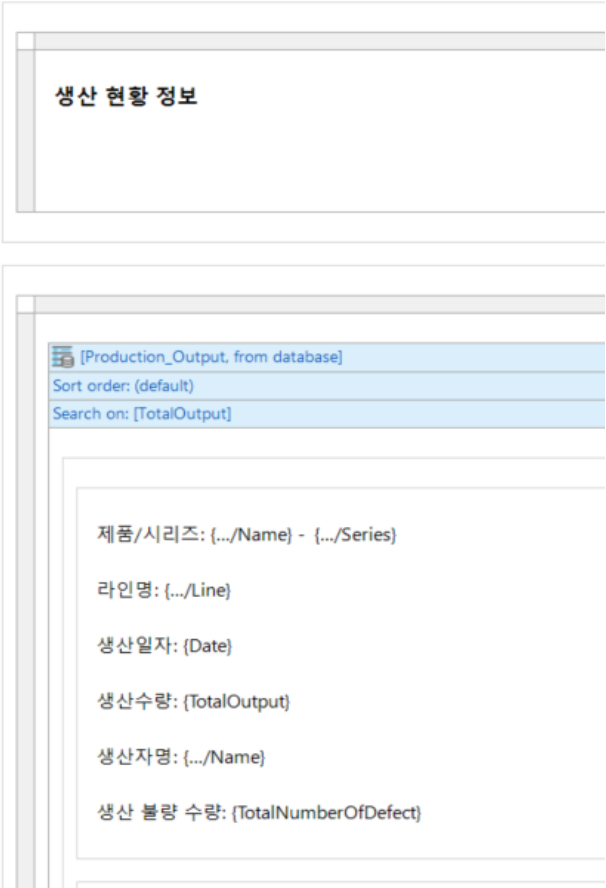


- 1-\* : 1대다 관계 (One-to-Many Association)
- 1-1 : 1대1 관계 (One-to-One Association)
- \*-\* : 다대다 관계 (Reference Set)

# 일별 생산관리 메뉴 추가

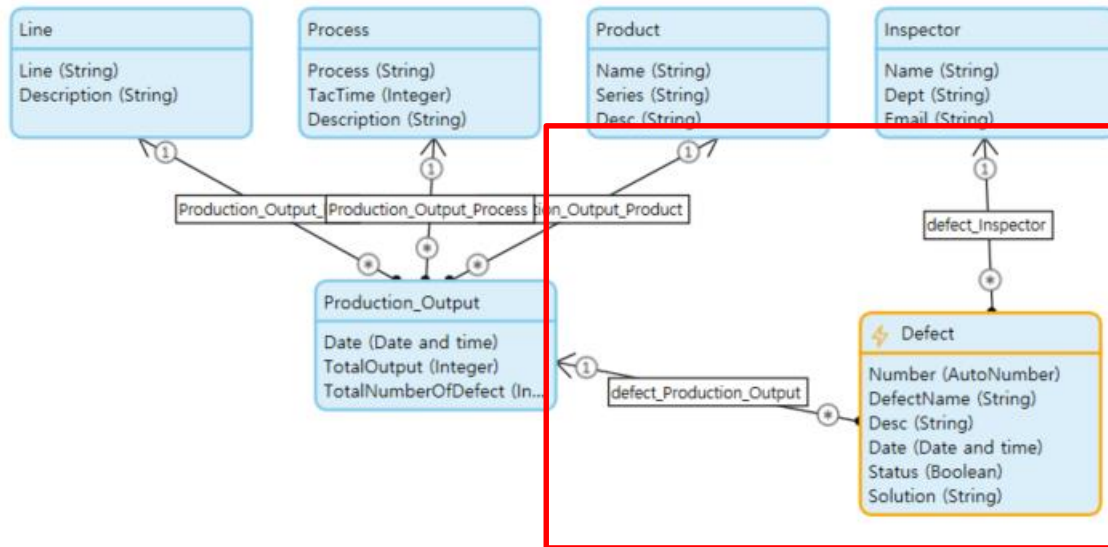


Production\_NewEdit  
Production\_Overview



# 일별 생산관리

## Entity 정의 – 제품 불량 DB 테이블 생성 및 Association 연계



Properties of Entity 'MyFirstModule.Defect'

General

Name:

Generalization:

Image:

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System members

☐ Store 'createdDate'

☐ Store 'changedDate'

☐ Store 'owner'

☐ Store 'changedBy'

Attributes Associations Validation rules Event handlers Indexes

Name	Type	Default value	Microfi
Number	AutoNumber	1	
DefectName	String (200)		
Desc	String (200)		
Date	Date and time		
Status	Boolean	false	
Solution	String (200)		

- Entity 명: Defect
- Association: Defect -> Inspector
- Association: Defect -> Production\_Output

# Agenda:

개요

Home 메뉴 구성

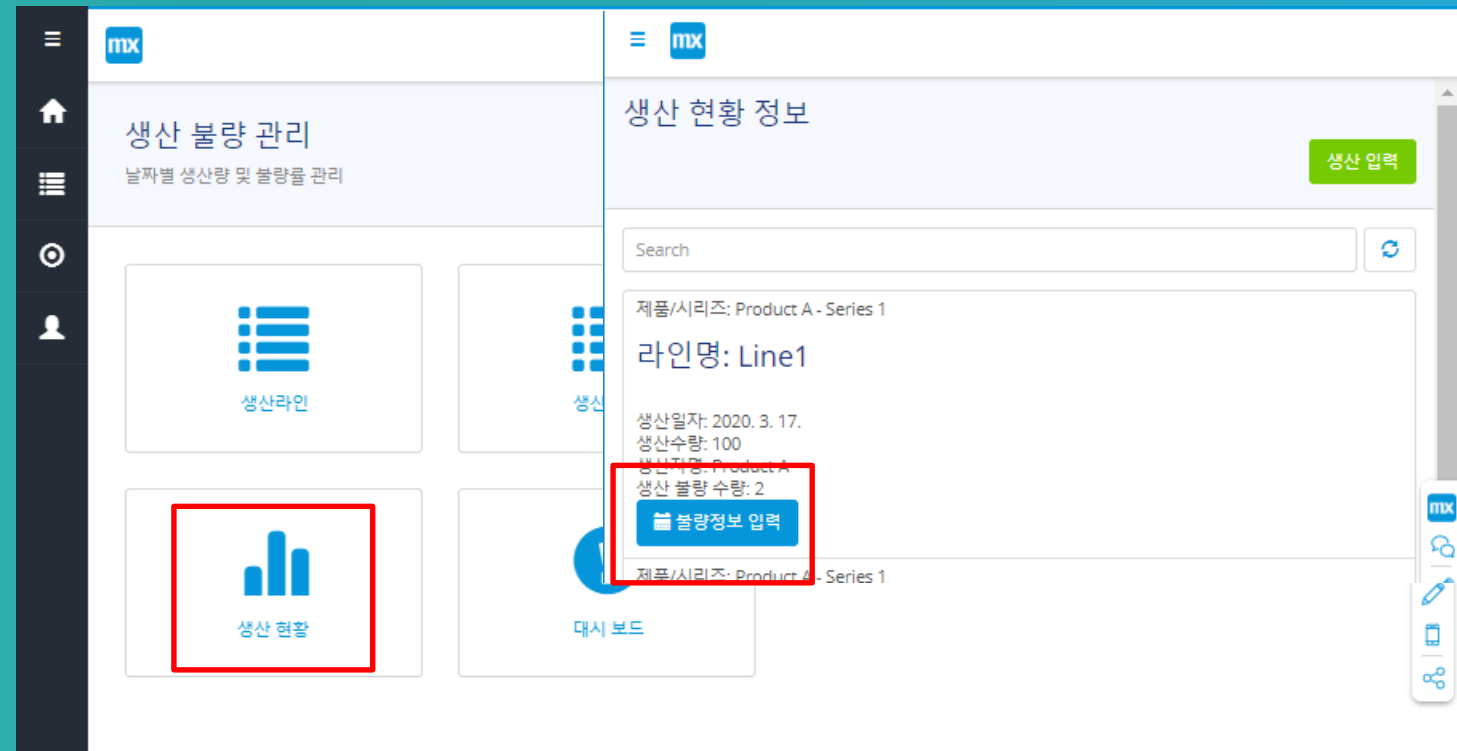
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

