



APEX 입문 워크샵(Beginner Workshop) - 실습가이드: Part 1

2021.09.06
한국오라클
김은희 상무

M01, M02 모듈 오픈

http://taewan.kim/apex-workshop/01.beginner_ws/

Oracle APEX Workshop taewan.kim 블로그 Σ민수아빠 Oracle Cloud OCI 공식문서

Oracle APEX Workshop Search...

APEX 입문자 워크숍

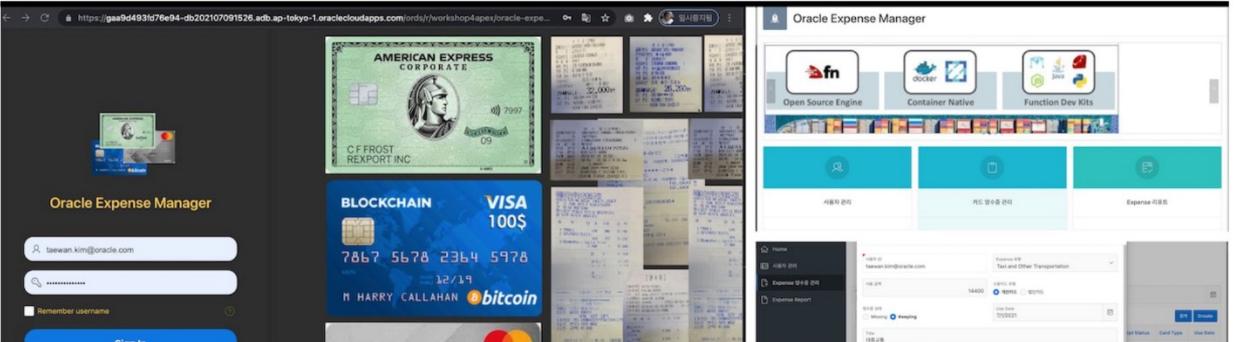
- APEX 입문자 워크숍 소개
- M01.실습환경 준비
- OCI Free Trial 신청
- OCI 기본 환경 설정
- APEX 개발 환경 구성
- APEX Workspace 사용자 등록
- M02-직원정보관리
- APEX APP, DB 테이블, LoV 생성
- 직원 정보 관리 Report 생성
- 직원 정보 관리 세부설정
- 직원 정보 관리 - 검색

APEX 입문자 워크숍

APEX 입문자 워크숍은 Oracle APEX를 처음 접하시는 분들을 위한 실습을 다룹니다. 이번 워크숍은 다음과 목적으로 제작되었습니다.

- 실습을 통해서 Oracle APEX로 애플리케이션을 개발하는 전반적인 절차를 익힌다.
- 실습을 통해서 기본적인 Oracle APEX 개념을 익힌다.
- 실습을 통해서 Oracle APEX 애플리케이션의 작동방식을 이해한다.

입문자 워크숍을 통해서 다음과 같은 애플리케이션을 개발할 예정입니다.



필수 항목입니다

LICENSE

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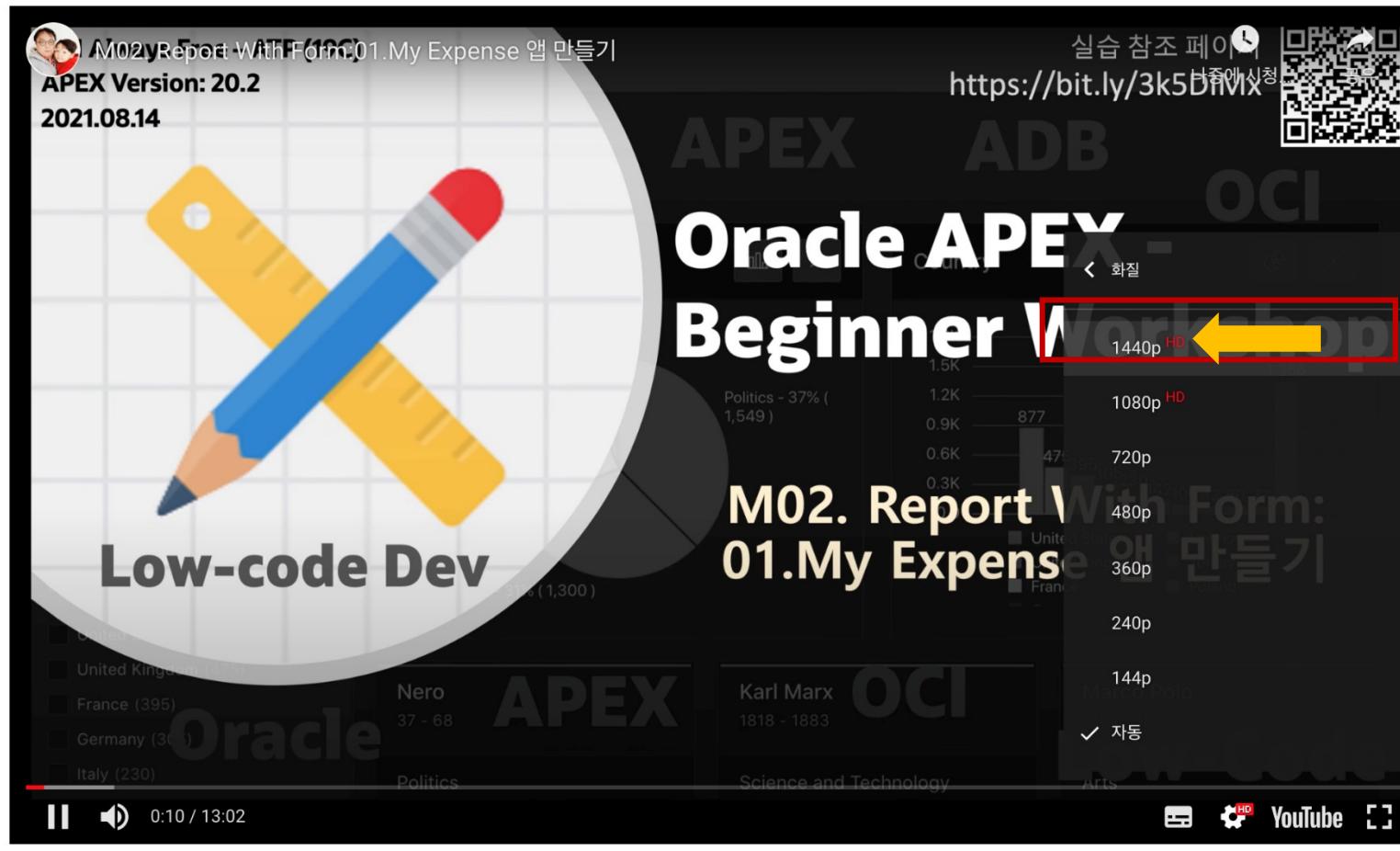
이 저작물은 크리에이티브 커먼즈 저작자표시-비영리-동일조건변경허락 4.0 국제 라이선스에 따라 이용할 수 있습니다.

실습 환경 구성

- APT 인스턴스를 개별적으로 만들어 진행해 주십시오.
- APEX Workshop 실습 인스턴스 위치
 - Region: Seoul
 - Compartiment: PROJECT >> apexws
- ATP 인스턴스 크기
 - 1 OCPU / 1 TB

동영상 시청 팁

- 해상도 높이기: 가능한 최고 해상도로 설정하고 시청하시기 바랍니다.



동영상 시청 팁

- 화면 키우기: Youtube 로고를 클릭하여 youtube 페이지로 이동 후 화면 키우기



질문 및 문의: Slack #kr_apex_users

kr_apex_users ▾

+ Add a bookmark

#kr_apex_users

You created this channel on August 6th. This is the very beginning of the #kr_apex_users channel. Description: Channel for APEX Users in Oracle Korea

[+ Add people](#)

Friday, August 6th ▾

 **Taewan Kim** 12:10 PM joined #kr_apex_users.

 **Taewan Kim** 12:10 PM set the channel description: Channel for APEX Users in Oracle Korea

 **SungWoo Chang** 12:10 PM was added to #kr_apex_users by Taewan Kim, along with 13 others. Also, Eunhie Kim (Kate) and 8 others joined.

Message #kr_apex_users

Compose message



향후 일정

- 금요일 10:00 : M03 모듈 오픈
- 월요일 10:00 : M04 모듈 오픈
- 수요일 10:00 ; APEX Zoom 세션
- 수요일 18:00 : 과제 제출
 - 제출: 김태완, taewan.kim@oracle.com
 - APEX Application 접속 정보

—



OCI Always Free – ATP (19C)

APEX Version: 20.2

2021.08.14

실습 참조 페이지

<https://bit.ly/37QmBIB>



Low-code Dev

Oracle APEX - Beginner Workshop

01. 실습 환경 준비 : APEX 개발 환경 구성

United Kingdom

France (395)

Germany (360)

Italy (230)

Nero
37 - 68

APEX

Karl Marx
1818 - 1883

OCI

Marco Polo
1254 - 1324

Low-Code

M01. 실습 환경 준비 : APEX 개발 환경 구성 (<https://bit.ly/37QmBIB>)

ATP 인스턴스 생성

- Region : Seoul
- Compartment : PROJECT > APEXWS
- Resource : 1 OCPU / 1 TB
- Workload : Transaction Processing

APEX Workspace

- Workspace Name : APEXWS
- Password : Welcome123456!
- Database user : APEXWS

M01-1. ATP 생성 (1/6)

2 Create Autonomous Database

List Scope

Compartment

Search compartments

- apackrsct01 (root)
 - AOSP
 - + CLOUD
 - + KRSET03
 - + LICENSE
 - ManagedCompartimentForPae
 - Management-Agents
 - OCILZ-AppDev
 - OCILZ-Database
 - OCILZ-Network
 - OCILZ-Security
 - + OTHERS
 - + PROJECT
 - ADWHOL
- 1 apexws
- DS-TFT-SAND

3

4

Create Autonomous Database

Provide basic information for the Autonomous Database

Compartment: apexws

Display name: DemoATP-ehkim → DemoATP

Database name: DB202108252044

Choose a workload type

- Data Warehouse
- Transaction Processing → 4
- JSON
- APEX

Create Autonomous Database

Seoul 리전, Compartment : apexws 선택

South Korea Central (Seoul) Help

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M01-1. ATP 생성 (2/6)

Choose a deployment type

5 Shared Infrastructure

Run Autonomous Database on shared Exadata infrastructure.

Dedicated Infrastructure

Run Autonomous Database on dedicated Exadata infrastructure.

Configure the database

Always Free i
 Show only Always Free configuration options

Choose database version
19c

OCPUs count
1
The number of OCPU cores to enable. Available cores are subject to your tenancy's service limits.

Storage (TB)
1
The amount of storage to allocate.

Auto scaling
Allows system to use up to three times the provisioned number of cores as the workload increases. [Learn more](#).

M01-1. ATP 생성 (3/6)

Create administrator credentials ⓘ

Username *Read-Only*
ADMIN
ADMIN username cannot be edited.

6 Password
..... Password 기억!!!
*** APEX 로그인 때 사용***

Confirm password
.....

Choose network access

Access Type

7 Secure access from everywhere
Restrict access to specified IP addresses and VCNs. ✓

Private endpoint access only
Restrict access to a private endpoint within an OCI VCN.

Configure access control rules ⓘ

M01-1. ATP 생성 (4/6)

Choose a license type

8 Bring Your Own License (BYOL)

Bring my organization's Oracle Database software licenses to the Database service. [Learn more.](#) ✓

License Included

Subscribe to new Oracle Database software licenses and the Database service.

Provide contacts for operational notifications and announcements ⓘ

Add Contact

Show Advanced Options

9 [Create Autonomous Database](#) [Cancel](#)

M01-1. ATP 생성 (5/6)

The screenshot shows the Oracle Cloud interface for an Autonomous Database named "DemoATP-ehkim".

General Information:

- Database Name: DB202108252044
- Workload Type: Transaction Processing
- Compartment: apackrsct01 (root)/PROJECT/apexws
- OCID: ...ebfyta [Show](#) [Copy](#)
- Created: Wed, Aug 25, 2021, 11:48:43 UTC
- OCPU Count: 1
- Auto Scaling: Enabled [i](#)
- Storage: 1 TB
- License Type: Bring Your Own License (BYOL)
- Database Version: 19c
- Lifecycle State: Provisioning
- Instance Type: Paid

Infrastructure:

- Dedicated Infrastructure: No

Autonomous Data Guard [i](#):

- Status: Disabled [Enable](#)

Backup:

- Last Automatic Backup: No active backups exist for this database.
- Manual Backup Store: Not Configured

Network:

- Access Type: Allow secure access from everywhere
- Access Control List: Disabled [Edit](#)

Actions:

- DB Connection
- Performance Hub
- Service Console
- Scale Up/Down
- More Actions [▼](#)

M01-1. ATP 생성 (6/6)

The screenshot shows the Oracle Cloud Autonomous Database Details page for a database named "DemoATP-ehkim". The top navigation bar includes "ORACLE Cloud", a search bar, and account information for "South Korea Central (Seoul)".