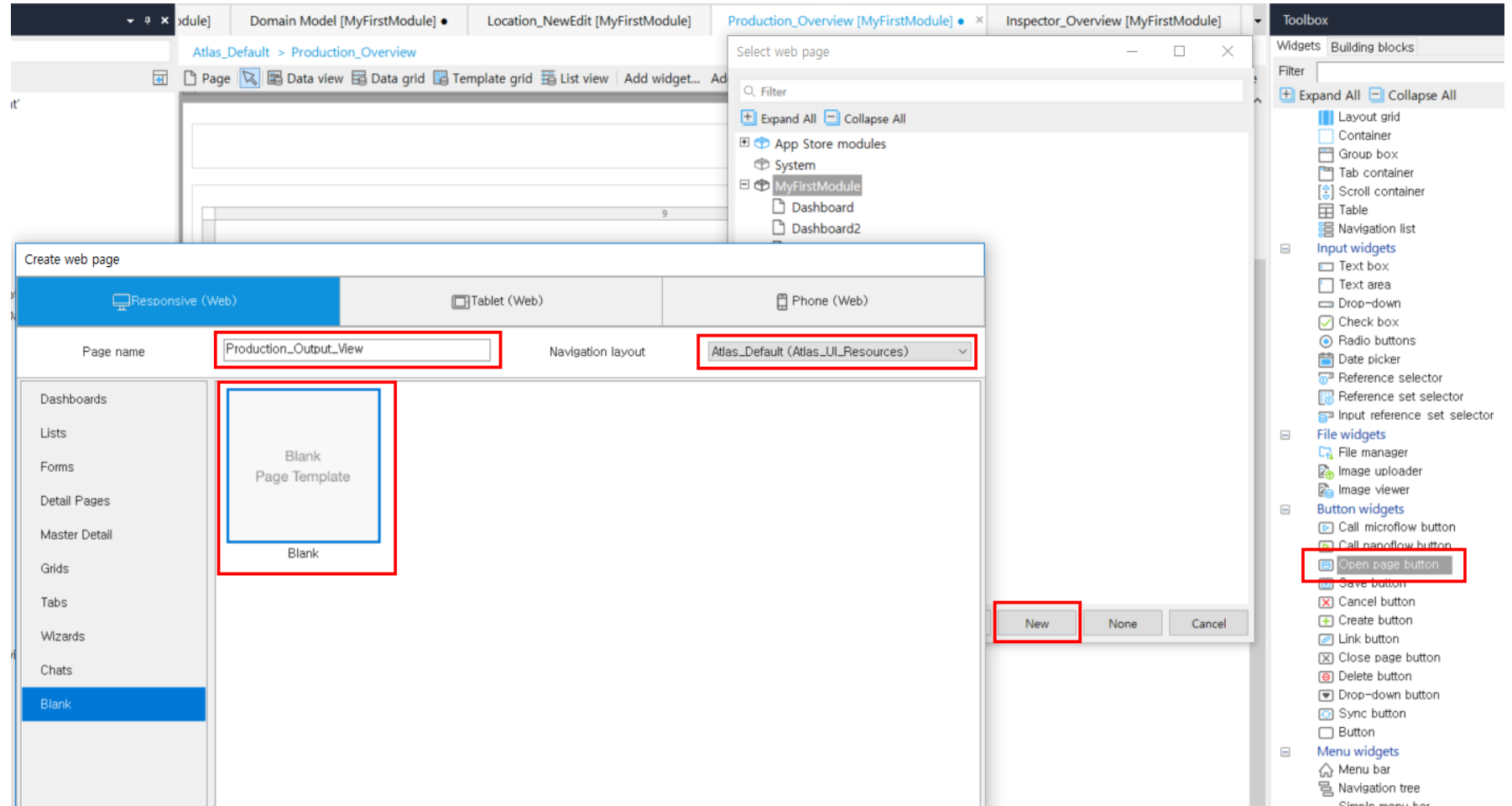
일별 생산관리

제품 불량관리

대시보드

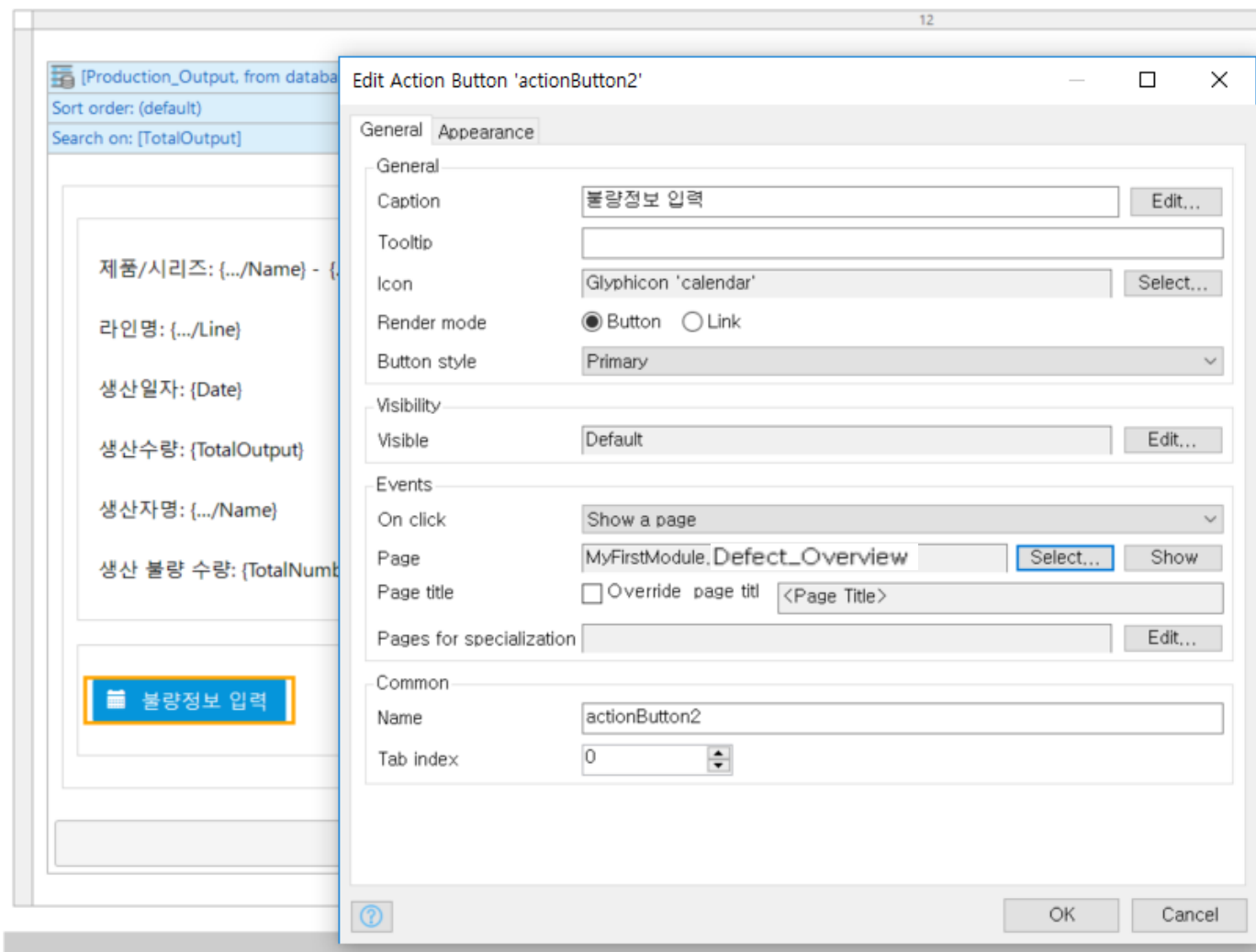


# 제품 불량 관리 생산 관리 조회 페이지 생성



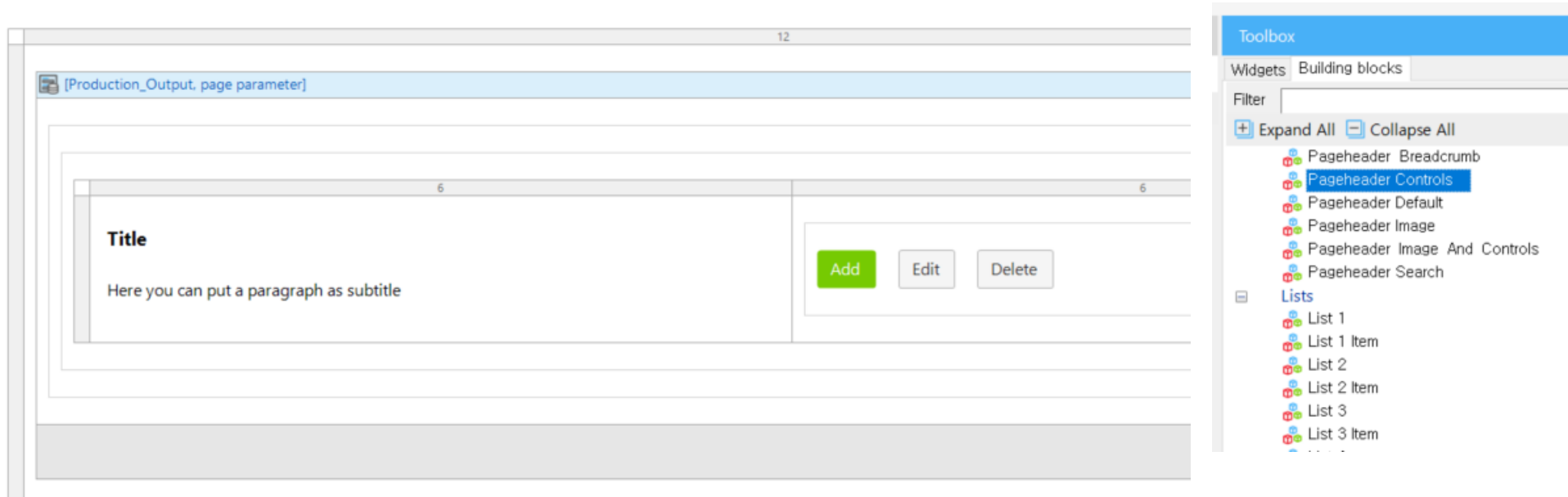
# 제품 불량 관리

## 불량정보 입력 버튼 생성

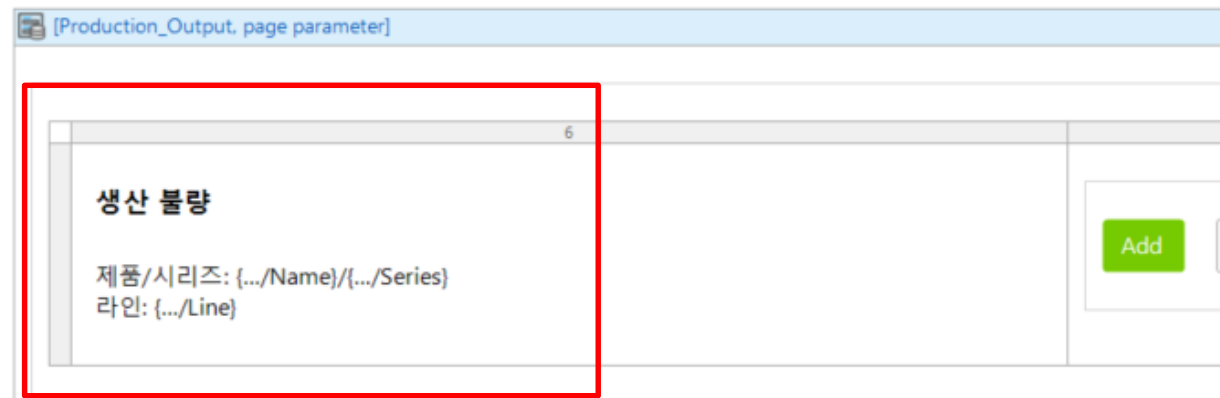


# 제품 불량 관리

## 불량 조회 화면 – 화면 제목 변경



- Data View
- Layout grid
- Pageheader Controls





# 제품 불량 관리

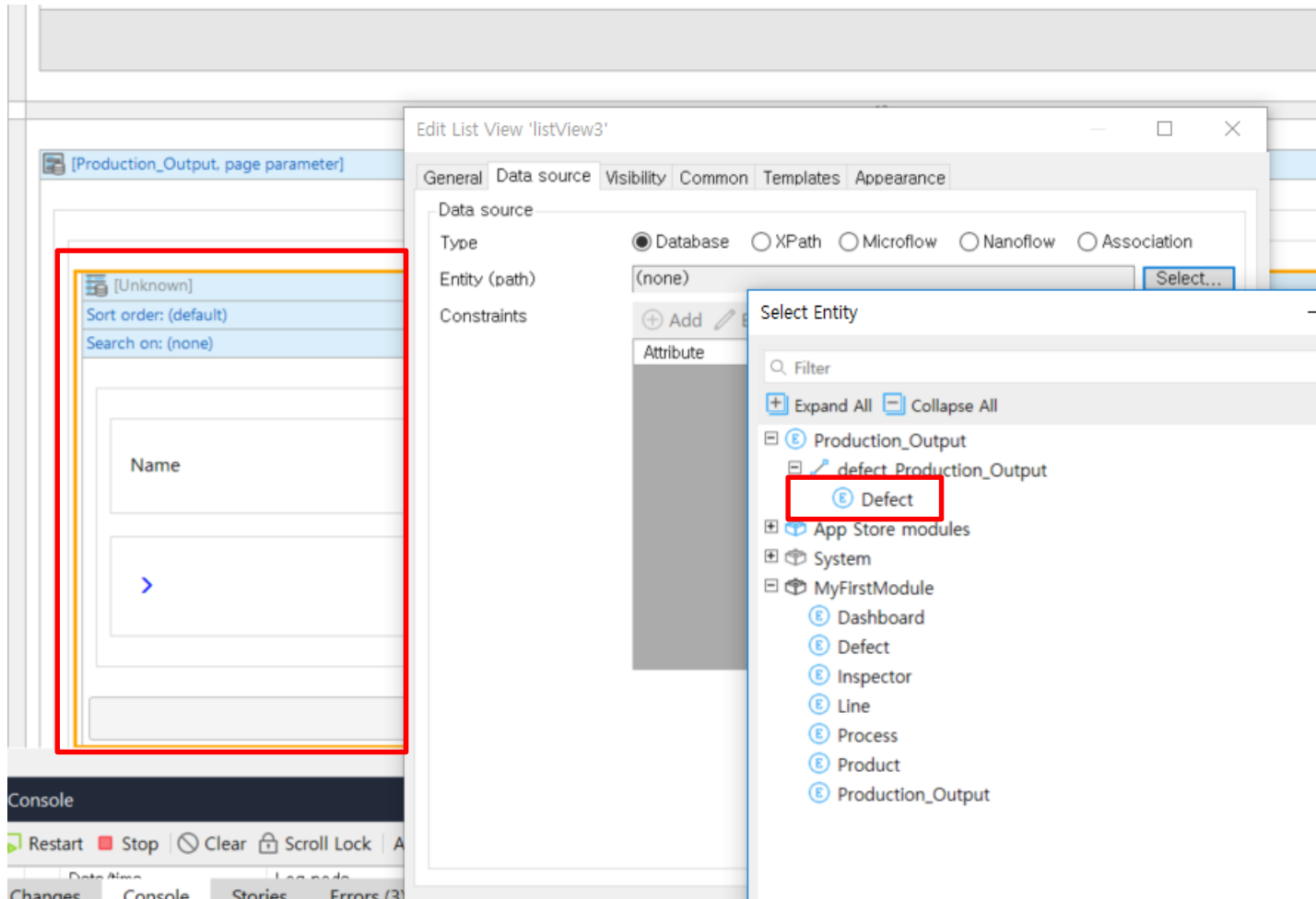
## 불량 조회 화면 - 화면 내용 개발

The image displays two wireframe screenshots of a web application interface. The top screenshot shows a form with a title field, a subtitle field, and three buttons: Add, Edit, and Delete. The bottom screenshot shows a table with a header row and several empty rows, highlighted with a red border.

- Data view
- Production\_Output Entity와 연계

# 제품 불량 관리

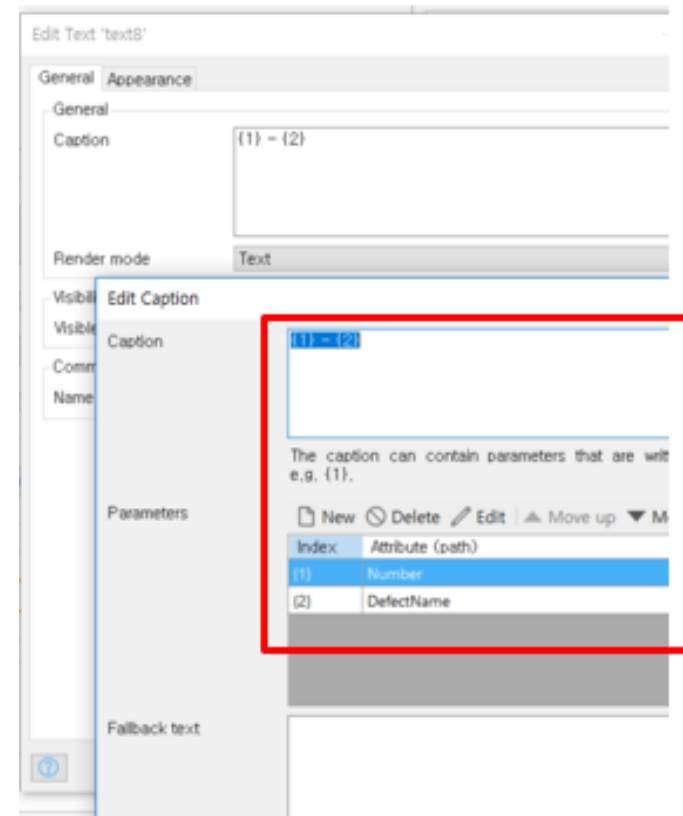
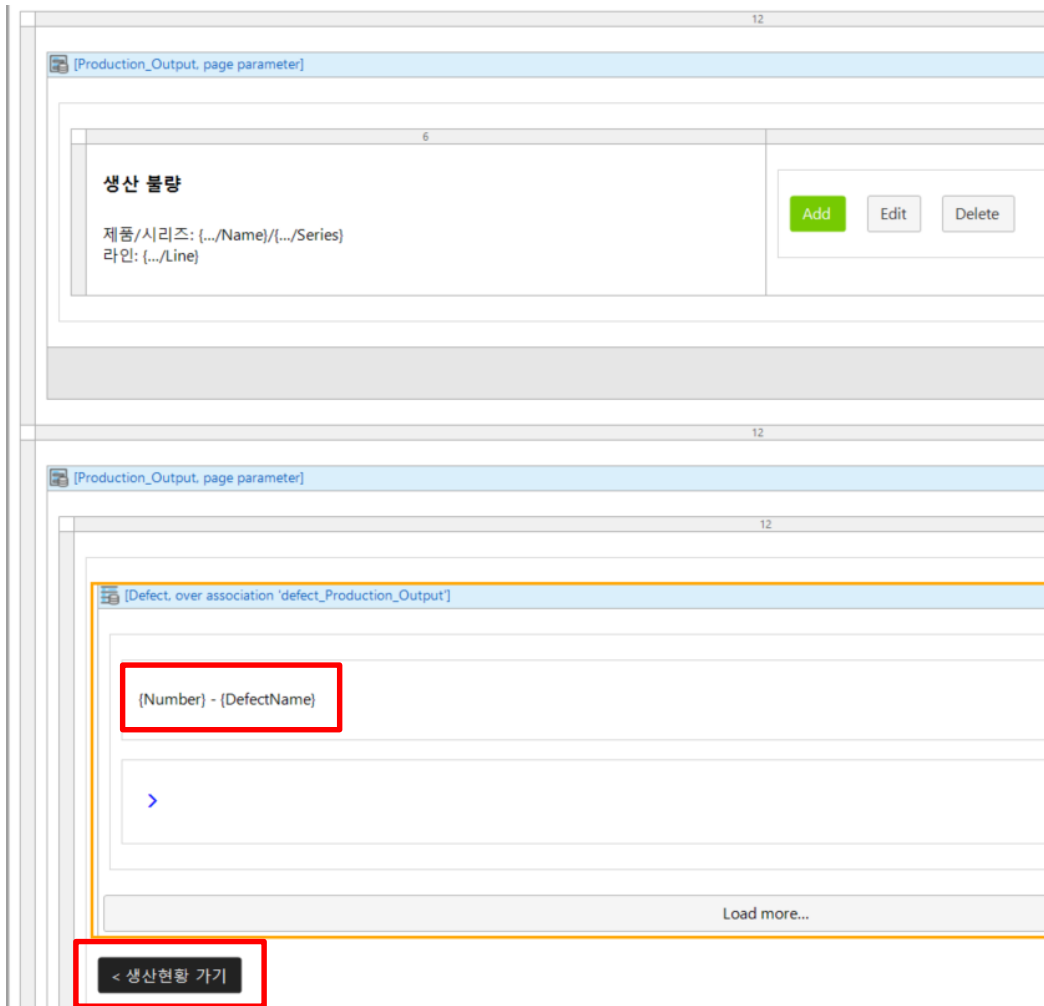
## 불량 조회 화면 – 화면 내용 개발 (Nest Data)