The main content area displays "Autonomous Database Information" for "DemoATP-ehkim". It features a large green "ATP" logo and the status "AVAILABLE".

At the top of the main content area, there are several buttons: "DB Connection", "Performance Hub", "Service Console" (which is highlighted with a red box), "Scale Up/Down", and "More Actions".

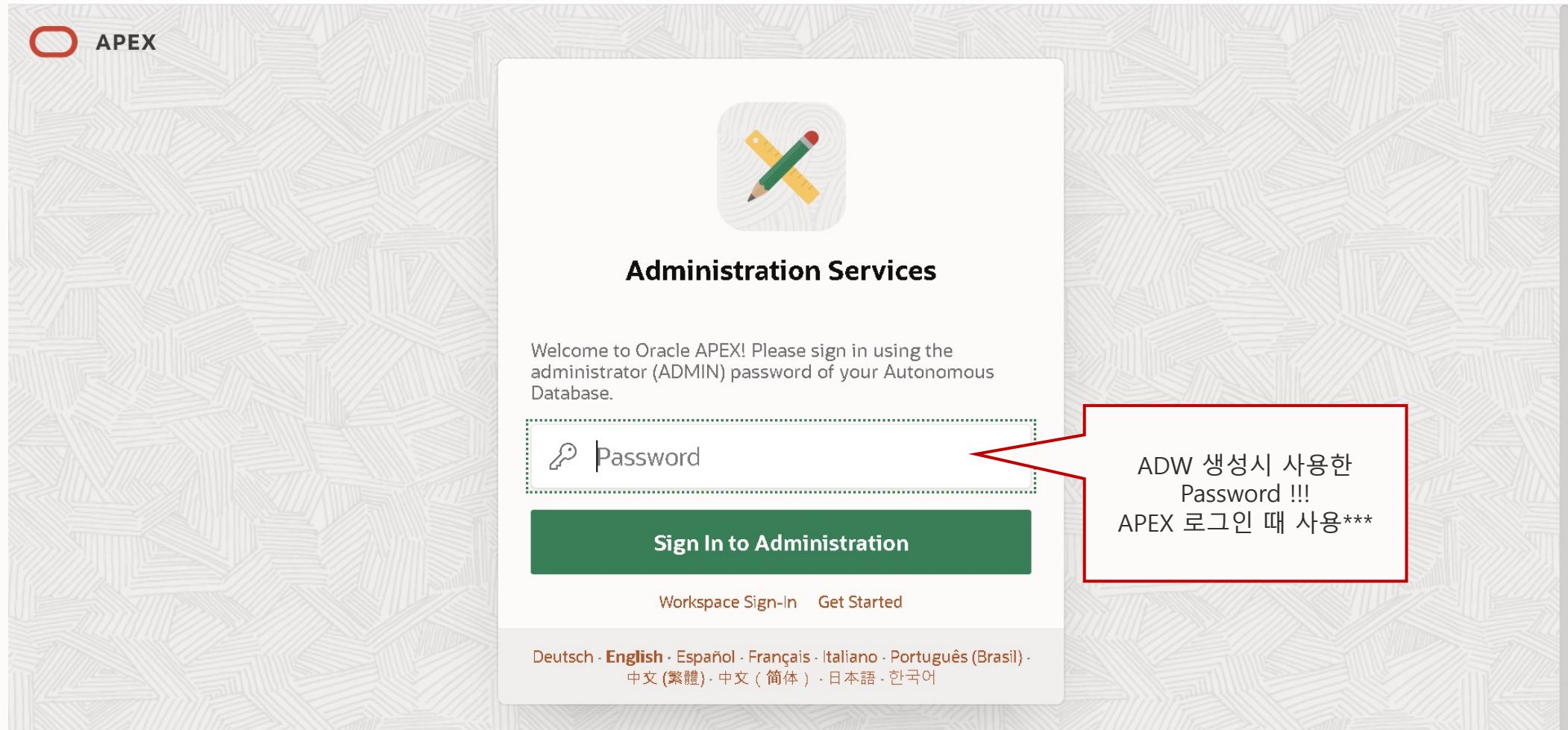
Below these buttons, there are tabs: "Tools" (which is highlighted with a red box) and "Tags".

The "Tools" tab section contains:

- Database Actions**: Describes low-code development using SQL worksheets, REST interfaces, and machine learning models. It includes a "Open Database Actions" button.
- Oracle ML User Administration**: Describes Oracle Machine Learning environment. It includes a "Open Oracle ML User Administration" button.
- Oracle Application Express**: Describes APEX as a low-code development platform for scalable enterprise apps. It includes a "Open APEX" button.
- SODA Drivers**: Describes Simple Oracle Document Access (SODA) APIs for working with JSON documents. It includes a "Download SODA Drivers" button.

A red callout box labeled "APEX로 가는 방법 2가지" points to the "Service Console" and "Tools" buttons. Two blue numbered boxes, "1" and "2", point to the "Tools" tab and the "Open APEX" button respectively.

M01-2. APEX Workspace 생성과 로그인 (1/5)



M01-2. APEX Workspace 생성과 로그인 (2/5)

The screenshot shows the Oracle Application Express (APEX) interface. At the top, there is a navigation bar with the APEX logo, 'Manage Instance', 'Manage Workspaces', 'Monitor Activity', a help icon, and an 'AD' button. Below the navigation bar, there is a large 'Welcome to Oracle Application Express!' message with a pencil and paper icon. A green 'Create Workspace' button is prominently displayed. The main text on the page reads: 'Before you get started, please take a moment to create a workspace. A workspace is a shared work area where multiple developers can build applications.' and 'Once created, sign in to your workspace to begin building applications. Return to Administration Services to create additional workspaces or to manage this Application Express instance.' At the bottom of the page, there are links for 'admin', 'internal', and 'en', along with copyright information: 'Copyright © 1999, 2020, Oracle. All rights reserved.' and 'Application Express 20.2.0.00.20'. The Oracle logo is also present at the bottom right.

M01-2. APEX Workspace 생성과 로그인 (3/5)

The screenshot shows the 'Create Workspace' dialog box from the Oracle Application Express (APEX) interface. The dialog title is 'Create Workspace'. It contains fields for 'Database User' (set to 'APEXWS'), 'Password' (redacted), and 'Workspace Name' (set to 'APEXWS'). Below the form is an 'Advanced' section. At the bottom are 'Cancel' and 'Create Workspace' buttons. The background shows the APEX navigation bar with links like 'Manage Instance', 'Manage Workspaces', and 'Monitor Activity'. On the right, there's a sidebar titled 'System Message' with a 'Workspace Tasks' list and an 'Available Updates' section.

**DB유저,
Workspace 이름 기억!!!**

- Database user : APEXWS
- Password : Welcome123456!
- Workspace Name : APEXWS

M01-2. APEX Workspace 생성과 로그인 (4/5)

The screenshot shows the Oracle Application Express Administration Services interface. At the top, there is a navigation bar with the APEX logo, 'Manage Instance', 'Manage Workspaces', and 'Monitor Activity' dropdowns. A green banner message states: 'Workspace created. Sign out of Administration Services and sign in to APEXWS to begin building applications.' On the left, there is a 'System Message' section with a yellow background and a 'Manage Instance' button. The main area is titled 'Administration Services' and contains three buttons: 'Manage Instance', 'Manage Workspaces', and 'Monitor Activity'. To the right, there is a sidebar with a red box highlighting the 'AD' link in the top right corner, which is labeled '1'. A red box also highlights the text 'APEX 유저로 로그인하기 위해 클릭' (Click to log in as an APEX user). The sidebar includes sections for 'Instance Tasks' (Jump to Workspace, Feature Configuration), 'Workspace Tasks' (Create Workspace, Find a Workspace, Manage Workspaces), and 'Available Updates' (System is up-to-date, upgrade information).

1

AD

APEX 유저로 로그인하기 위해 클릭

Workspace created. Sign out of Administration Services and sign in to APEXWS to begin building applications.

Administration Services

Create Workspace

Manage Instance

Manage Workspaces

Monitor Activity

System Message

Workspaces

Schemas

Applications

Users

Mail Queue Entries

Websheets

Instance Tasks

Jump to Workspace...

Feature Configuration

Workspace Tasks

Create Workspace

Find a Workspace

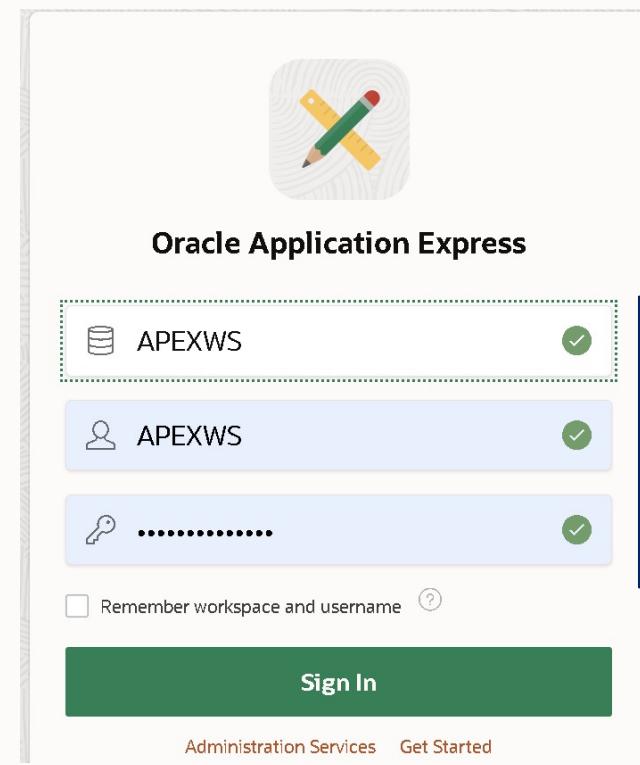
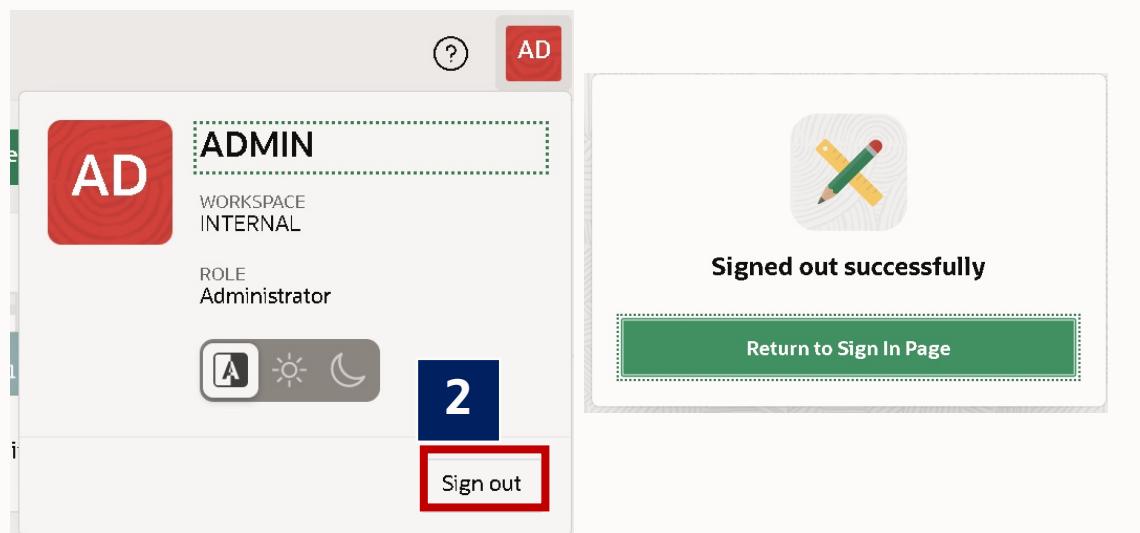
Manage Workspaces

Available Updates

System is up-to-date.

Once a new Application Express release becomes available, your instance will be **immediately** upgraded.

M01-2. APEX Workspace 생성과 로그인 (5/5)



- Workspace Name : APEXWS
- Database user : APEXWS
- Password : Welcome123456!