- Building blocks – List1
- Defect Entity와 연계

# 제품 불량 관리

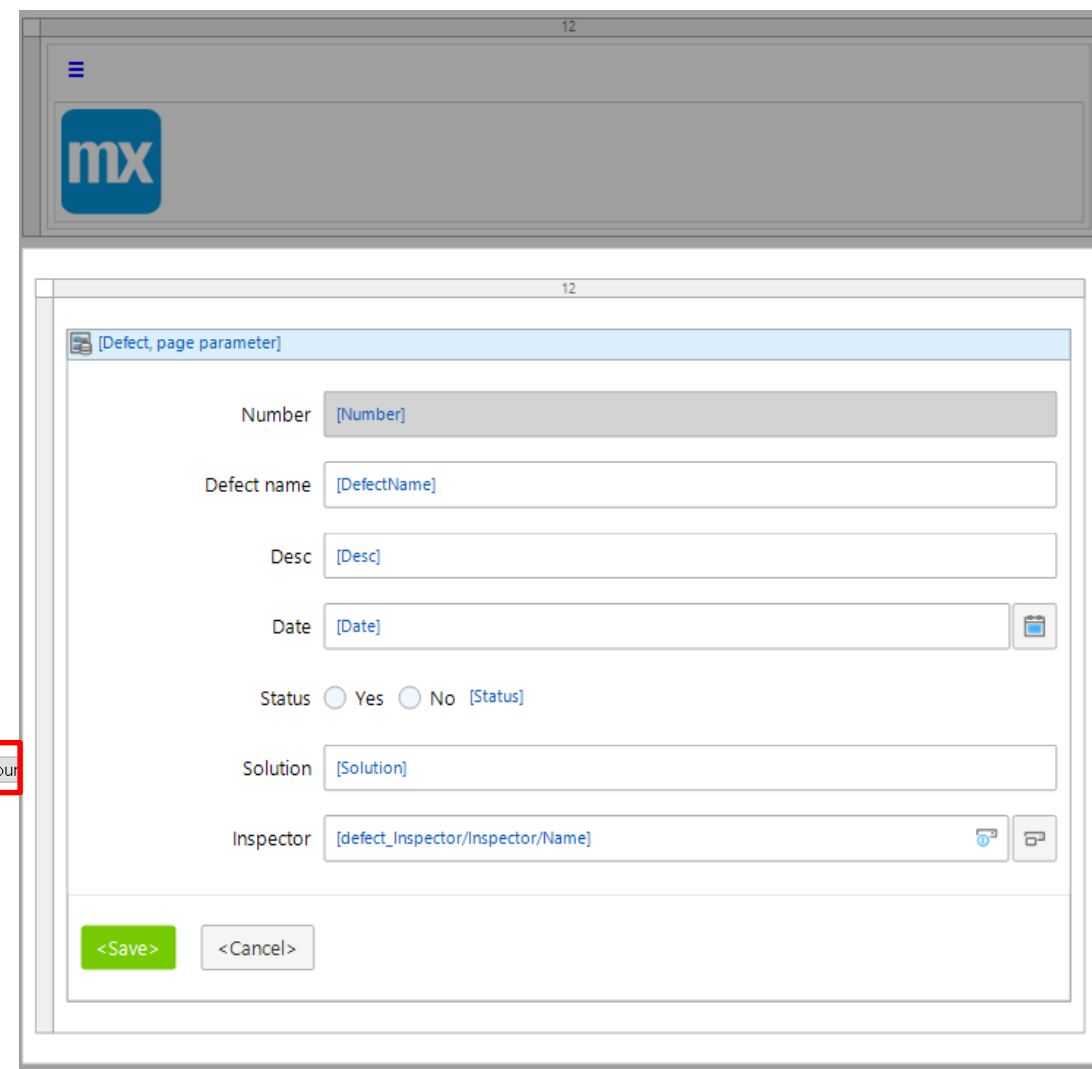
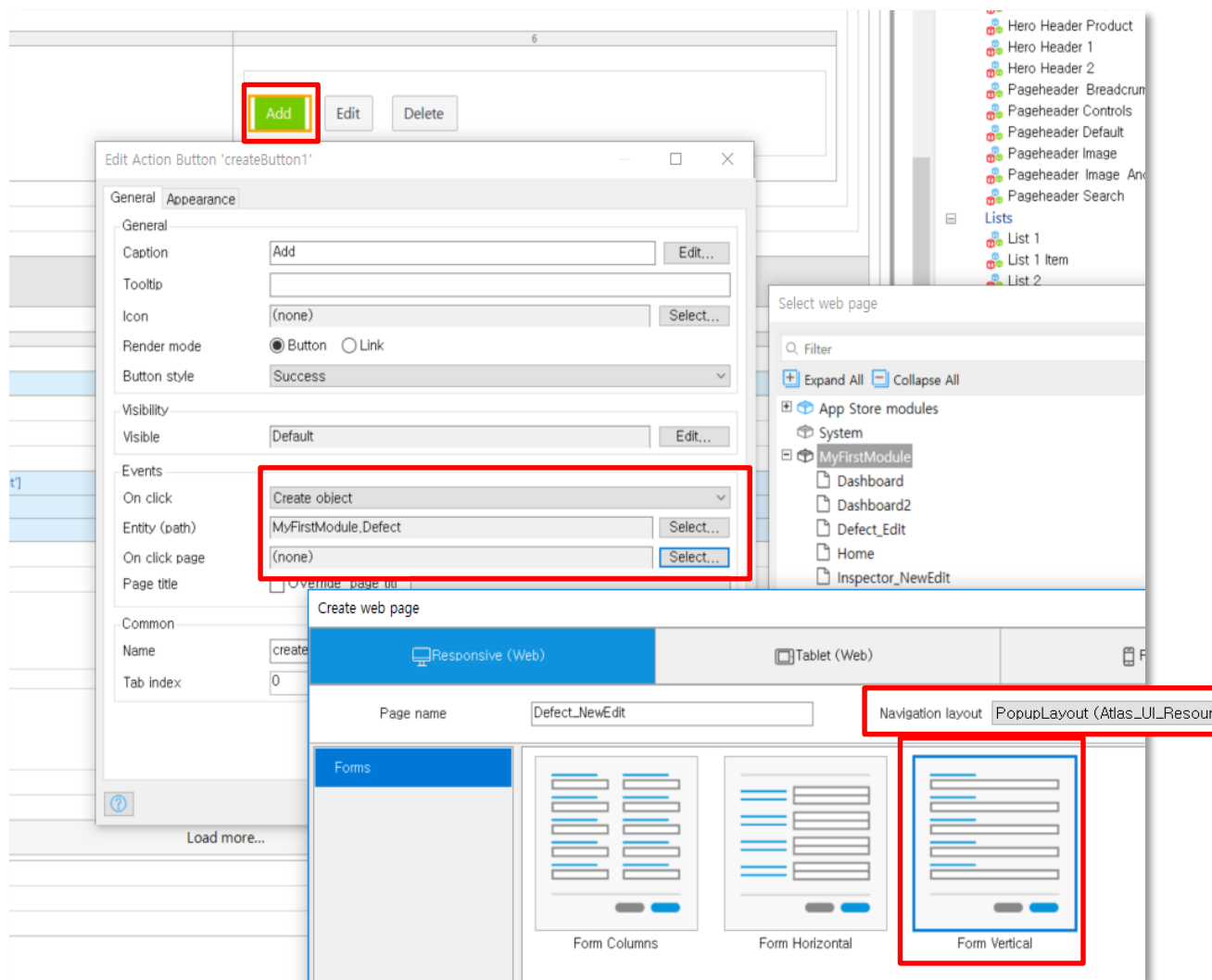
## 불량 조회 화면 – 화면 내용 개발 (Nest Data)



- 불량 정보 속성 연계
- 버튼 추가 (Button Style: Inverse)

# 제품 불량 관리

## 불량 입력 화면 생성



# 제품 불량 관리

## 불량 수량 자동 집계 - 수량 속성 추가

[Production\_Output, from database]  
Sort order: (default)  
Search on: [TotalOutput]

제품/시리즈: {.../Name} - {.../Line}

라인명: {.../Line}

생산일자: {Date}

생산수량: {TotalOutput}

생산자명: {.../Name}

생산 불량 수량: {TotalNumberOfDefect}

불량정보 입력

Edit Text 'text6'

General Appearance

Caption 생산 불량 수량: {1}

Edit...

Edit Caption

Caption 생산 불량 수량: {1}

The caption can contain parameters that are written as a number between braces, e.g. {1}.

Index	Attribute (path)	Format
{1}	TotalNumberOfDefect	123456789

New Delete Edit Move up Move down

Fallback text

The fallback text will be displayed if there is no available data to fill the template.

OK Cancel

mx

생산 현황 정보

Search

제품/시리즈: Product A - Series 1

라인명: Line1

생산일자: 2020. 3. 17.  
생산수량: 100  
생산자명: Product A  
생산 불량 수량: 2

불량정보 입력

제품/시리즈: Product A - Series 1

라인명: Line1

생산일자: 2020. 3. 17.  
생산수량: 3

# 제품 불량 관리

## 불량 수량 자동 집계 – Entity 이벤트 핸들러

Properties of Entity 'MyFirstModule.Defect'

General

Name: Defect

Generalization: (none) [Select...]

Image: (none) [Select...]

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System members

☐ Store 'createdDate'

☐ Store 'changedDate'

☐ Store 'owner'

☐ Store 'changedBy'

Documentation

Attributes Associations Validation rules **Event handlers**

New Edit Delete Go to microflow

Moment	Event	Microflow	Raises error
After	Commit	MyFirstModule.ACO_ADE_Defect_SetTotalNumberOfDefects	

New Event Handler

When

Moment: ☒ Before ☐ After

Event: ☐ Create ☒ Commit ☐ Delete ☐ Rollback

What

Pass event object: ☒ Yes ☐ No

Microflow: (none) [Select...]

☒ Raise an error when the microflow returns false.

OK Cancel

**수량 추가**

1

defect\_Inspector

2

3

4

5

Select Microflow

Filter

Expand All Collapse All

App Store modules

System

MyFirstModule

ACO\_ADE\_Defect\_SetTotalNumberOfDefects

ACT\_Production\_InputDailyProduction

DrillDownDB

OpenDashBD

Select New None Cancel

# 제품 불량 관리

## 불량 수량 자동 집계 – Entity 이벤트 핸들러



### Naming Rule

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



# 제품 불량 관리

## 불량 수량 자동 집계 – Entity 이벤트 핸들러

Properties of Entity 'MyFirstModule.Defect'

General

Name: Defect

Generalization: (none) [Select...]

Image: (none) [Select...]

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System members

☐ Store 'createdDate'

☐ Store 'changedDate'

☐ Store 'owner'

☐ Store 'changedBy'

Documentation

Attributes Associations Validation rules **Event handlers** 2

New Edit Delete Go to microflow

Moment	Event	Microflow	Raises error
After	Commit	MyFirstModule.ACO_ADE_Defect_SetTotalNumberOfDefects	

New Event Handler

When

Moment: ☐ Before ☒ After 3

Event: ☐ Create ☒ Commit ☐ Delete ☐ Rollback

What

Pass event object: ☒ Yes ☐ No

Microflow: (none) [Select...] 4

OK Cancel

수량 감소

defect\_inspector 1

Defect

Number (AutoNumber)

DefectName (String)

Desc (String)

Date (Date and time)

Status (Boolean)

Solution (String)

Select Microflow

Filter

Expand All Collapse All

App Store modules

System

MyFirstModule

ACO\_ADE\_Defect\_SetTotalNumberOfDefects

ACT\_Production\_InputDailyProduction

DrillDownDB

OpenDashBD

Add Microflow

Name: ACE\_ADE\_Defect\_SetTotalNumberOfDefects 6

OK Cancel

Select New None Cancel 5

# 제품 불량 관리

## Microflow 구현 - ACO\_ADE\_Defect\_SetTotalNumberOfDefects

The image displays the configuration steps for the ACO\_ADE\_Defect\_SetTotalNumberOfDefects microflow. It includes three dialog boxes and a flow diagram:

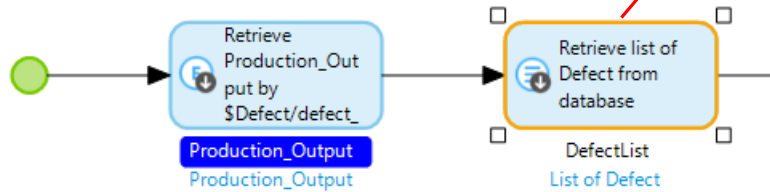
- Parameter Dialog:** Shows the 'Defect' parameter with 'Data type' set to 'Object' and 'Name' set to 'Defect'.
- Select Association Dialog:** Shows the 'defect\_Production\_Output (MyFirstModule.Production\_Output)' variable selected under the 'Variables' section.
- Retrieve Objects Dialog:** Shows the 'Retrieve' step configured with 'Source' set to 'By association', 'Association' set to '\$Defect/defect\_Production\_Output', 'Type' set to 'MyFirstModule.Production\_Output', and 'Object name' set to 'Production\_Output'.
- Flow Diagram:** Shows a 'Retrieve Production\_Out put by \$Defect/defect\_Production\_Output' step in the flow.