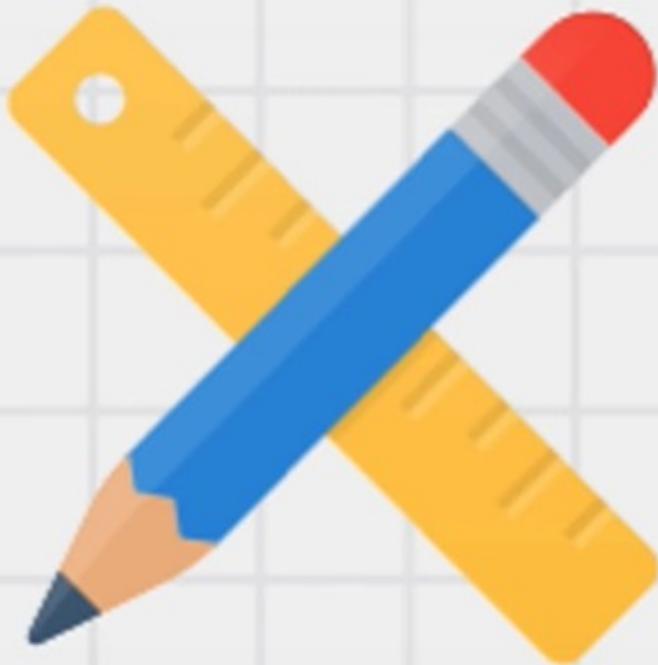
OCI Always Free – ATP (19C)

APEX Version: 20.2

2021.08.14

실습 참조 페이지

<https://bit.ly/3iQAfBS>



Low-code Dev

APEX ADB OCI Oracle APEX - Beginner Workshop

01. 실습 환경 준비 : APEX Workspace 사용자 등록



M01-3. APEX Workspace의 사용자(User) 등록 (1/10)

The screenshot shows the Oracle APEX workspace dashboard. At the top, there is a navigation bar with icons for App Builder, SQL Workshop, Team Development, App Gallery, and a search function. On the right side, there is an 'About' section with a brief description of Oracle APEX and a 'Learn More ...' link. Below that is a 'Dashboard' section with counts for Applications (0), Tables (0), Productivity Apps (0), and Issues (0). The main area displays 'Top Apps', 'Top Users', and 'Messages'. The 'Top Users' table shows one user named 'apexws' with a profile icon 'AP'. A callout box highlights this user with the following information:

- Workspace Name : APEXWS
- Database user : APEXWS
- Password : Welcome123456!

A large blue callout box at the bottom left contains the following text:

❖ 인증 정보를 변경 하자!!
Database user 정보 사용
→ APEX user 정보 사용 (by user 등록)

M01-3. APEX Workspace의 사용자(User) 등록 (2/10)

The screenshot shows the Oracle APEX workspace interface. At the top, there is a navigation bar with icons for App Builder, SQL Workshop, Team Development, and App Gallery. On the far right of the navigation bar is a user icon (highlighted with a red box and labeled '1') and a help icon. Below the navigation bar, there are three main tabs: App Builder, SQL Workshop, and Team Development. The App Builder tab is selected. In the center, there are three cards: Top Apps, Top Users, and Messages. The Top Users card shows a list with one entry: 'apexws' (AP). To the right, a sidebar titled 'Administration' is open, showing options like Manage Service, Manage Users and Groups (which is highlighted with a red box and labeled '2'), Monitor Activity, Dashboards, and Change My Password. A red arrow points from the 'Manage Users and Groups' option to a callout box.

- Database user 정보 사용시 보안적, 운영적 측면에서 문제 발생 가능성 있음
- 따라서, APEX사용자를 개발자, 일반 사용자로 분류하여 별도 등록하여 사용함

지금까지 APEX Workspace에 데이터베이스 사용자인 apexws로 로그인했습니다. 데이터베이스 사용자가 아닌 APEX Workspace 사용자를 등록하여 사용하겠습니다. 개발자 사용자와 일반 사용자 2개를 등록합니다.

사용자 유형	사용자 이름	비밀번호	비고
개발자 사용자	dev01	Welcome123456!	관리자, 개발자 권한 부여
일반 사용자	user01	Welcome123456!	

M01-3. APEX Workspace의 사용자(User) 등록 (3/10)

The screenshot shows the Oracle APEX workspace management interface. At the top, there are navigation links for App Builder, SQL Workshop, Team Development, and App Gallery. On the right side of the header are icons for search, user profile, help, and account.

The main title is "Manage Users and Groups". Below it, there are tabs for "Users" (selected), "Groups", and "Group Assignments".

On the right side of the page, there is a sidebar titled "Manage Users" which contains descriptive text and links for workspace administrators, developers, and end users. A red box highlights the "Create User >" button in the sidebar.

The main content area displays a table of users:

User	Email	Account Type	Locked	Builder Last Login	Created
APEXWS	-	Workspace Administrator	No	34 minutes ago	38 minutes ago

A blue box with the number "1" is placed over the "Create User >" button in the sidebar.

Below the table, there is a page number "1 - 1".

Text in the sidebar:

- Manage Users**: Use this page to control access for Application Express workspace administrators, application developers, and end users.
- Workspace administrators**: can create and modify applications and database objects as well as manage user accounts, groups, and development services.
- Developers**: can create and modify applications and database objects.
- End users**: have no development privileges and can only access applications that do not use an external authentication scheme.

[Learn More ...](#)

Tasks

M01-3. APEX Workspace의 사용자(User) 등록 (4/10)

The screenshot shows the Oracle Application Express (APEX) workspace user creation interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with search and user icons.

The current page is "Create User" under "Manage Users and Groups". The main title is "Create User". Below it, there are tabs: "Show All" (selected), "User Identification", "Account Privileges", "Password (For authentication against workspace user account repository only)", and "Group Assignments".

The "User Identification" section contains the following fields:

- * Username: dev01 (highlighted with a red box and a blue number 2)
- * Email Address: demo@gmail.com
- First Name: (empty)
- Last Name: (empty)
- Description: (empty)
- Default Date Format: (empty)

On the right side, there is a sidebar titled "Users" with the following text:
Use this page to control access for Application Express application developers, workspace administrators and end users.
Developers can create and edit applications as well as create and modify database objects.
Workspace administrators can additionally create and edit user accounts, manage groups, manage development services.
End users have no development privileges and are defined to provide access control to applications that do not use an external authentication scheme.

M01-3. APEX Workspace의 사용자(User) 등록 (5/10)

Description

Create User

Cancel Create and Create Another Create User

Show All User Identification Account Privileges Password (For authentication against workspace user account repository only) Group Assignments

Account Privileges

Default Schema: APEXWS

Accessible Schemas (null for all):

User is a workspace administrator: 3

User is a developer:

App Builder Access:

SQL Workshop Access:

Team Development Access:

Set Account Availability: Unlocked

M01-3. APEX Workspace의 사용자(User) 등록 (6/10)

Create User

Show All User Identification Account Privileges Password (For authentication against workspace user account repository only) Group Assignments

>Password (For authentication against workspace user account repository only)

* Password: Passwords are case sensitive [?](#)

* Confirm Password:

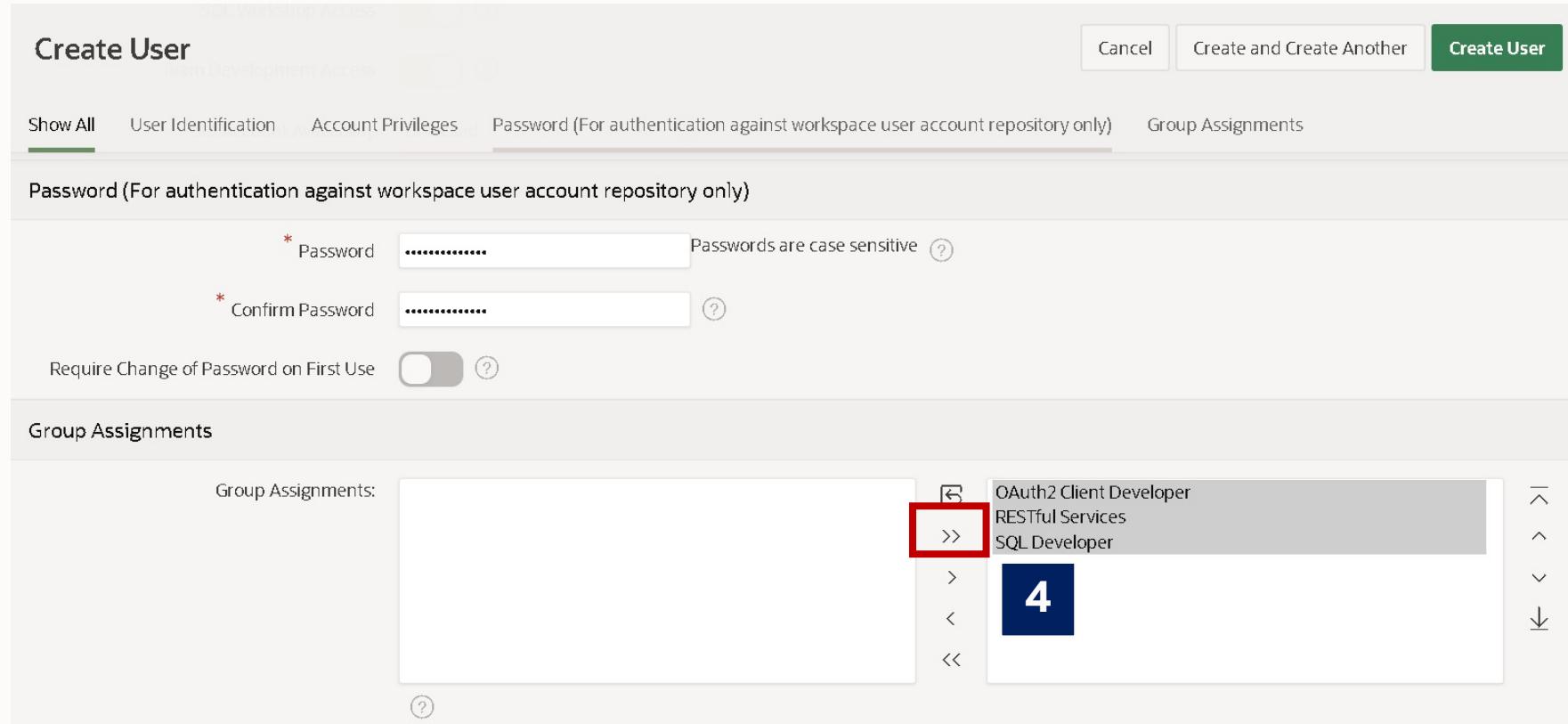
Require Change of Password on First Use: [?](#)

Group Assignments

Group Assignments:

[OAuth2 Client Developer](#)
[RESTful Services](#)
[SQL Developer](#)

[Cancel](#) [Create and Create Another](#) [Create User](#)



M01-3. APEX Workspace의 사용자(User) 등록 (7/10)

The screenshot shows the Oracle Application Express (APEX) interface for managing users and groups. The top navigation bar includes links for App Builder, SQL Workshop, Team Development, and App Gallery. On the right side of the header are search, user profile, help, and APEX icons.

The main content area is titled "Manage Users and Groups". A green success message box displays "User created." with a checkmark icon and the number "6" in a blue box. Below this, there are tabs for "Users" (selected), "Groups", and "Group Assignments".

The "Users" tab displays a table with the following data:

User	Email	Account Type	Locked	Builder Last Login	Created
APEXWS	-	Workspace Administrator	No	38 minutes ago	41 minutes ago
DEV01	demo@gmail.com	Workspace Administrator	No	-	Now

Below the table, a note indicates there are 1 - 2 more users. To the right of the table, a "Create User >" button is highlighted with a red box and the number "5".

The right sidebar contains several sections:

- Manage Users**: Describes the page for controlling access for workspace administrators, application developers, and end users.
- Workspace administrators**: Can create and modify applications and database objects as well as manage user accounts, groups, and development services.
- Developers**: Can create and modify applications and database objects.
- End users**: Have no development privileges and can only access applications that do not use an external authentication scheme.
- Learn More ...**
- Tasks**
- About Application Express**

M01-3. APEX Workspace의 사용자(User) 등록 (8/10)

The screenshot shows the Oracle APEX workspace interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, App Gallery, and various search and help icons. The current page is 'Manage Users and Groups \ Create User'. The main content area is titled 'Create User' and contains tabs for Show All, User Identification, Account Privileges, Password (For authentication against workspace user account repository only), and Group Assignments. The 'User Identification' tab is selected, displaying fields for Username (USER01), Email Address (demo@gmail.com), First Name, Last Name, Description, and Default Date Format. A red box highlights the 'Username' field, and a blue box with the number '1' highlights the 'Create User' button. To the right, a sidebar titled 'Users' provides information about workspace administrators, developers, and end users.

APEX App Builder SQL Workshop Team Development App Gallery

Manage Users and Groups \ Create User

Create User

Show All User Identification Account Privileges Password (For authentication against workspace user account repository only) Group Assignments

User Identification

* Username: USER01
* Email Address: demo@gmail.com
First Name:
Last Name:
Description:
Default Date Format:

Cancel Create and Create Another Create User

Users
Use this page to control access for Application Express application developers, workspace administrators and end users.
Developers can create and edit applications as well as create and modify database objects.
Workspace administrators can additionally create and edit user accounts, manage groups, manage development services.
End users have no development privileges and are defined to provide access control to applications that do not use an external authentication scheme.

M01-3. APEX Workspace의 사용자(User) 등록 (9/10)

Account Privileges

Default Schema: APEXWS

Accessible Schemas (null for all):

User is a workspace administrator: 2

User is a developer:

App Builder Access:

SQL Workshop Access:

Team Development Access:

Set Account Availability: Unlocked

Create User

Show All User Identification Account Privileges Password (For authentication against workspace user account repository only) Group Assignments

Password (For authentication against workspace user account repository only)

* Password: Passwords are case sensitive

* Confirm Password:

Require Change of Password on First Use:

Group Assignments

Group Assignments: OAuth2 Client Developer, RESTful Services, SQL Developer

3

개발자, 일반사용자의 차이 확인!

M01-3. APEX Workspace의 사용자(User) 등록 (10/10)

The screenshot shows the Oracle Application Express (APEX) workspace management interface. The top navigation bar includes links for App Builder, SQL Workshop, Team Development, and App Gallery, along with search and user icons.

The main page title is "Manage Users and Groups". A green success message at the top left states "User created." with a checkmark icon.

The "Users" tab is selected in the navigation bar, showing a list of users. The table columns are: User, Email, Account Type, Locked, Builder Last Login, and Created.

User	Email	Account Type	Locked	Builder Last Login	Created
APEXWS	-	Workspace Administrator	No	41 minutes ago	44 minutes ago
DEV01	demo@gmail.com	Workspace Administrator	No	-	3 minutes ago
USER01	demo@gmail.com	End User	No	-	Now

To the right of the table, there is a sidebar titled "Manage Users" which provides instructions for workspace administrators, developers, and end users. It also includes links for "Learn More ...", "Tasks", "About Application Express", and "Monitor Activity".

OCI Always Free – ATP (19C)

APEX Version: 20.2

2021.08.14



Low-code Dev

실습 참조 페이지

<https://bit.ly/3k5DIMx>



APEX

ADB

OCI

Oracle APEX - Beginner Workshop

Politics - 37% (1,549)

1.5K
1.2K
0.9K
0.6K
0.3K
1,356
877
475
395
305
230
142
108
82
80
77

M02. Report With Form:
01. My Expense 앱 만들기

Karl Marx
1818 - 1883

OCI

Marco Polo
1254 - 1324

Oracle

APEX

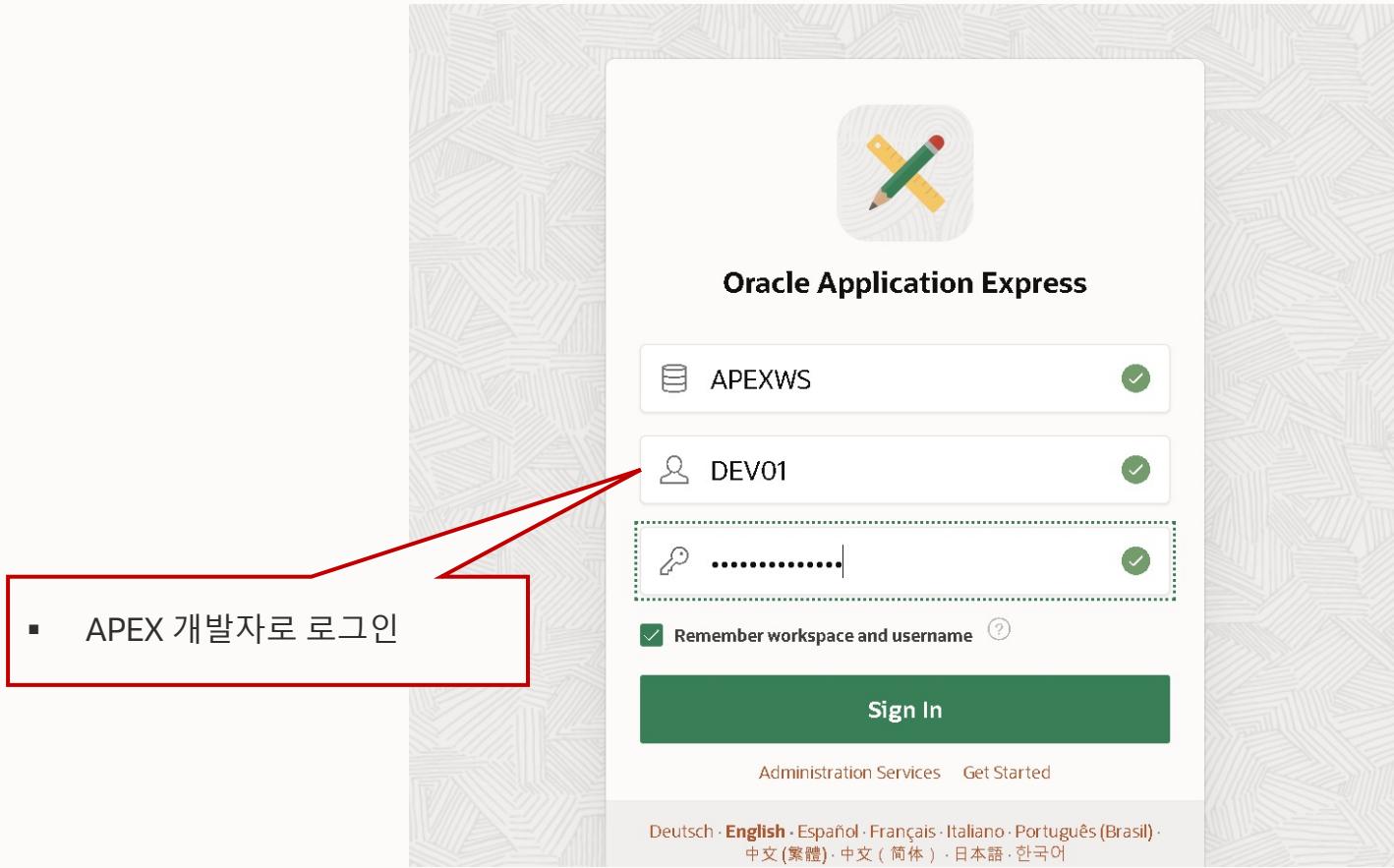
United States
United Kingdom
France (395)
Germany (300)
Italy (230)

Nero
37 - 68
Politics

Science and Technology

Low-Code
Arts

M02.1-1. 로그인



M02.1-2. 앱 생성 (1/6)

The screenshot shows the Oracle Application Express (APEX) App Builder interface. A red box highlights the 'App Builder' tab in the top navigation bar. Another red box highlights the 'DE' (Developer Edition) link in the top right corner. A third red box highlights the user icon in the bottom left corner.

1 APEX App Builder SQL Workshop Team Development App Gallery DE

2 Create Import Dashboard Workspace Utilities

About
The App Builder enables you to design, develop and deploy applications which are beautiful and responsive.
[Learn More ...](#)

Recent
No Applications found.

Tasks
[Install Sample App](#) >
[Install Productivity App](#) >
[Manage Backups](#) >
[Browse by Facets](#) >

Migrations
[Oracle Forms Migrations](#) >

Get Started Now

Create a New App
Start building your first application in Application Express.

Install a Productivity or Sample App
Choose from over 20 sample and productivity apps.

dev01 apexws en Copyright © 1999, 2020, Oracle and/or its affiliates. All rights reserved. Application Express 20.2.0.0.20

35 Copyright © 2020, Oracle and/or its affiliates | Confidential: Internal/Restricted/Highly Restricted

M02.1-2. 앱 생성 (2/6)

APEX App Builder SQL Workshop Team Development App Gallery

Create Application

Create an Application

3

New Application
Add pages on existing data, select application features, set your theme, and configure other options.

From a File
Upload a CSV, XLSX, XML or JSON file, or copy and paste data, then create your application.

Productivity App
Install one of many included Sample and Productivity Apps from the App Gallery.

Quick SQL · Copy Application · Help

dev01 apexws en

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Application Express 20.2.0.00.20

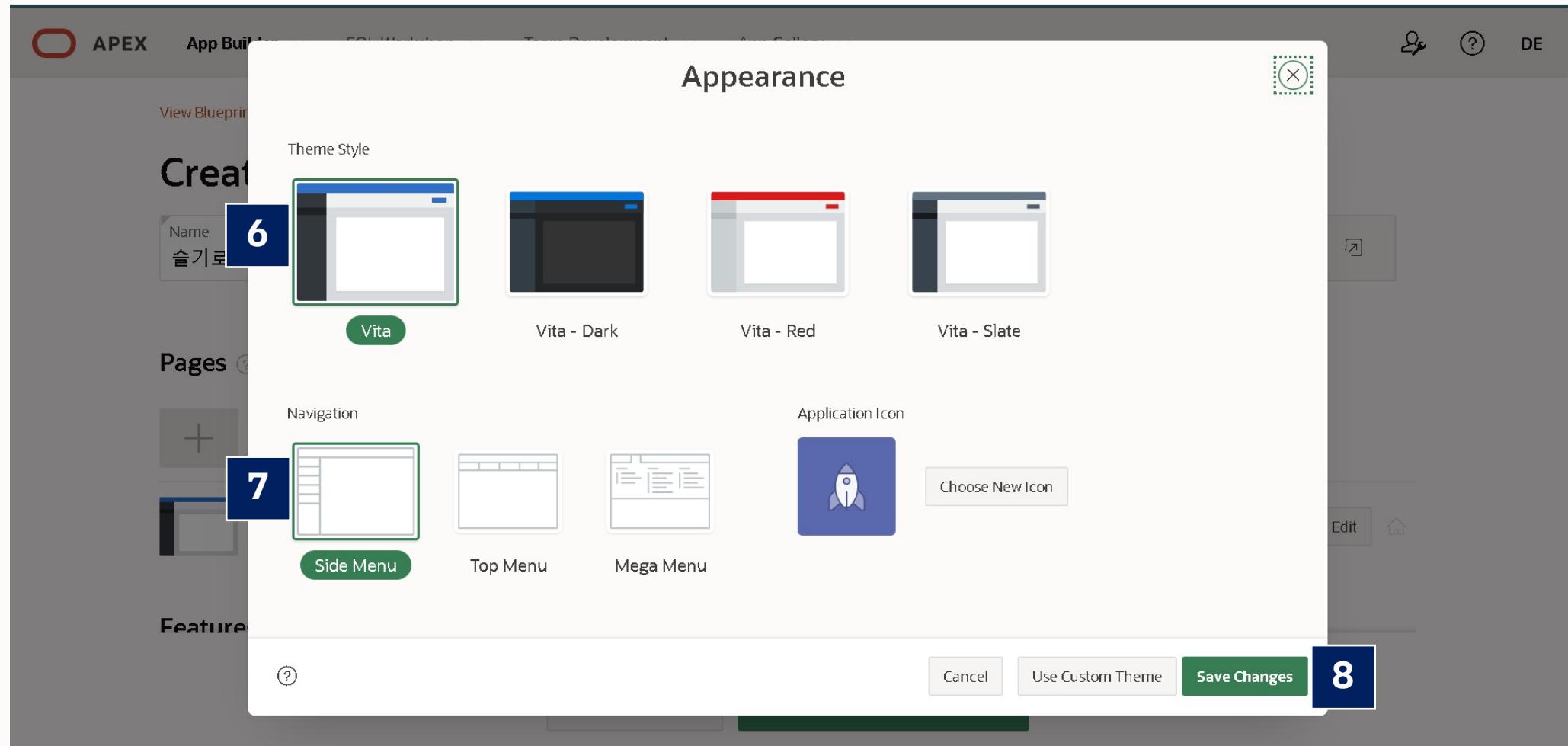
M02.1-2. 앱 생성 (3/6)

The screenshot shows the Oracle APEX App Builder interface with the following elements:

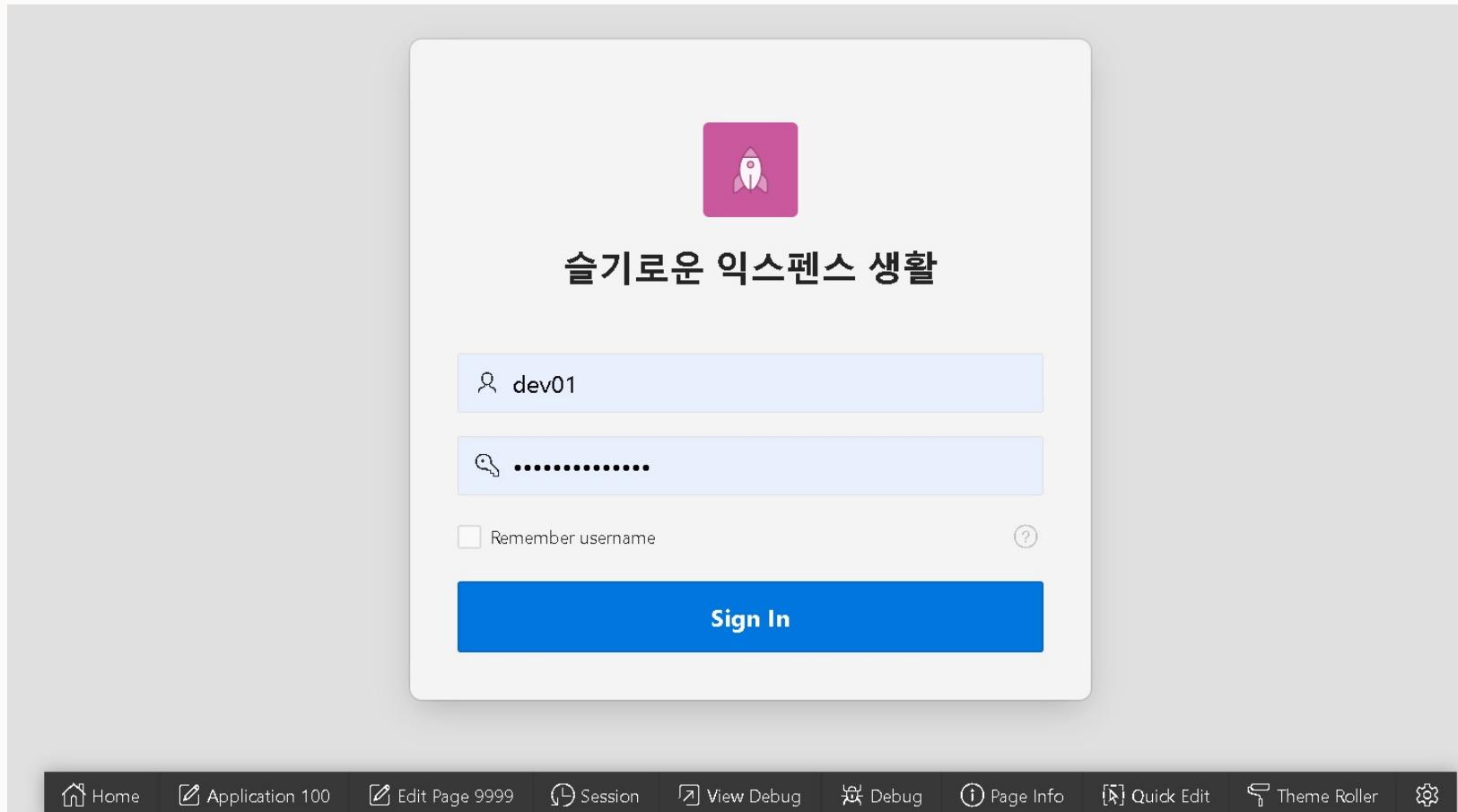
- Header:** APEX, App Builder, SQL Workshop, Team Development, App Gallery, User icon, Help icon, DE dev01.
- Main Title:** Create an Application
- Form Fields:**
 - Name:** 슬기로운 익스펜스 생활 (highlighted by a red box labeled 4)
 - Appearance:** Vita, Side Menu (highlighted by a red box labeled 5)
- Pages Section:** Add Page, Home (Blank), Edit, Home icon.
- Features Section:** About Page (highlighted by a red box labeled 9), Access Control, Activity Reporting.
- Buttons:** Cancel, Create Application (highlighted by a red box labeled 9).

A red callout box points from the 'About Page' feature to the text "이번 실습에는 Feature 없이!" (No features in this exercise!).

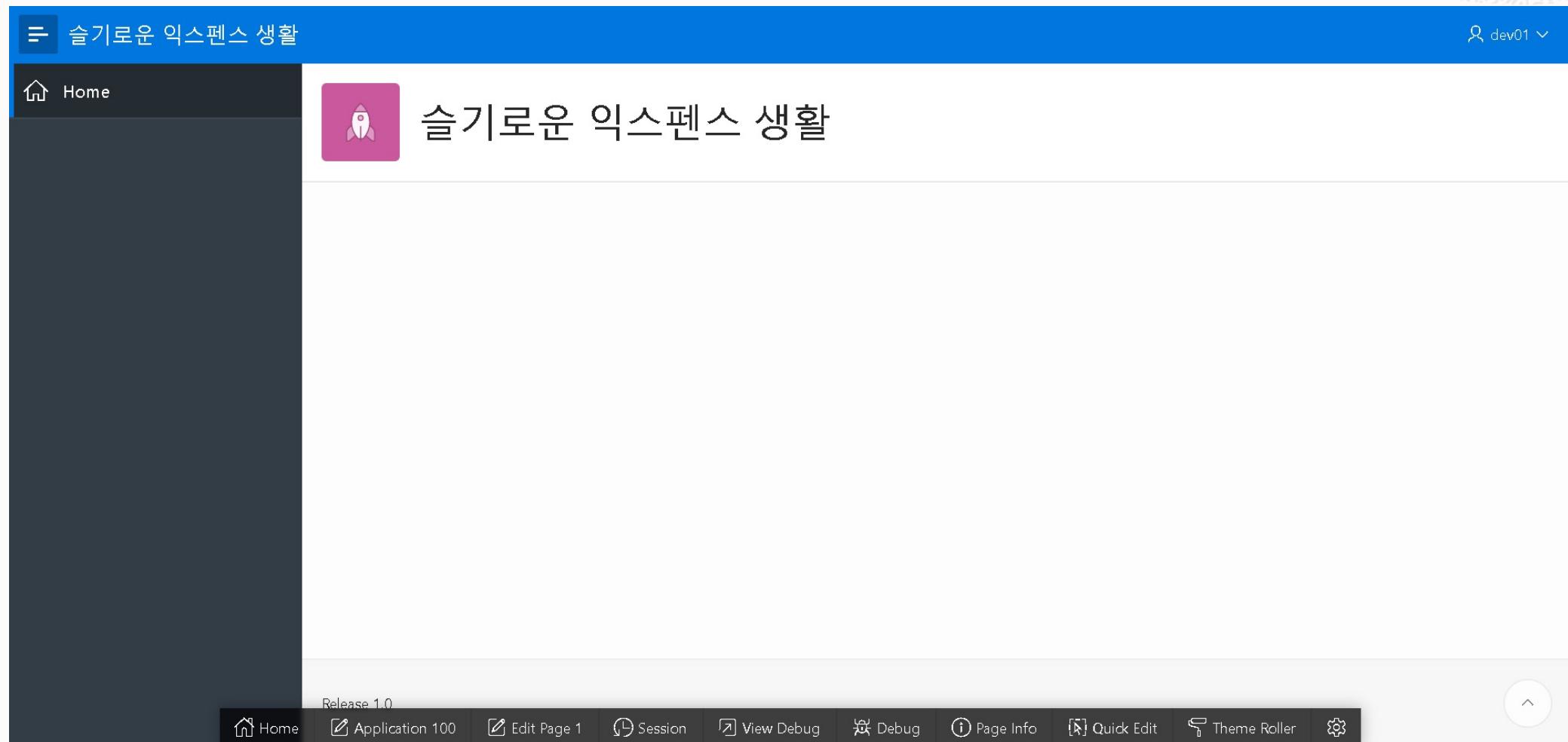
M02.1-2. 앱 생성 (4/6)



M02. 1-2. 앱 생성 (5/6)

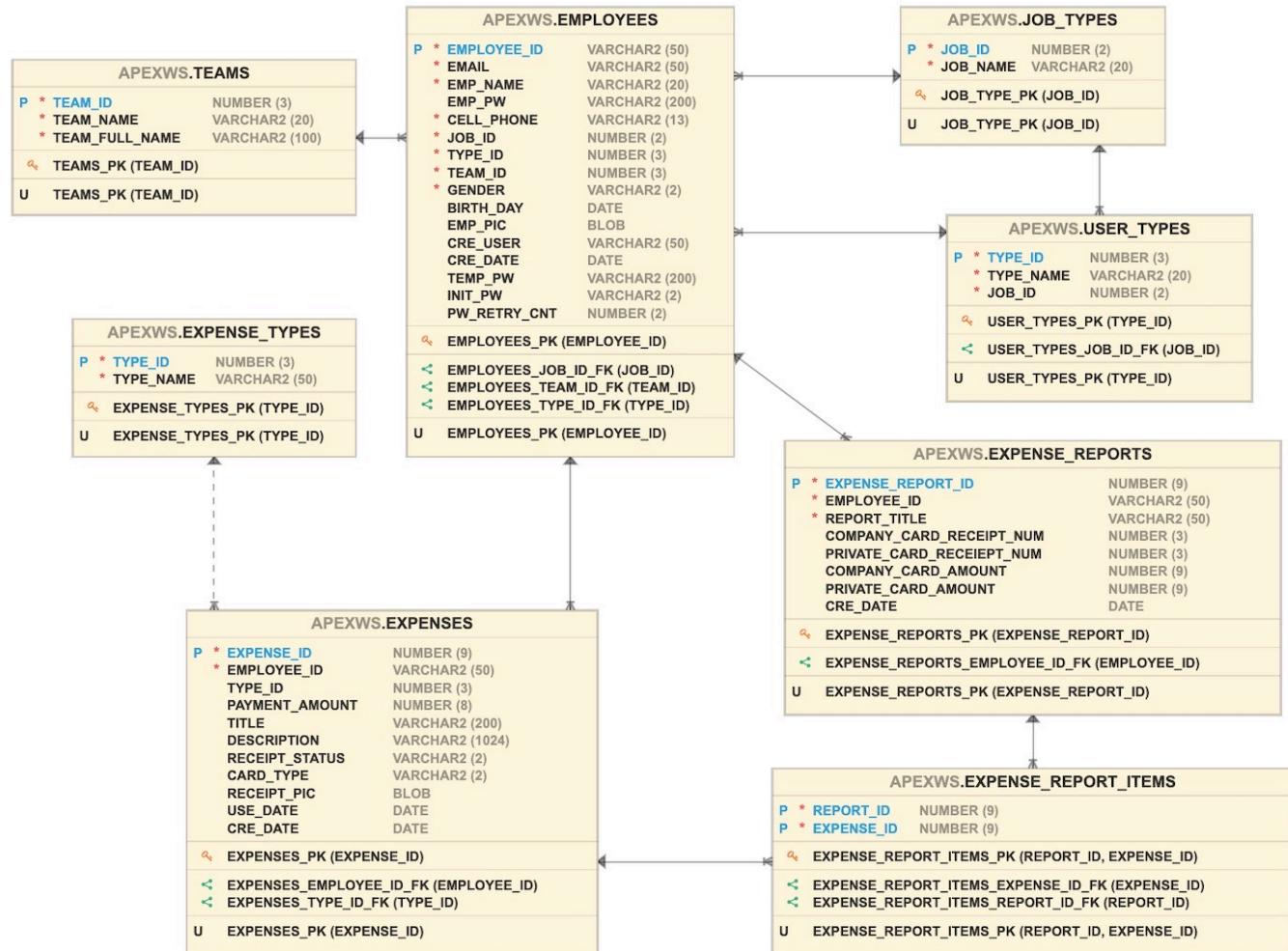


M02.1-2. 앱 생성 (6/6)



M02.1-3. DB 테이블 생성

- 리소스 파일 다운로드
https://taewanmerrepo.github.io/2021/08/apex/apexws_res.zip
- DDL 파일 위치 : /sqls/base_table.sql
- SQL Workshop > SQL Script를 통해 7개 테이블을 생성함



M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (1/8)



M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (2/8)

The screenshot shows the Oracle Database SQL Workshop interface. At the top, there is a navigation bar with tabs: APEX (selected), App Build, 2 SQL Workshop (highlighted with a red box), Team Development, and App Gallery. To the right of the tabs are search, user, and help icons, along with session information (DE dev01). Below the navigation bar is a toolbar with five icons: Object Browser, SQL Commands, SQL Scripts (highlighted with a red box and labeled with a blue '3'), Utilities, and RESTful Services. The main area contains three sections: Recently Created Tables, Recent SQL Commands, and Recent SQL Scripts. Under 'Recently Created Tables', it says 'No tables found'. Under 'Recent SQL Commands' and 'Recent SQL Scripts', it also says 'No SQL commands found'. On the right side, there is a sidebar titled 'About' which provides a brief description of the SQL Workshop and a link to 'Learn More ...'. Below 'About' is a section titled 'Schema' with a sub-section for selecting the default database schema for the session. At the bottom of the sidebar is a 'Create Object' menu with options: Table, View, Index, Sequence, Type, Package, Procedure, Function, Trigger, and Materialized View. A 'Set' button is located next to the schema selection dropdown.

M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (3/8)

The screenshot shows the Oracle Application Express (APEX) interface, specifically the SQL Workshop > SQL Scripts section. The top navigation bar includes links for APEX, App Builder, SQL Workshop (which is currently selected), Team Development, and App Gallery. On the far right, there are search, user profile, and session information (DE dev01). Below the navigation is a toolbar with search, go, and actions buttons, followed by a large blue button labeled '4'. To the right of the toolbar are buttons for Delete Checked, Upload (which is highlighted with a red box), Quick SQL, and Create. A sidebar on the right contains tasks such as Manage Results, Show Quotas, Export, and Import. The main content area displays a search bar and a message stating 'No data found.'

M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (4/8)

The screenshot shows the Oracle APEX interface with the 'SQL Workshop' tab selected. In the foreground, a modal dialog titled 'Upload Script' is open, prompting the user to 'Choose File'. A red box highlights this input field, and a large blue number '5' is overlaid on it. Below the input field are fields for 'Script Name' (empty) and 'File Character Set' (set to 'Unicode UTF-8').