- ACO\_ADE\_Defect\_SetTotalNumberOfDefects

# 제품 불량 관리

## Microflow 구현 - ACO\_ADE\_Defect\_SetTotalNumberOfDefects

Defect  
Defect



Retrieve Objects

Retrieve

Source ☐ By association ☒ From database

Entity

Options

Range ☒ All ☐ First ☐ Custom

XPath constraint

`[MyFirstModule.defect_Production_Output = $Production_Output]`

Line	Column	Error
------	--------	-------

Sorting

|

Attribute	Sort order
-----------	------------

Output

Type

List name

Select Type of Action

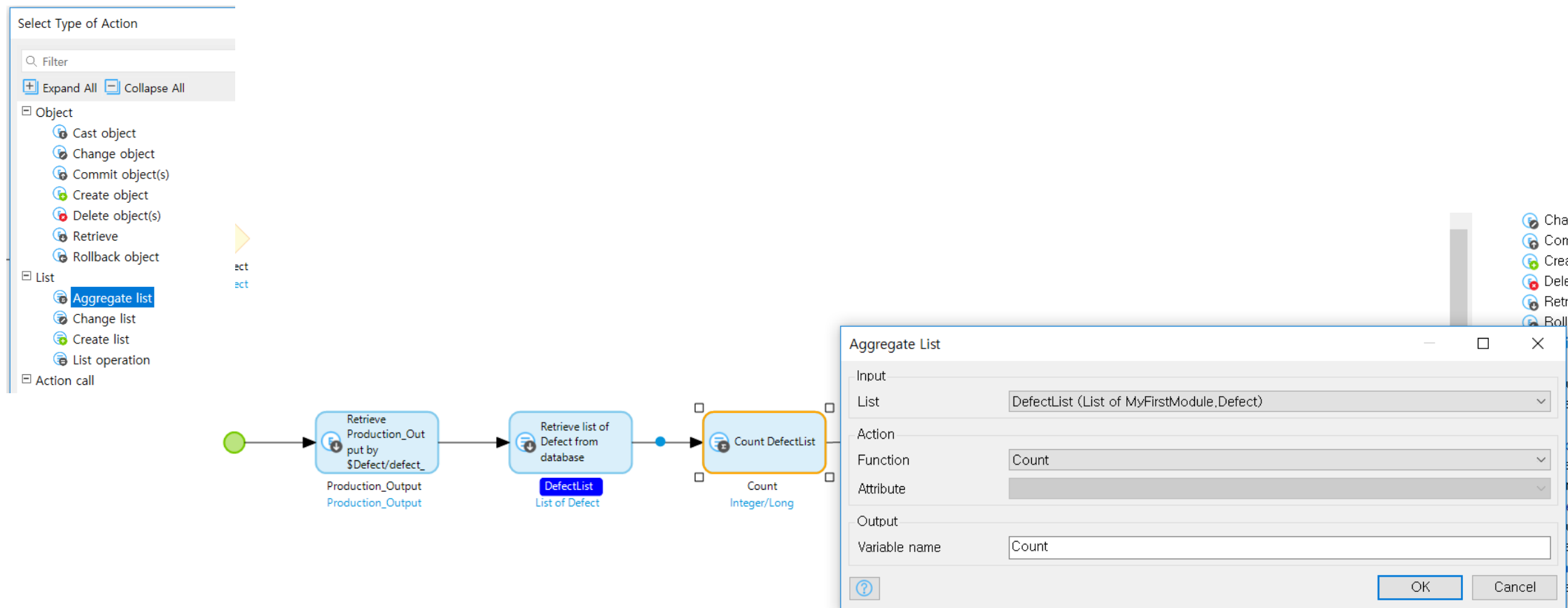
Object

- ☐ Cast object
- ☐ Change object
- ☐ Commit object(s)
- ☐ Create object
- ☐ Delete object(s)
- ☒ Retrieve
- ☐ Rollback object

List

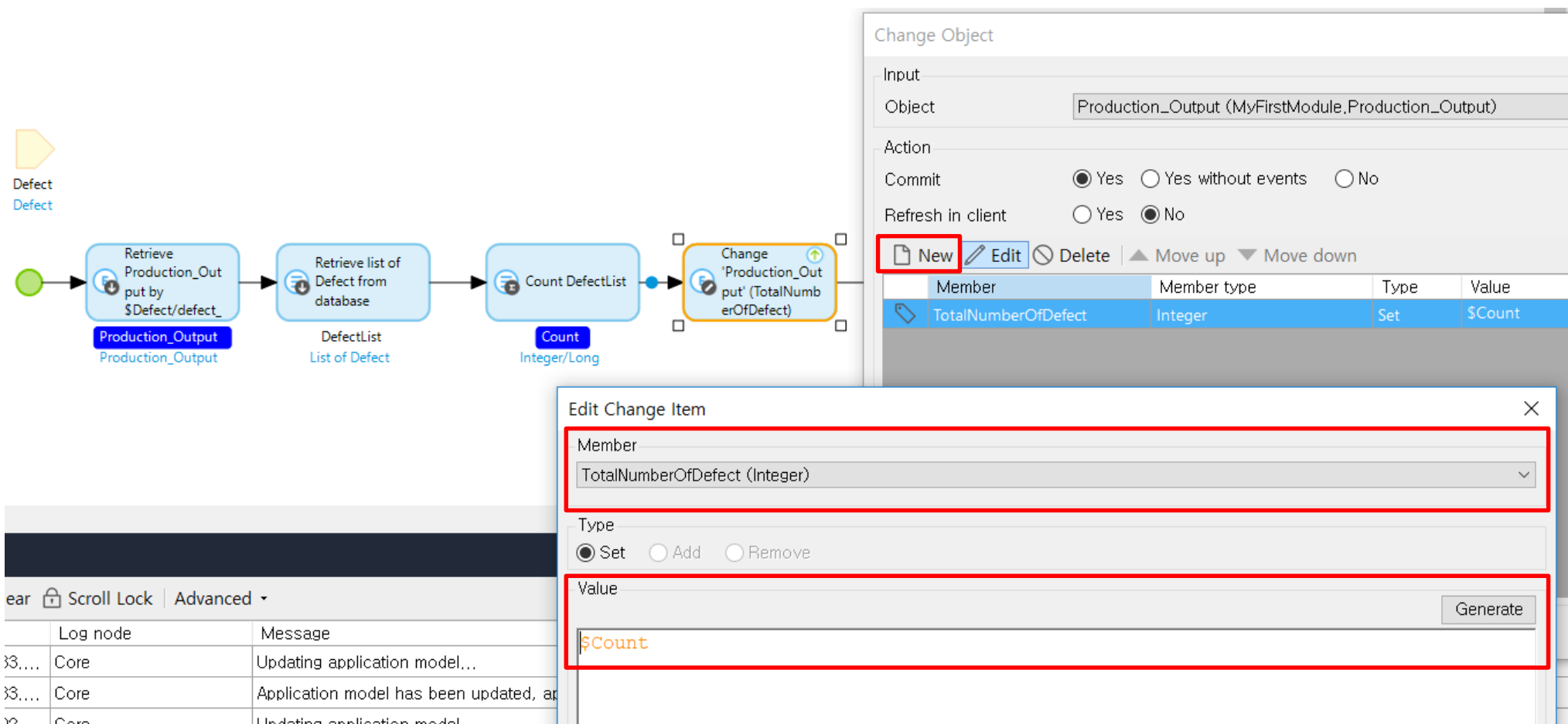
# 제품 불량 관리

## Microflow 구현 - ACO\_ADE\_Defect\_SetTotalNumberOfDefects



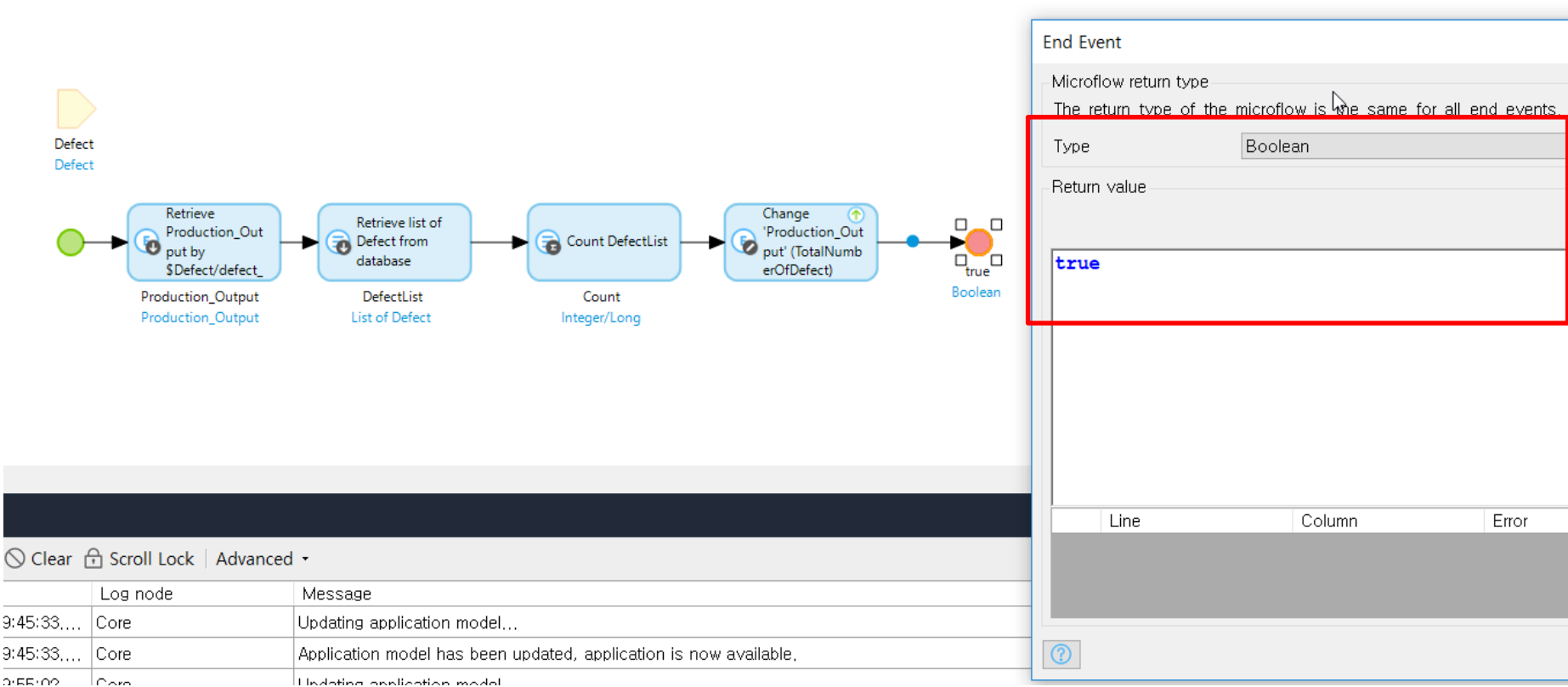
# 제품 불량 관리

## Microflow 구현 - ACO\_ADE\_Defect\_SetTotalNumberOfDefects



# 제품 불량 관리

## Microflow 구현 - ACO\_ADE\_Defect\_SetTotalNumberOfDefects



# Agenda:

개요

Home 메뉴 구성

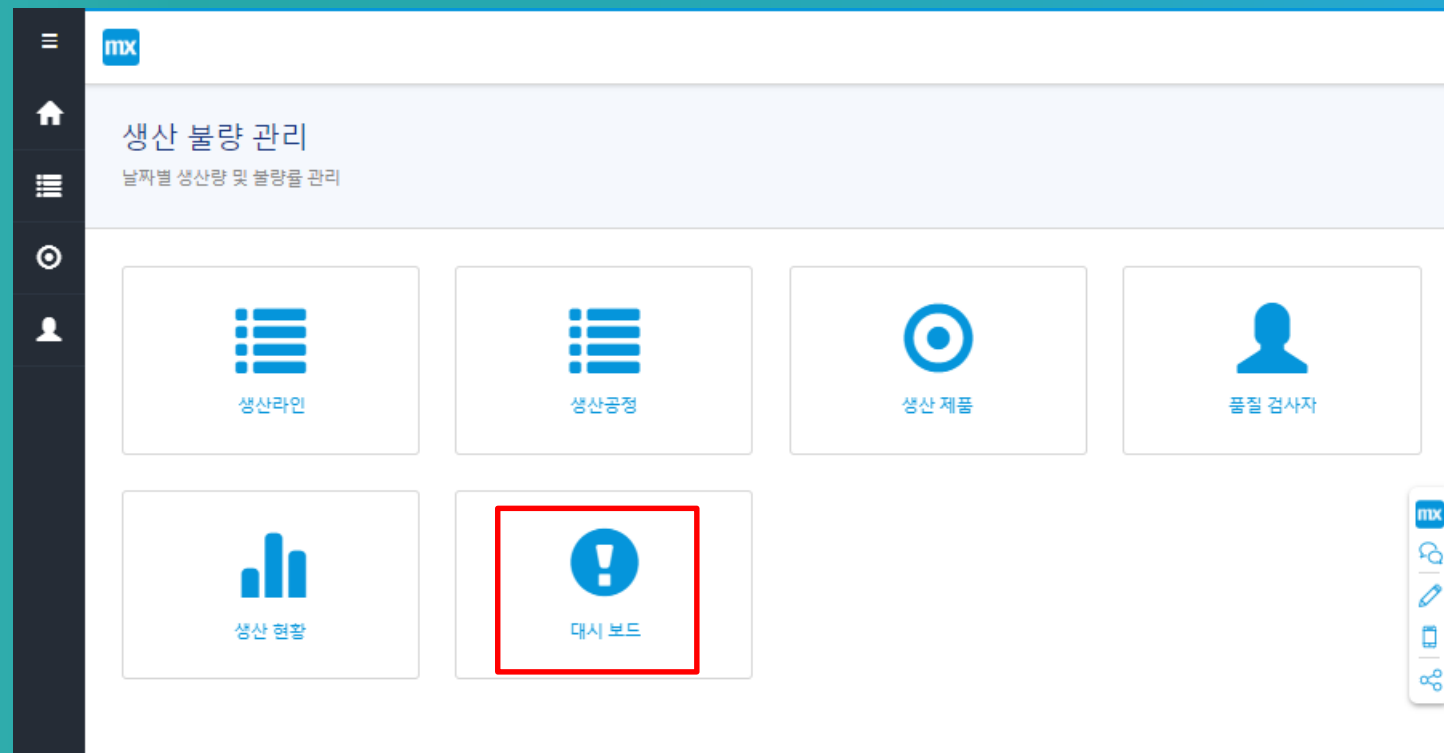
생산라인 관리

생산공정, 생산제품, 검사담당자 개발 실습

일별 생산관리

제품 불량관리

대시보드



# 대시보드 Entity 생성

Properties of Entity 'MyFirstModule.Dashboard'

General

Name: Dashboard

Generalization: (none) [Select...]

Image: (none) [Select...]

Persistable: ☒ Yes ☐ No

Objects of this entity can only be stored in the database if it is persistable.

System members

☐ Store 'createdDate'

☐ Store 'changedDate'

☐ Store 'owner'

☐ Store 'changedBy'

Attributes Associations Validation rules Event handlers Indexes

[New] [Insert new above selected] [Edit] [Delete] [Move up] [Move down]

Name	Type	Default value
MinValue	Decimal	1
MaxValue	Decimal	100
OEE	Decimal	83
Defect	Decimal	95
Quality	Decimal	61
Performance	Decimal	50

top [Clear] [Scroll Lock]



The screenshot shows the Siemens App Store interface. At the top, there's a navigation bar with 'Control', 'Language', and 'Help' on the left, and 'Run Locally', 'View', and a shopping cart icon on the right. Below this is a breadcrumb trail: 'ACE\_ADE\_Defect\_SetTotalNumberOfDefects [MyFirstModule]' > 'ACO\_ADE\_Defect\_SetTotalNumberOfDefects [MyFirstModule]' > 'Dashboard [MyFirstModule]' > 'App Store'. The 'App Store' section has a blue header with 'App Store' text. Below the header is a navigation bar with 'Home', 'Back', and 'Forward' links. To the right of these links is a 'Show:' dropdown menu set to 'All apps' and a search bar containing 'RGraph Gauge'. The search results are displayed under the heading 'Search results for 'RGraph Gage''. A list of apps is shown, with the first app, 'RGraph Gauge Charts', highlighted by a red box. The app card for 'RGraph Gauge Charts' includes a small icon, the app name, the creator 'First Consulting', a description: 'Add an interactive Gauge chart based on the lightweight RGraph library to your Mendix application. Two types of gauges are supported: - Original (odometer-like); - Semicircular Progress', categories 'Widgets - All, Widgets - Display, Add-Ons - Widgets', a star rating of 4 stars, '4 reviews', 'Pricing: Free', 'Type: Widget', 'Downloads: 305', and a 'Read more' button.

Control Language Help Run Locally View

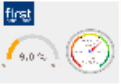
ACE\_ADE\_Defect\_SetTotalNumberOfDefects [MyFirstModule] ACO\_ADE\_Defect\_SetTotalNumberOfDefects [MyFirstModule] Dashboard [MyFirstModule] App Store x Toolbox

### App Store

Home Back Forward Show: All apps RGraph Gauge

#### Search results for 'RGraph Gage'

**Apps**



**RGraph Gauge Charts**

Created by: First Consulting

Add an interactive Gauge chart based on the lightweight RGraph library to your Mendix application. Two types of gauges are supported:

- Original (odometer-like);
- Semicircular Progress

Categories: Widgets - All, Widgets - Display, Add-Ons - Widgets

4 reviews

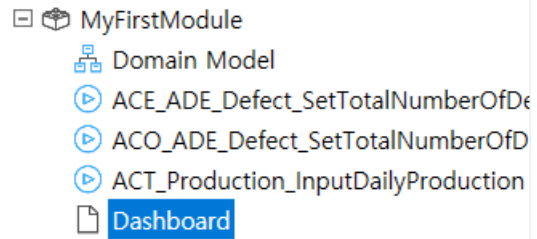
Pricing: Free

Type: Widget

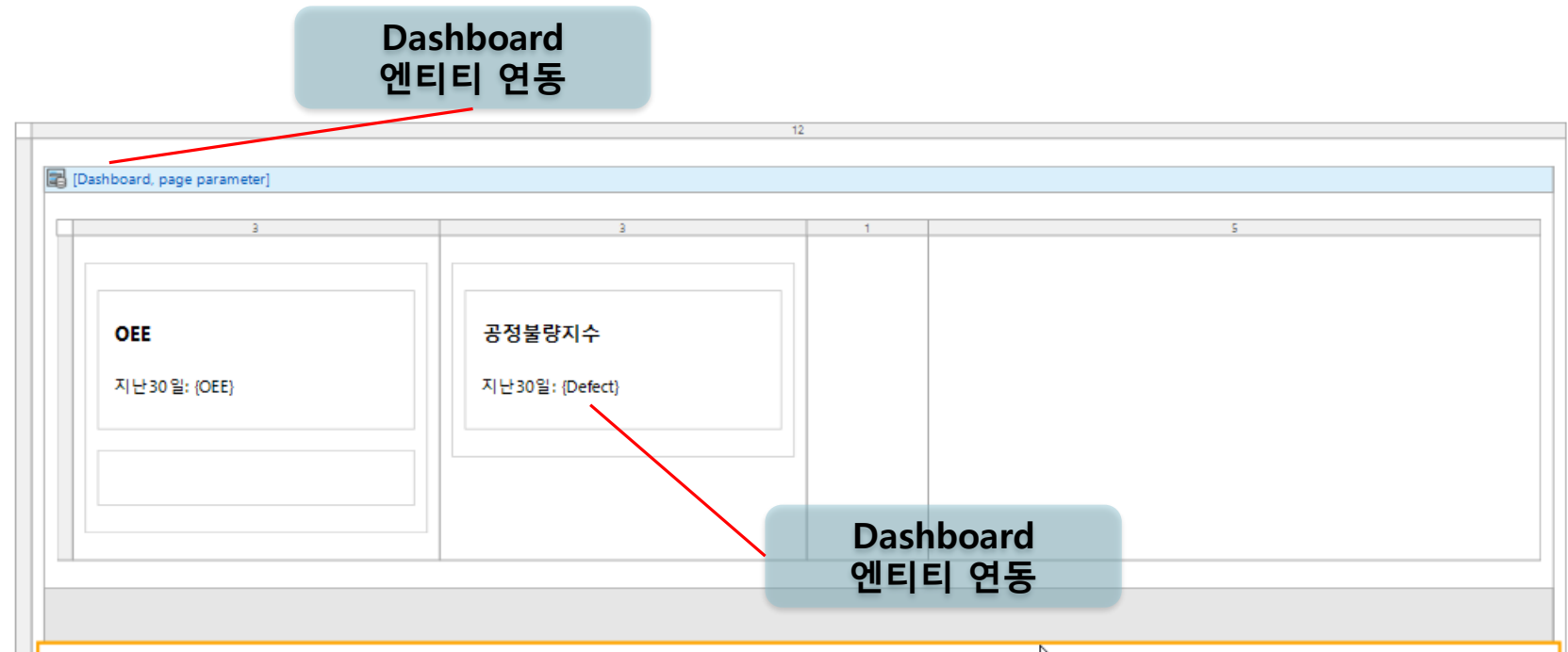
Downloads: 305

Read more

# 대시보드 페이지 생성

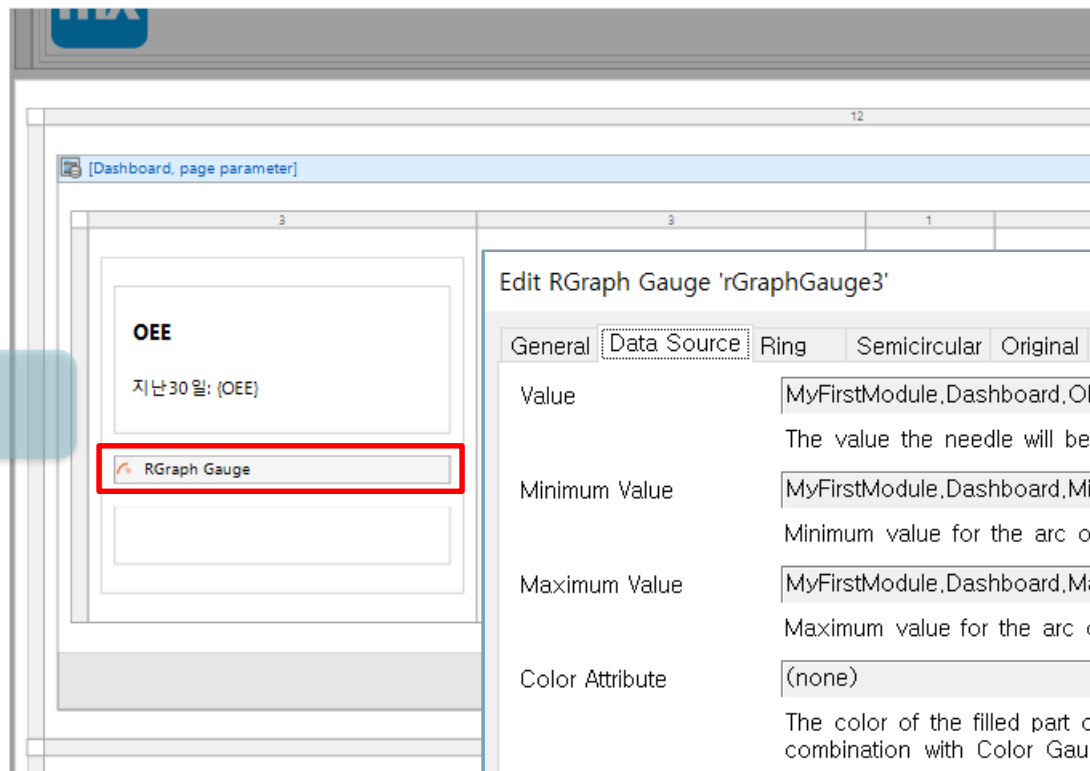


- 페이지명: Dashboard



# 대시보드 차트 위젯 – RGraph Gauge

위젯 추가

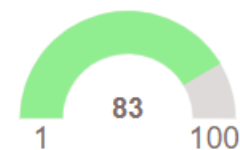


## Edit RGraph Gauge 'rGraphGauge3'

General	Data Source	Ring	Semicircular	Original	Animation	Interaction	Common	Appearance
Value	MyFirstModule,Dashboard,OEE	Select...						
	The value the needle will be pointing at.							
Minimum Value	MyFirstModule,Dashboard,MinValue	Select...						
	Minimum value for the arc of the gauge.							
Maximum Value	MyFirstModule,Dashboard,MaxValue	Select...						
	Maximum value for the arc of the gauge.							
Color Attribute	(none)	Select...						
	The color of the filled part of the gauge. Can not be used in combination with Color Gauge Sections.							