After uploading, a file entry for 'base_table.sql' is visible in the main list area, highlighted with a green border. The file details are: Last modified on 8/17/2021 at 4:40 PM, type 'SQL 파일', size '5KB'. The 'base_table.sql' icon is a blue script symbol.

The bottom of the screen displays standard APEX navigation and footer information, including the user 'dev01', application 'apexws', language 'en', copyright notice 'Copyright © 1999, 2020, Oracle and/or its affiliates. All rights reserved.', and version 'Application Express 20.2.0.0.20'.

M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (5/8)

The screenshot shows the Oracle SQL Workshop interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop (selected), Team Development, and App Gallery. On the right, there are search, user, and help icons, along with a session identifier DE dev01.

The main area is titled "SQL Scripts". It features a toolbar with search, go, actions, and a "Create" button. Below is a table listing scripts:

	Edit	Owner	Name	Created	Updated By	Updated	Bytes	Results	Run
<input type="checkbox"/>	<input type="checkbox"/>	DEV01	base_table.sql	Now	DEV01	Now	4,732	0	

A red box highlights the "Run" button for the first script row. In the bottom right corner of the table area, there is a dark blue box containing the number 6, indicating six rows of data.

On the right side of the table, there is a "Tasks" sidebar with the following options:

- Manage Results >
- Show Quotas >
- Export >
- Import >

M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (6/8)

The screenshot shows the Oracle APEX interface with the 'SQL Workshop' selected in the top navigation bar. The current page is 'Run Script'. A large 'i' icon and the title 'Run Script' are prominently displayed. Below the title, a message reads: 'You have requested to run the following script. Please confirm your request.' A table provides details about the script: 'base_table.sql' was created on 08/25/2021 at 06:41:42 AM by DEV01, updated on the same date and time, contains 41 statements, and is 4,732 bytes in size. At the bottom, there are 'Cancel' and 'Run Now' buttons, with 'Run Now' being highlighted with a red box and the number '7' placed next to it. The footer includes links for dev01, apexws, and en, along with copyright information and the version Application Express 20.2.0.0.20.

Script Name	base_table.sql
Created	on 08/25/2021 06:41:42 AM by DEV01
Updated	on 08/25/2021 06:41:42 AM by DEV01
Number of Statements	41
Script Size in Bytes	4,732

Cancel **Run Now** 7

M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (7/8)

Number ↑=	Elapsed	Statement	Feedback	Rows
1	0.02	drop table USER_TYPES CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
2	0.00	drop table TEAMS CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
3	0.00	drop table JOB_TYPES CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
4	0.00	drop table EMPLOYEES CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
5	0.00	drop table EXPENSE_TYPES CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
6	0.00	drop table EXPENSES CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
7	0.00	drop table EXPENSE_REPORTS CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
8	0.00	drop table EXPENSE_REPORT_ITEMS CASCADE CONSTRAINTS	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
9	0.00	drop view EXPENSE_REPORT_ITEMS_V	ORA-00942: table or view does not exist ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 676 ORA-06512: at "SYS.DBMS_SYS_SQL", line 1658 ORA-06512: at "SYS.WWV_DBMS_SQL_APEX_200200", line 662 ORA-06512: at "APEX_200200.WWV_FLOW_DYNAMIC_EXEC", line 1769	-
10	0.16	CREATE TABLE JOB_TYPES (job_id number(2) NOT NULL);	Table created.	0
11	0.06	insert into JOB_TYPES values(1, '의사')	1 row(s) inserted.	1
12	0.00	insert into JOB_TYPES values(2, '간호사')	1 row(s) inserted.	1
13	0.02	CREATE TABLE TEAMS (team_id number(3) NOT NULL,team	Table created.	0
14	0.02	insert into TEAMS values(1, 'PDS', '소아과')	1 row(s) inserted.	
15	0.00	insert into TEAMS values(2, 'OB&GY', '산부인과')	1 row(s) inserted.	
Download				

▪ SQL script 내용상 error 9개 발생

row(s) 1 - 15 of 41 Next ▶

41

Statements Processed

32

Successful

With Errors

9



M02.1-3. DB 테이블 생성 : SQL Workshop > SQL Scripts (8/8)

The screenshot shows the Oracle APEX SQL Workshop interface. The top navigation bar has tabs for APEX, App Builder, SQL Workshop (which is selected and highlighted in blue), Team Development, and App Gallery. The user is logged in as DE dev01 with schema APEXWS. On the left, there's an Object Browser with a tree view of tables: EMPLOYEES (selected and highlighted in green), EXPENSES, EXPENSE_REPORTS, EXPENSE_REPORT_ITEMS, EXPENSE_TYPES, JOB_TYPES, TEAMS, and USER_TYPES. A red box highlights the 'Tables' dropdown in the Object Browser. A red arrow points from the 'USER_TYPES' table in the tree to a callout box containing the text '7개 테이블과 데이터가 Loading 완료'. The main workspace displays the 'EMPLOYEES' table definition with the following columns:

Column Name	Data Type	Nullable	Default	Primary Key
EMPLOYEE_ID	VARCHAR2(50)	No	-	1
EMAIL	VARCHAR2(50)	No	-	-
EMP_NAME	VARCHAR2(20)	No	-	-
EMP_PW	VARCHAR2(200)	Yes	-	-
CELL_PHONE	VARCHAR2(13)	No	-	-
JOB_ID	NUMBER(2,0)	No	-	-
TYPE_ID	NUMBER(3,0)	No	-	-
TEAM_ID	NUMBER(3,0)	No	-	-
GENDER	VARCHAR2(2)	No	-	-
BIRTH_DAY	DATE	Yes	-	-
EMP_PIC	BLOB	Yes	-	-

At the bottom, there are links for dev01, apexws, and en, along with copyright information: Copyright © 1999, 2020, Oracle and/or its affiliates. All rights reserved. Application Express 20.2.0.00.20.

M02.1-4. LOV 컴포넌트 생성, List of Values (1/12)

The screenshot shows the Oracle APEX dashboard. At the top, there are links for App Builder, SQL Workshop, Team Development, and App Gallery. On the right, there are icons for search, user profile, help, and DE. The main area has four sections: App Builder, SQL Workshop, Team Development, and App Gallery. Below these are three cards: Top Apps, Top Users, and Messages. The Top Apps card shows one application: '슬기로운 익스펜스 생활' (Expense Life) by user 'DE' with 6 messages. The Top Users card shows two users: 'dev01' (DE) with 42 messages and 'apexws' (AP) with 6 messages. The Messages card shows 1 message. To the right, there's an 'About' section with a brief description of Oracle APEX and a 'Learn More ...' link. Below that is a 'Dashboard' section with counts for Applications (1), Tables (8), Productivity Apps (0), and Issues (0). There's also a 'Resources' section with links to Community Site, apex.world, and Blog.

Top Apps	Top Users	Messages
1 [应用图标] 슬기로운 익스펜스 생활 6	DE dev01 42 AP apexws 6	1

About

Oracle APEX is the native application development framework of the Oracle Database.

Learn More ...

Dashboard

Applications	Tables
1	8

Productivity Apps Issues

Resources

- Community Site >
- apex.world >
- Blog >

M02.1-4. LOV 컴포넌트 생성, List of Values (2/12)

The screenshot shows the Oracle APEX App Builder interface. At the top, there is a navigation bar with links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery. On the right side of the navigation bar, there are icons for search, user profile, help, and a session identifier (DE dev01). Below the navigation bar, the title "Application 105" is displayed, followed by a breadcrumb trail: Application 105 - 슬기로운 익스펜스 생활. To the right of the title are buttons for Edit Application Properties and About. The main content area features several icons representing different application components: Run Application, Supporting Objects, Shared Components (which is highlighted with a red box and a large blue number '2' above it), Utilities, and Export / Import. Below these icons is a search bar and a "Create Page >" button. At the bottom of the page, there are links to recently edited pages: 1. Home, 9999. Login Page, and 0. Global Page - Desktop. The footer contains links for dev01, apexws, and en, along with copyright information: Copyright © 1999, 2020, Oracle and/or its affiliates. All rights reserved. and Application Express 20.2.0.0.20.

M02.1-4. LOV 컴포넌트 생성, List of Values (3/12)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with search and user profile icons. The current application is Application 105, and the workspace is DE dev01.

The main content area displays the "Shared Components" page. The page is organized into several sections:

- Application Logic**: Includes Application Definition Attributes, Application Items, Application Processes, Application Computations, Application Settings, Automations, and Build Options.
- Navigation**: Includes Lists, Navigation Menu, Breadcrumbs, and Navigation Bar List.
- Security**: Includes Security Attributes, Authentication Schemes, Authorization Schemes, Application Access Control, Session State Protection, and Web Credentials.
- User Interface**: Includes User Interface Attributes, Themes, and Templates.
- Other Components**: This section contains a red box around the "List of Values" component, which is highlighted with a blue box containing the number "3". Other components listed include Plug-ins, Component Settings, Shortcuts, and Email Templates.
- Files**: Includes Static Application Files and Static Workspace Files.
- About**: Describes shared components and provides links to Learn More and Tasks.
- Tasks**: Includes Export Application Components, Manage Supporting Objects, Edit Application Comment, and Developer Comments.
- Workspace Objects**: Describes workspace objects and includes links for Static Workspace Files and Credentials.

At the bottom left, a URL is shown: <https://yh0olybn5pqce4n-db202108190957.adb.ap-seoul-1.oraclecloudapps.com/ords/f?p=4000:4110:102581370607584::::>. The bottom right corner features the Oracle logo.

M02.1-4. LOV 컴포넌트 생성, List of Values (4/12)

The screenshot shows the Oracle APEX App Builder interface for creating a List of Values (LOV) component. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with user information for DE dev01. The current page is Application 105 \ Shared Components \ Lists of Values. The main content area displays a table with one row for 'LOGIN_REMEMBER_USERNAME'. The table columns are Name, Type, Updated, Entry Count, Subscribed From, and Subscribers. The 'Create >' button in the toolbar is highlighted with a red box and a blue number '4' above it, indicating four items to be created.

Name	Type	Updated	Entry Count	Subscribed From	Subscribers
LOGIN_REMEMBER_USERNAME	Static	12 minutes ago	1		1 - 1

List of Values
A List of Values can be referenced by page items as well as report fields. It controls the values displayed and limits the user's selection. Lists of Values can be static (based on values you enter), or dynamic (based on different data sources of either Local Database, REST Enabled SQL or REST Data Source). [Learn More ...](#)

Recently Edited
[Login Remember Username](#)

M02.1-4. LOV 컴포넌트 생성, List of Values (5/12)

- JOB TYPES

업무 유형: 의사, 간호사

```
select job_id as r, job_name as d from JOB_TYPES
```

- EMP TYPES

(1, '교수')
(2, '펠로우')
(3, '레시던트')
(4, '인턴')
(5, '본과실습생')
(6, '간호사')
(7, '주임간호사')
(8, '수간호사')
(9, '간호부장')

```
select type_id as r, type_name as d from USER_TYPES
```

- Teams

(1, 소아과)
(2, 산부인과)
(3, 간담췌외과)
(4, 신경외과)
(5, 응급의학과)

```
select team_full_name as d, team_id as r from TEAMS
```

- Gender Types

남성: M

여성: F

M02.1-4. LOV 컴포넌트 생성, List of Values (6/12)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with user information (DE dev01) and a search icon. The main content area displays the 'List of Values' creation dialog, which is overlaid on a background showing a list of components for application 105.

Create List of Values

A List of Values is a static or dynamic definition used to display a specific type of page item, such as popup lists of values, a select list, a check box, a radio group, or multiple select lists.

Create List of Values: From Scratch As a Copy of an Existing List of Values

Cancel Next >

The background shows a list of components under 'Application 105 \ Shared Components \ Lists of Values'. One component, 'LOGIN_REMEMBER_USERNAME', is selected. The right sidebar provides a brief description of what a List of Values is and how it can be created.

M02.1-4. LOV 컴포넌트 생성, List of Values (7/12)

The screenshot shows the Oracle APEX App Builder interface. A modal dialog titled "Create List of Values" is open, showing the first step of a two-step process. The step is labeled "Name and Type". The "Name" field contains "JOB TYPES" and the "Type" is set to "Dynamic". A note below the form states: "Static lists are based on predefined pairs of display and return values. Dynamic lists are based on a dynamic data source of either Local Database, REST Enabled SQL or REST Data Source." A red box highlights the note "▪ Dynamic LOV : SQL 쿼리 사용". The background shows the application navigation bar with "APEX", "App Builder", "SQL Workshop", "Team Development", and "App Gallery". The sidebar on the right displays "List of Values" information, including a description of what it is, a "Create" button, and a "Subscribers" section. The bottom of the screen shows the footer with copyright information and the version "Application Express 20.2.0.0.20".