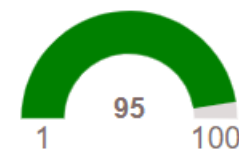
OEE

지난30일: 83.00










공정불량지수

지난30일: 95.00





# 대시보드









## 메뉴 생성 – 메뉴 연동 Microflow 생성

3	3	3	
 <a href="#">생산라인</a>	 <a href="#">생산공정</a>	 <a href="#">생산 제품</a>	 <a href="#">품질 검</a>
3	3	3	
 <a href="#">생산 현황</a>	 <a href="#">생산 정보 입력</a>	 <a href="#">대시 보드</a>	

Select Microflow

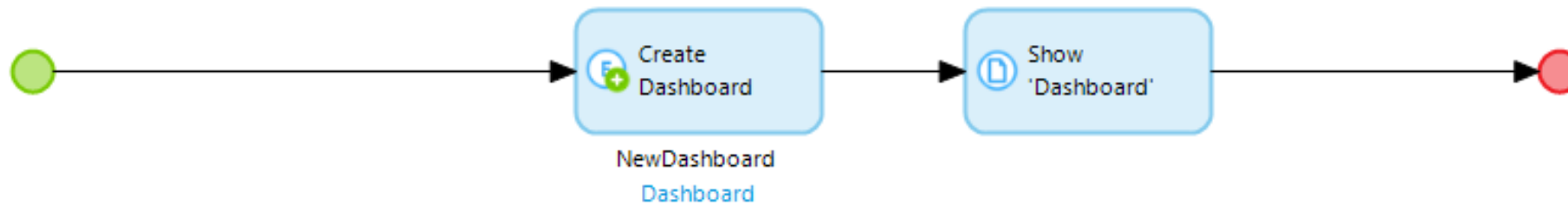
Filter

 Expand All  Collapse All

-  App Store modules
-  System
-  MyFirstModule
  -  ACE\_ADE\_Defect\_SetTotalNumberOfDefects
  -  ACO\_ADE\_Defect\_SetTotalNumberOfDefects
  -  ACT\_Production\_InputDailyProduction
  -  DrillDownDB
  -  **OpenDashBD**

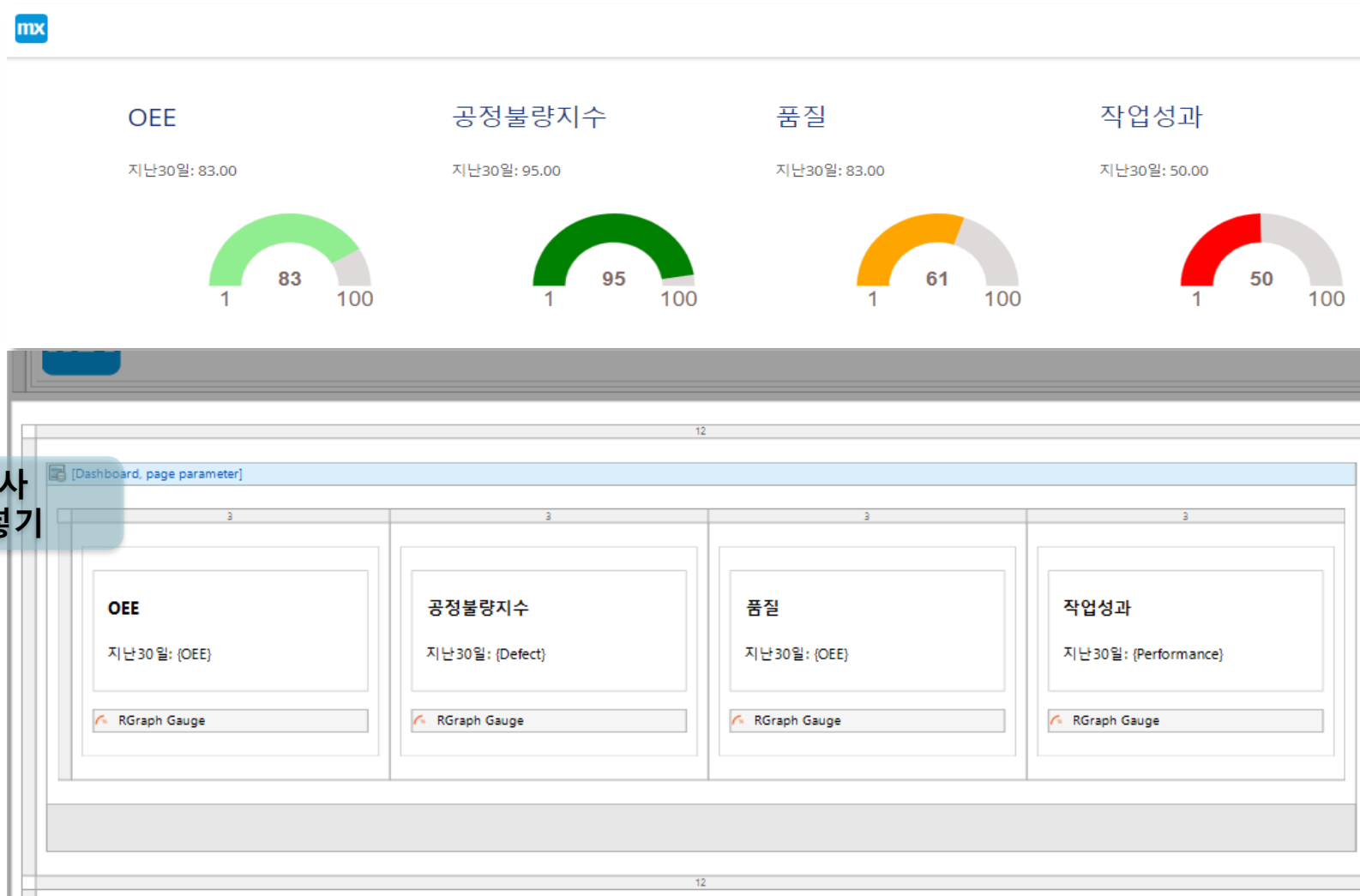
# 대시보드

## Microflow 생성 - OpenDashBD

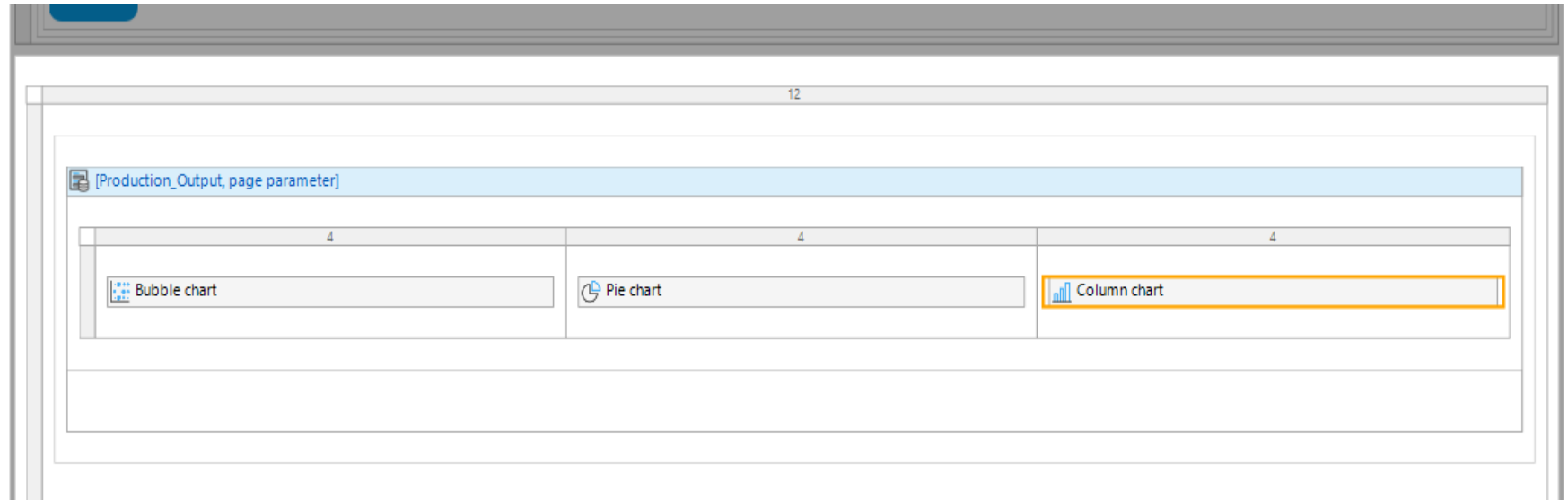
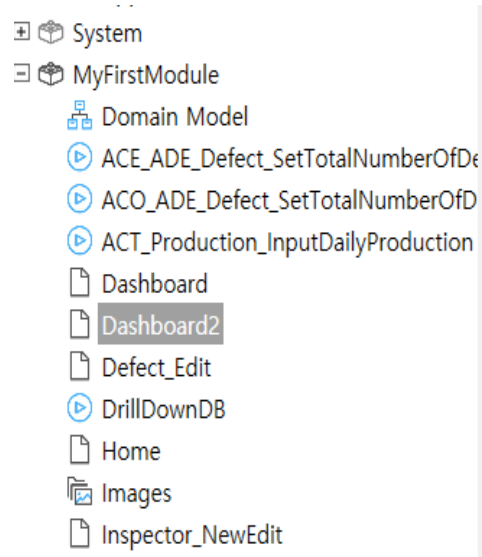