M02.1-4. LOV 컴포넌트 생성, List of Values (8/12)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery. On the right, there are user icons and the text "DE dev01". The main area displays the "Application 105 \ Shared Components \ Lists of Values" page. A modal window titled "Create List of Values" is open, showing a progress bar with three steps completed. The third step, "List of Values Source", is active. It includes tabs for Data Source (Local Database selected), REST Enabled SQL Service, and REST Data Source. Under "Source Type", the "SQL Query" option is selected. Below it, a text area contains the SQL code: "select job_id as r, job_name as d from JOB_TYPES". At the bottom of the modal are "Cancel" and "Next >" buttons. To the right of the modal, a sidebar provides information about Lists of Values and a "Recently Edited" section.

Create List of Values

List of Values Source

Data Source Local Database REST Enabled SQL Service REST Data Source

* Source Type Table SQL Query Function Returning SQL

* Enter a SQL SELECT statement

```
1 select job_id as r, job_name as d from JOB_TYPES
```

Cancel Next >

Lists of Values

A List of Values can be referenced by page items as well as report fields. It controls the values displayed and limits the user's selection. Lists of Values can be static (based on values you enter), or dynamic (based on different data sources of either Local Database, REST Enabled SQL or REST Data Source).

Subscribers

1 - 1

Learn More ...

Recently Edited

Login Remember Username

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Application Express 20.2.0.0.20

M02.1-4. LOV 컴포넌트 생성, List of Values (9/12)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', 'App Gallery', and user information 'DE dev01'. The left sidebar shows 'Application 105 \ Shared Components \ Lists of Values'. The main content area displays a 'Create List of Values' dialog with the following fields:

- Name**: LOGIN_REMEMBER_USERNAME
- Return Column**: R
- Display Column**: D

Below the dialog are 'Cancel' and 'Create' buttons. To the right of the dialog, there is a sidebar with the following sections:

- List of Values**: A descriptive text explaining what a List of Values is and how it can be used.
- Subscribers**: Shows a count of 1-1.
- Recently Edited**: Shows 'Login Remember Username'.

M02.1-4. LOV 컴포넌트 생성, List of Values (10/12)

The screenshot shows the Oracle APEX 'Create List of Values' dialog box. The dialog has a progress bar at the top with three steps: 'Name and Type' (the current step, indicated by a green dot), 'Display and Return' (indicated by a grey dot), and 'Validation' (indicated by a grey dot). The main area of the dialog contains the following information:

- Name:** GENDER TYPES
- Type:** Static (radio button selected)
- Description:** Static lists are based on predefined pairs of display and return values. Dynamic lists are based on a dynamic data source of either Local Database, REST Enabled SQL or REST Data Source.

A red box highlights the 'Static' radio button, and a red arrow points from the text 'Static LOV : 테이블 사용' (Static LOV : Table usage) located in the bottom-left corner of the dialog to the 'Static' radio button.

Below the dialog, the APEX application interface is visible, showing the 'Lists of Values' page with other entries like 'EMP TYPES', 'JOB TYPES', etc., and a sidebar with documentation and recently edited items.

M02.1-4. LOV 컴포넌트 생성, List of Values (11/12)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, App Gallery, and user-specific options like DE dev01. The main workspace displays a "Lists of Values" page for Application 105. A modal window titled "Create List of Values" is open, showing a step-by-step process with three completed steps. The modal contains instructions about static values and a table to define the list. The table has columns for Sequence, Display Value, and Return Value. Three rows are present: row 1 (남성, M), row 2 (여성, F), and row 3 (empty). The "Create List of Values" button at the bottom right of the modal is highlighted.

Lists of Values

Name ↑

EMP TYPES

JOB TYPES

LOGIN_REMEMBER_USERNAME

TEAMS

Static Values

Create List of Values

Subscribers

A List of Values can be referenced by page items as well as report fields. It controls the values displayed and limits the user's selection. Lists of Values can be static (based on values you enter), or dynamic (based on different data sources of either Local Database, REST Enabled SQL or REST Data Source).

Recently Edited

Job Types

Login Remember Username

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Application Express 20.2.0.0.20

dev01 apexws en

M02.1-4. LOV 컴포넌트 생성, List of Values (12/12)

The screenshot shows the Oracle APEX App Builder interface for creating a List of Values (LOV). The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with search, user, and help icons. The current page is Application 105 \ Shared Components \ Lists of Values.

A green success message at the top left states "Static List of Values created." The main content area displays a table of existing LOVs:

Name	Type	Updated	Entry Count	Subscribed From	Subscribers
EMP TYPES	Local	2 minutes ago			
GENDER TYPES	Static	Now	2		
JOB TYPES	Local	4 minutes ago			
LOGIN_REMEMBER_USERNAME	Static	22 minutes ago	1		
TEAMS	Local	71 seconds ago			

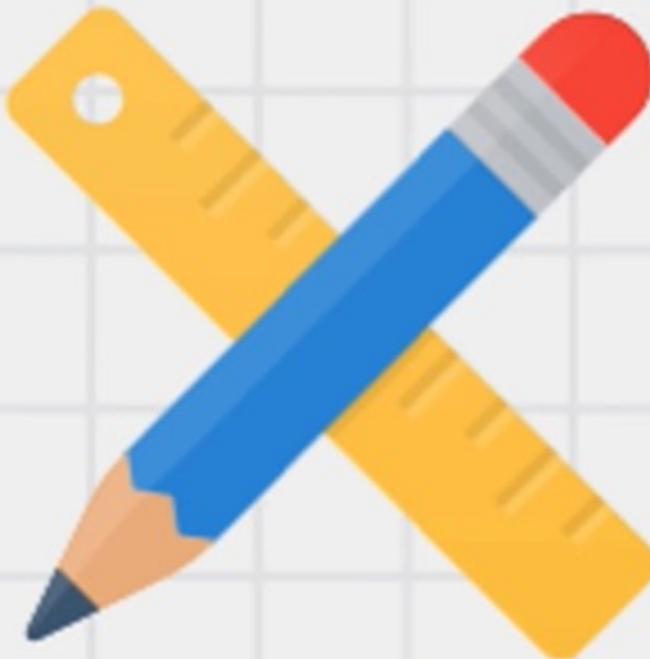
On the right side, there is a sidebar titled "List of Values" with descriptive text and a "Learn More ..." link. Below it, under "Recently Edited", are links for Gender Types, Teams, Emp Types, Job Types, and Login Remember Username.

At the bottom, footer links include dev01, apexws, en, Copyright © 1999, 2020, Oracle and/or its affiliates. All rights reserved., Application Express 20.2.0.00.20, and a small Oracle logo.

OCI Always Free – ATP (19C)

APEX Version: 20.2

2021.08.14



Low-code Dev

Oracle

APEX

Politics

Nero
37 - 68

Karl Marx
1818 - 1883

OCI

United States

United Kingdom (479)

France (395)

Germany (306)

Italy (230)

실습 참조 페이지
<https://bit.ly/3xXVQN7>



APEX

ADB

OCI

Oracle APEX - Beginner Workshop

M02. Report With Form:
02. 직원 정보 관리 Report
생성

Politics - 37%
(1,549)

1.5K
1.2K
0.9K
0.6K

475
877
1,356

United States
United Kingdom
Turkey
Poland

Marco Polo
1254 - 1324

Science and Technology

Marco Polo
1254 - 1324

Arts

Low-Code

M02.2. 결과물 미리 보기 : Interactive Report with Form

The screenshot displays two views of an Oracle APEX application. On the left, the main page titled '직원 정보 관리' (Employee Information Management) shows a grid of employee data with columns: 직원 ID, Email, 이름 (Name), 전화번호 (Phone Number), 업무 유형 (Job Type), 직급 (Position), 팀 (Team), 성별 (Gender), and 등록일 (Registration Date). On the right, a modal dialog titled 'emp-form' allows editing of an employee record for '채송화' (Chae Song-hwa) with fields for Employee ID, Name, Phone Number, Job Type, Position, Gender, and Birthdate. It also includes a 'Drag and Drop' area for a profile picture and a 'Choose File' button.

Employee Data Grid:

직원 ID	Email	이름	전화번호	업무 유형	직급	팀	성별	등록일
KimJW	demo@gmail.com	김준완	111-1111-1111	의사	교수	간담췌외과	남성	2021-08-25
YangSH	demo@gmail.com	양석현	100-1111-1111	간호사	간호부장	신경외과	남성	2021-08-25
20210008	demo@gmail.com	주종수	000-0000-0000	의사	교수	응급의학과	남성	2021-08-25
20210009	demo@gmail.com	천명태	000-1111-1111	간호사	간호부장	신경외과	남성	2021-08-25
IJ	demo@gmail.com	이익준	111-1111-1111	의사	교수	응급의학과	남성	2021-08-25
DoJH	demo@gmail.com	도재학	111-0000-0000	의사	펠로우	산부인과	남성	2021-08-25

Form - modal dialog:

Employee Information Form (emp-form):

직원 ID songhwa	이메일 okcode@gmail.com
이름 채송화	핸드폰번호 010-1234-1234
업무유형 의사	직급 교수
성별 여성	팀명 신경외과
생년월일 1991-12-01	

Drag and Drop
Select a file or drop one here.

Choose File

Download

Cancel Apply Changes

Vita sidebar

Interactive Report

Form – modal dialog

[참고] Employees 테이블 설명

APEXWS00.EMPLOYEES	
P * EMPLOYEE_ID	VARCHAR2 (50)
* EMAIL	VARCHAR2 (50)
* EMP_NAME	VARCHAR2 (20)
EMP_PW	VARCHAR2 (200)
* CELL_PHONE	VARCHAR2 (13)
* LOB_ID	NUMBER (2)
* TYPE_ID	NUMBER (3)
* TEAM_ID	NUMBER (3)
* GENDER	VARCHAR2 (2)
BIRTH_DAY	DATE
EMP_PIC	BLOB
CRE_USER	VARCHAR2 (50)
CRE_DATE	DATE
TEMP_PW	VARCHAR2 (200)
INIT_PW	VARCHAR2 (2)
PW_RETRY_CNT	NUMBER (2)
EMPLOYEES_PK (EMPLOYEE_ID)	
EMPLOYEES_LOB_ID_FK (LOB_ID)	
EMPLOYEES_TEAM_ID_FK (TEAM_ID)	
EMPLOYEES_TYPE_ID_FK (TYPE_ID)	
U EMPLOYEES_PK (EMPLOYEE_ID)	

```
CREATE TABLE EMPLOYEES
(
    employee_id      VARCHAR2(50) NOT NULL,
    email            VARCHAR2(50) NOT NULL,
    emp_name         VARCHAR2(20) NOT NULL,
    emp_pw           VARCHAR2(200),
    cell_phone       VARCHAR2(13) NOT NULL,
    lob_id           number(2) NOT NULL,
    type_id          number(3) NOT NULL,
    team_id          number(3) NOT NULL,
    gender           VARCHAR2(2) Not Null,
    birth_day        DATE,
    emp_pic          BLOB,
    cre_user         VARCHAR2(50),
    cre_date         DATE,
    temp_pw          VARCHAR2(200),
    init_pw          VARCHAR2(2),
    pw_retry_cnt     NUMBER(2),
    CONSTRAINT employees_pk PRIMARY KEY (employee_id),
    CONSTRAINT employees_lob_id_fk FOREIGN KEY (lob_id) references LOB_TYPES,
    CONSTRAINT employees_type_id_fk FOREIGN KEY (type_id) references USER_TYPES,
    CONSTRAINT employees_team_id_fk FOREIGN KEY (team_id) references TEAMS
);
```

M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(1/8)

The screenshot shows the Oracle APEX dashboard. At the top, there is a navigation bar with icons for App Builder, SQL Workshop, Team Development, and App Gallery. To the right of the navigation bar are search, user, help, and language selection (DE) buttons.

The main content area is divided into three sections:

- Top Apps:** A table showing the top application. The first row, "슬기로운 익스펜스 생활", is highlighted with a red border. It has a gray icon, a green progress bar, and the number 1.
- Top Users:** A table showing the top users. The first row, "dev01", is highlighted with a blue background and the number 1. It has a purple icon, a green progress bar, and the number 88.
- Messages:** A section showing message counts: 1 Application and 8 Tables.