- Home 메뉴 링크에서 호출됨

# 대시보드 차트 위젯 – RGraph Gauge

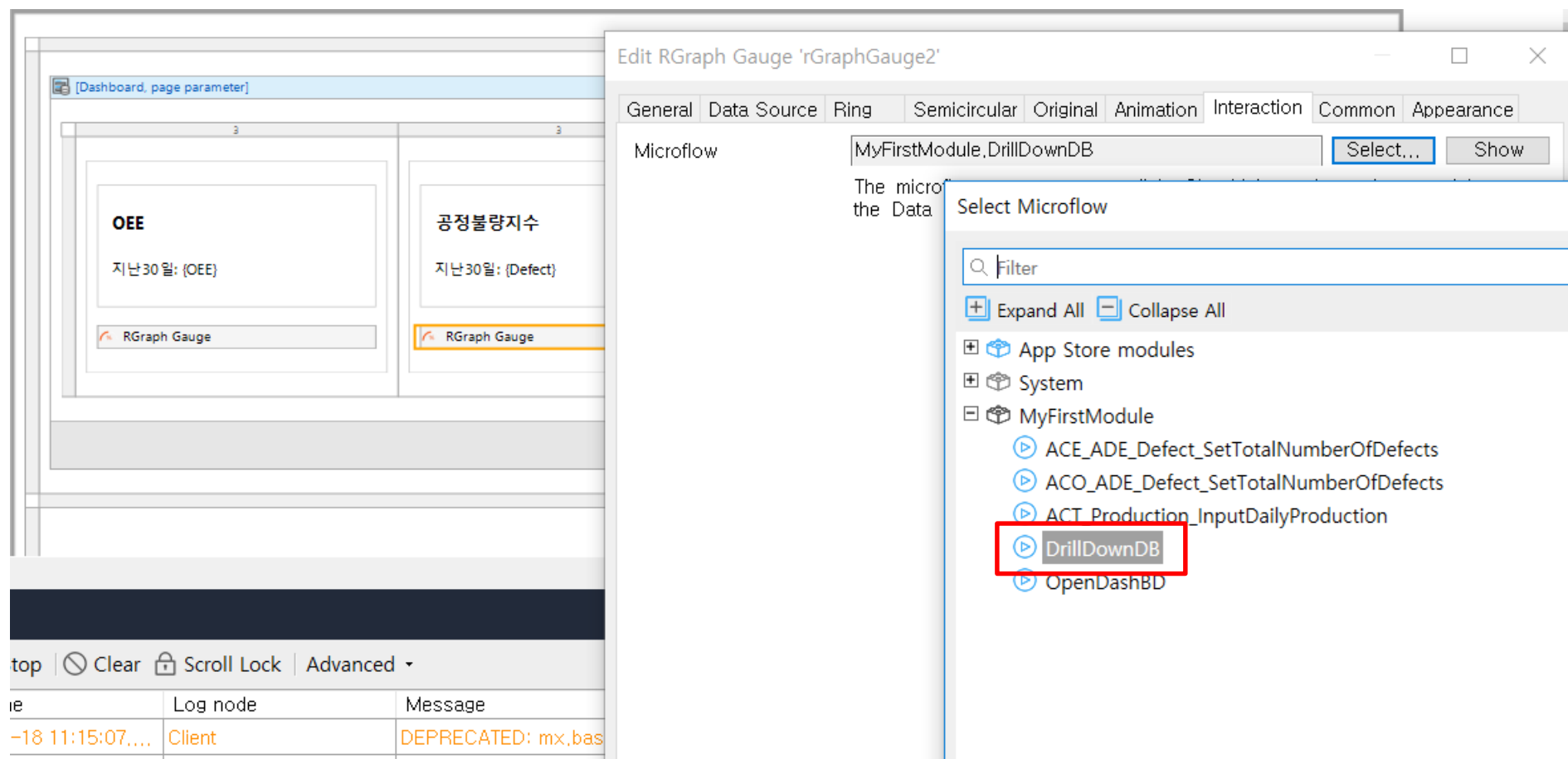


- Production\_Output 엔티티 연동
- Bubble / Pie / Column 차트 위젯 추가



# 대시보드

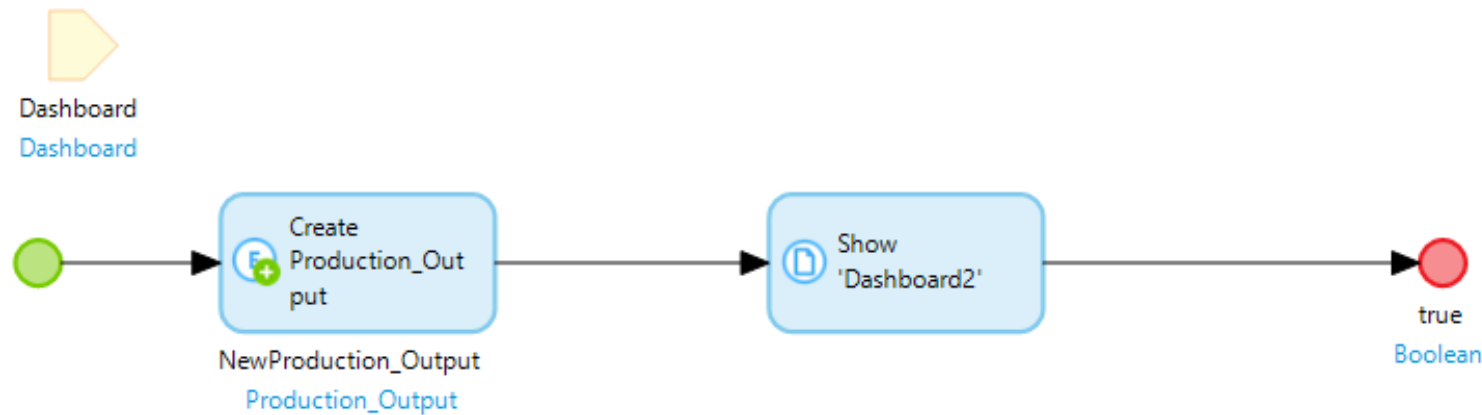
## 차트 Drill-down – Microflow 생성





# 대시보드

## 차트 Drill-down – Microflow 구현

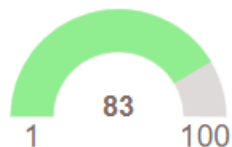


- Production\_Output 오브젝트 생성하여 Dashboard2 페이지로 전달

# 대시보드 차트 Drill-down 실행

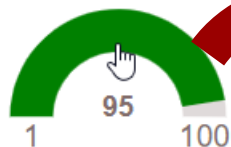
OEE

지난30일: 83.00



공정불량지수

지난30일: 95.00



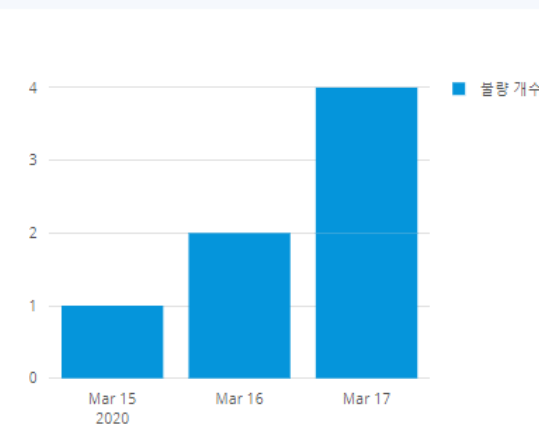
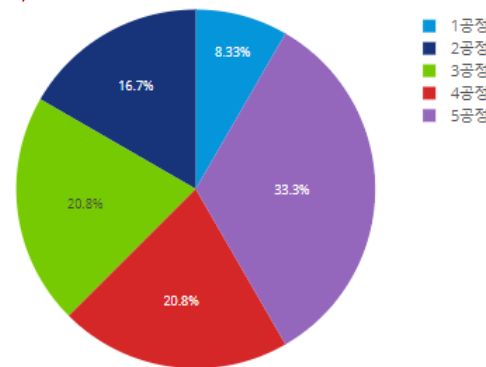
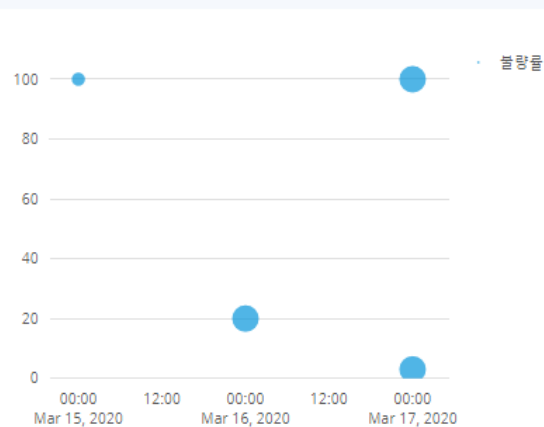
품질

지난30일: 83.00



- 공정불량지수 차트 클릭시 Drill-down 페이지 연동

mx



# 교육 내용

## 생산 불량 관리 앱 개발

**Project Explorer**

- Project 'Issue Management'
  - Settings
  - Security**
  - Navigation
  - System texts
  - App Store modules
  - System
  - MyFirstModule
    - Domain Model
    - ACE\_ADE\_Defect\_SetTotal
    - ACO\_ADE\_Defect\_SetTotal
    - ACT\_Production\_InputDaily
    - Dashboard
    - Dashboard2
    - Defect\_Edit
    - DrillDownDB
    - Home
    - Images
    - Inspector\_NewEdit
    - Inspector\_Overview

**Project Security**

Security level

Security level: ☐ Off ☐ Prototype / demo ☒ **Production**

Full security is applied. Configure administrator and anonymous access and define user roles and security for forms, microflows, entities, and reports.

Check security: ☒ Yes ☐ No

If there are no other errors, Mendix Studio Pro checks per user role whether forms that are accessible for a certain role only refer to attributes and associations that are accessible for that same role. This assumes that each user role is independent and that users do not need two or more roles to access functionality in your application.

Project status: ● Incomplete

Module status: User roles | Administrator | Demo users | Anonymous users | Password policy

**Edit module security**

Module	Page access	Nanoflow access	Microflow access	OData access	REST access	Entity access	Data set access
MyFirstModule	Incomplete	Complete	Incomplete	Complete	Complete	Incomplete	Complete

# 교육 내용

## 생산 불량 관리 앱 개발

The screenshot displays the Siemens PLM Software interface for configuring a column chart. The main window is titled 'Edit Column Chart 'columnChart1''. It features a 'Chart properties' tab with sub-tabs: 'Appearance', 'REST', 'Advanced', 'Common', and 'Appearance'. The 'Appearance' sub-tab is active, showing 'Bar mode' with 'Grouped' selected and 'Series' with a 'New' button highlighted. Below this is a table with columns 'Series', 'Entity', and 'Data source'. The table contains one row: 'Static', 'MyFirstModule.Production\_Output', and 'Datab...'. A 'New' button is also highlighted in the 'Series' section.

Overlaid on the main window is the 'Edit Series Item' dialog. It has tabs for 'Data source', 'Static series', 'Data points', 'Dynamic series', 'Events', and 'Advanced'. The 'Static series' tab is active. The dialog contains the following fields and options:

- X-axis data attribute:** 'MyFirstModule.Production\_Output.Date' (highlighted with a red box). A 'Select...' button is next to it.
- Y axis data attribute:** 'MyFirstModule.Production\_Output.TotalNumberOfDefect' (highlighted with a red box). A 'Select...' button is next to it.
- X axis sort attribute:** '(none)' (highlighted with a red box). A 'Select...' button is next to it.
- Sort order:** 'Ascending' (selected) and 'Descending' (unselected).
- Aggregation type:** 'None' (selected).

At the bottom of the dialog are 'OK' and 'Cancel' buttons. The background shows a 'Toolbox' with various chart types, including 'Column chart' (highlighted with a red box).

감사합니다.