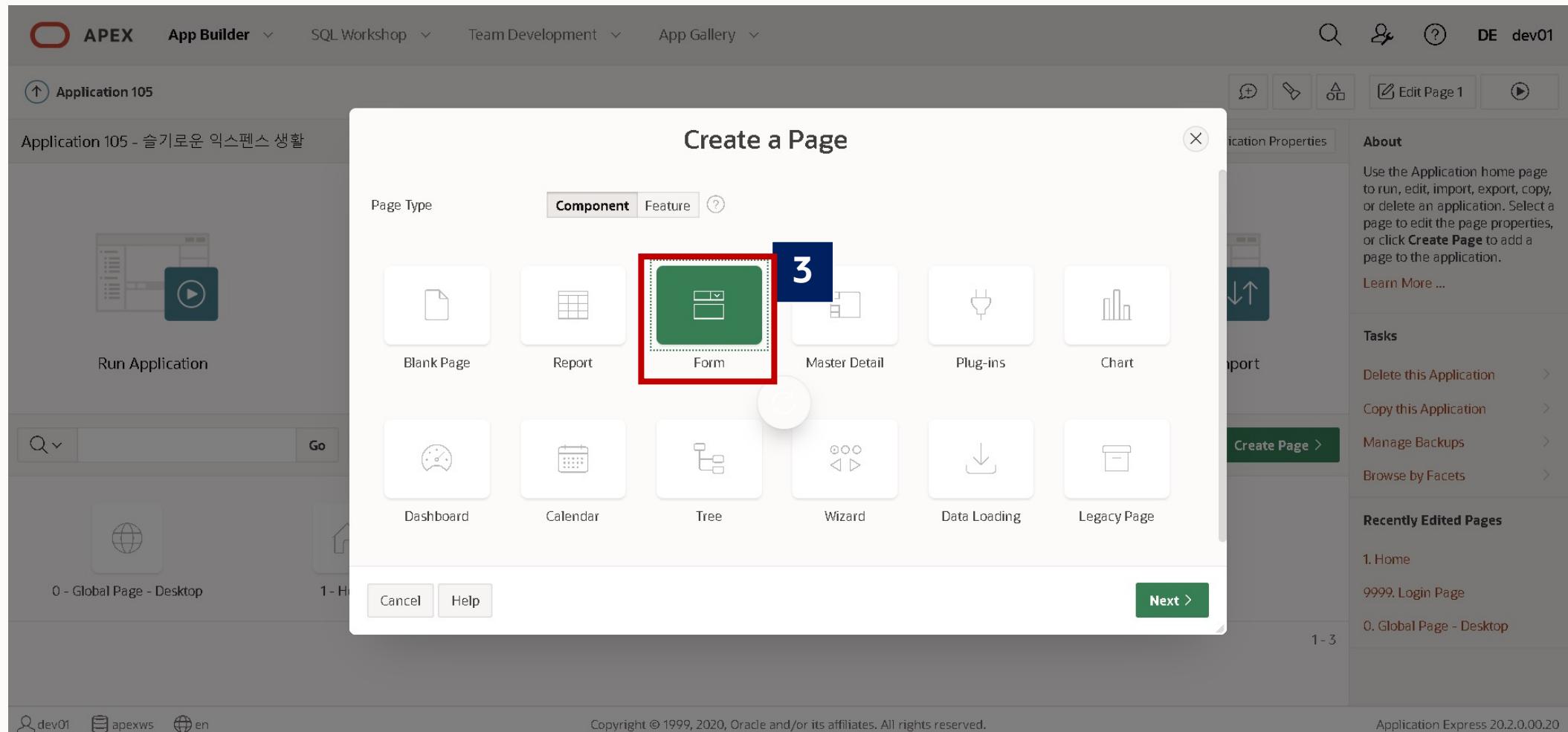
To the right of the main content area is a sidebar with the following sections:

- About:** Oracle APEX is the native application development framework of the Oracle Database. Includes a "Learn More ..." link.
- Dashboard:** Summary statistics: 1 Applications, 8 Tables, 0 Productivity Apps, 0 Issues.
- Resources:** Links to Community Site, apex.world, and Blog.

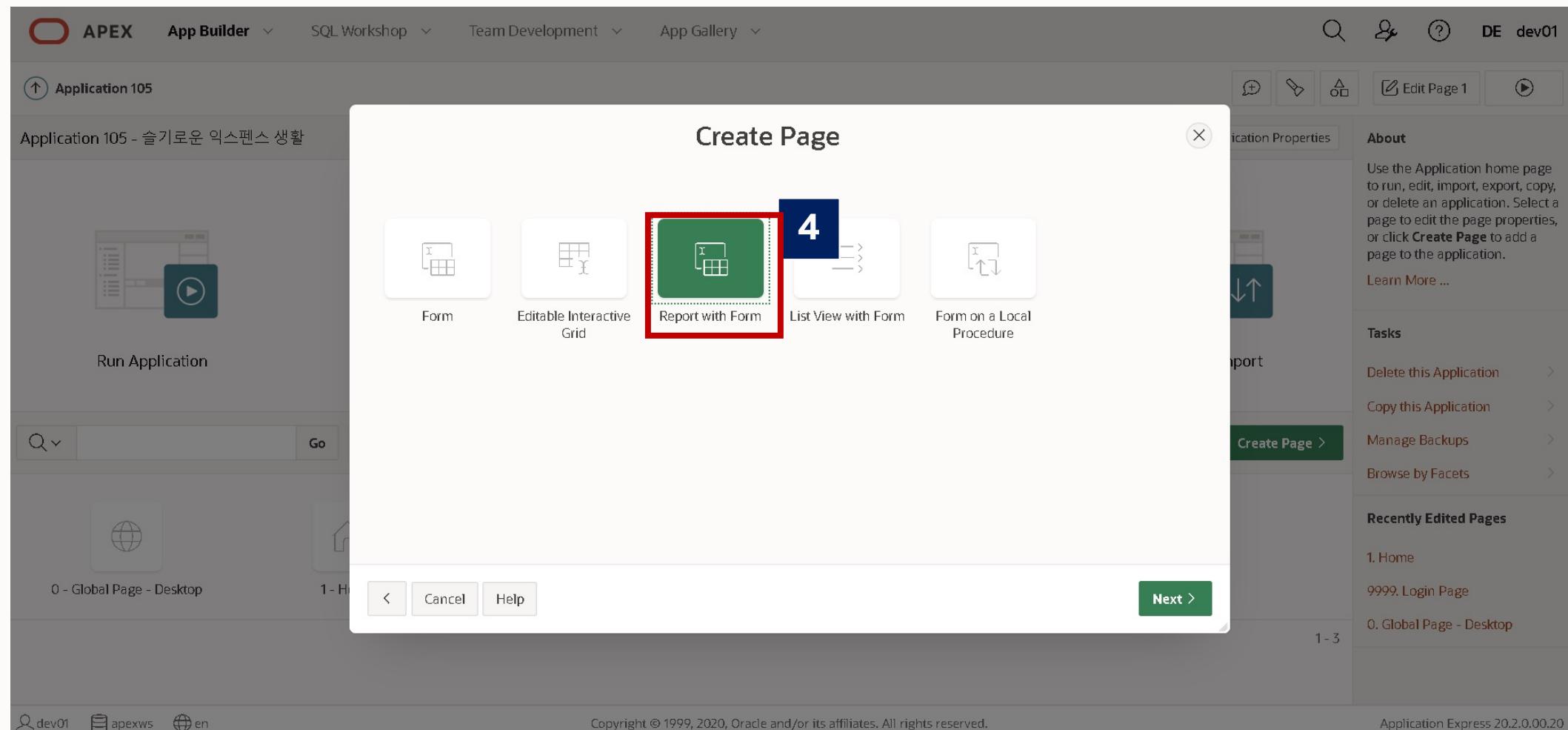
M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(2/8)

The screenshot shows the Oracle Application Express (APEX) App Builder interface. At the top, the navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with user information DE dev01. Below the navigation bar, the application title is Application 105 - 슬기로운 익스펜스 생활. On the left, there are five main buttons: Run Application, Supporting Objects, Shared Components, Utilities, and Export / Import. In the center, there is a search bar and a 'Create Page >' button highlighted with a red box and a blue '2' indicating it's the second step. To the right, there is an 'About' section with a brief description of the application home page, a 'Tasks' section with options like Delete this Application and Copy this Application, and a 'Recently Edited Pages' section listing 1. Home, 9999. Login Page, and 0. Global Page - Desktop. At the bottom, there are links for Global Page - Desktop, Home, and Login Page, along with copyright information for Oracle and a footer note about the page being step 2 of 8.

M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(3/8)



M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(4/8)



M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(5/8)

The screenshot shows the Oracle APEX App Builder interface. A modal dialog titled "Create Report with Form" is open in the center. The dialog has a progress bar at the top with one green dot and three grey dots. The main form contains the following fields:

- Report Type:** Interactive Report (selected)
- * Report Page Number:** 21
- * Report Page Name:** Employee report
- * Form Page Number:** 22
- * Form Page Name:** employee form
- Form Page Mode:** Normal
- Page Group:** - Select Page Group -

At the bottom of the dialog are "Cancel" and "Next >" buttons. To the right of the dialog, the application navigation bar shows "Edit Page 1". On the left, there's a sidebar with "Run Application" and "Create Page >". The main application area shows a list of pages: "0 - Global Page - Desktop" and "1 - Home". The bottom of the screen displays copyright information and the version "Application Express 20.2.0.00.20".

M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(6/8)

The screenshot shows the Oracle APEX App Builder interface. A modal dialog titled "Create Report with Form" is open, indicating step 2: "Navigation Menu".

Navigation Preference:

- Do not associate this page with a navigation menu entry
- Create a new navigation menu entry
- Identify an existing navigation menu entry for this page

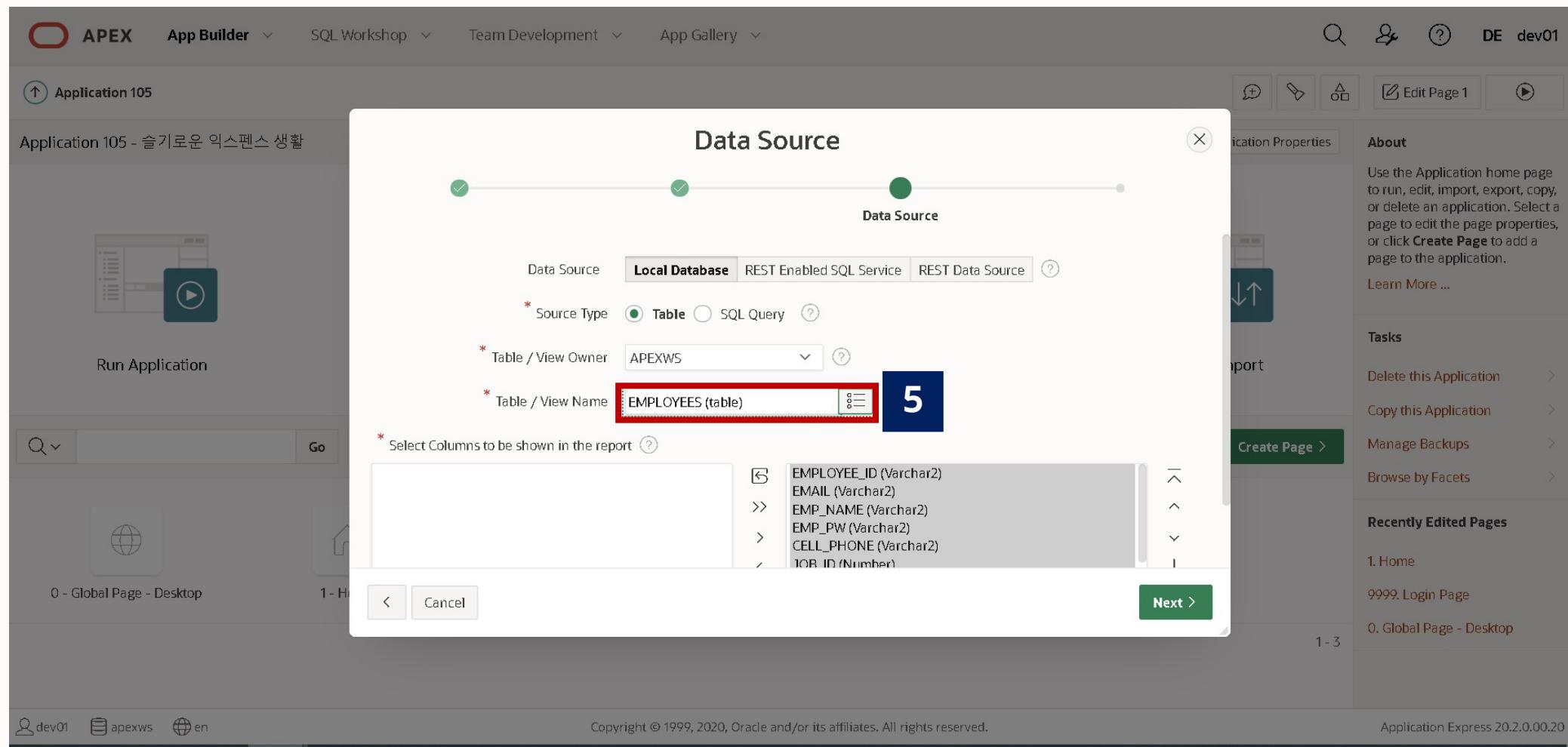
New Navigation Menu Entry: 직원 정보 관리

Parent Navigation Menu Entry: - No parent selected -
Home

At the bottom of the dialog are "Cancel" and "Next >" buttons.

The background shows the application's main interface with tabs like "APEX", "App Builder", "SQL Workshop", etc., and a sidebar with "Application Properties" and "Tasks".

M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(7/8)



The screenshot shows the Oracle APEX Data Source configuration dialog. The dialog title is "Data Source". It is step 5 of a 5-step process, indicated by a progress bar at the top.

The "Data Source" tab is selected. The "Source Type" is set to "Table". The "Table / View Owner" is "APEXWS". The "Table / View Name" is "EMPLOYEES (table)".

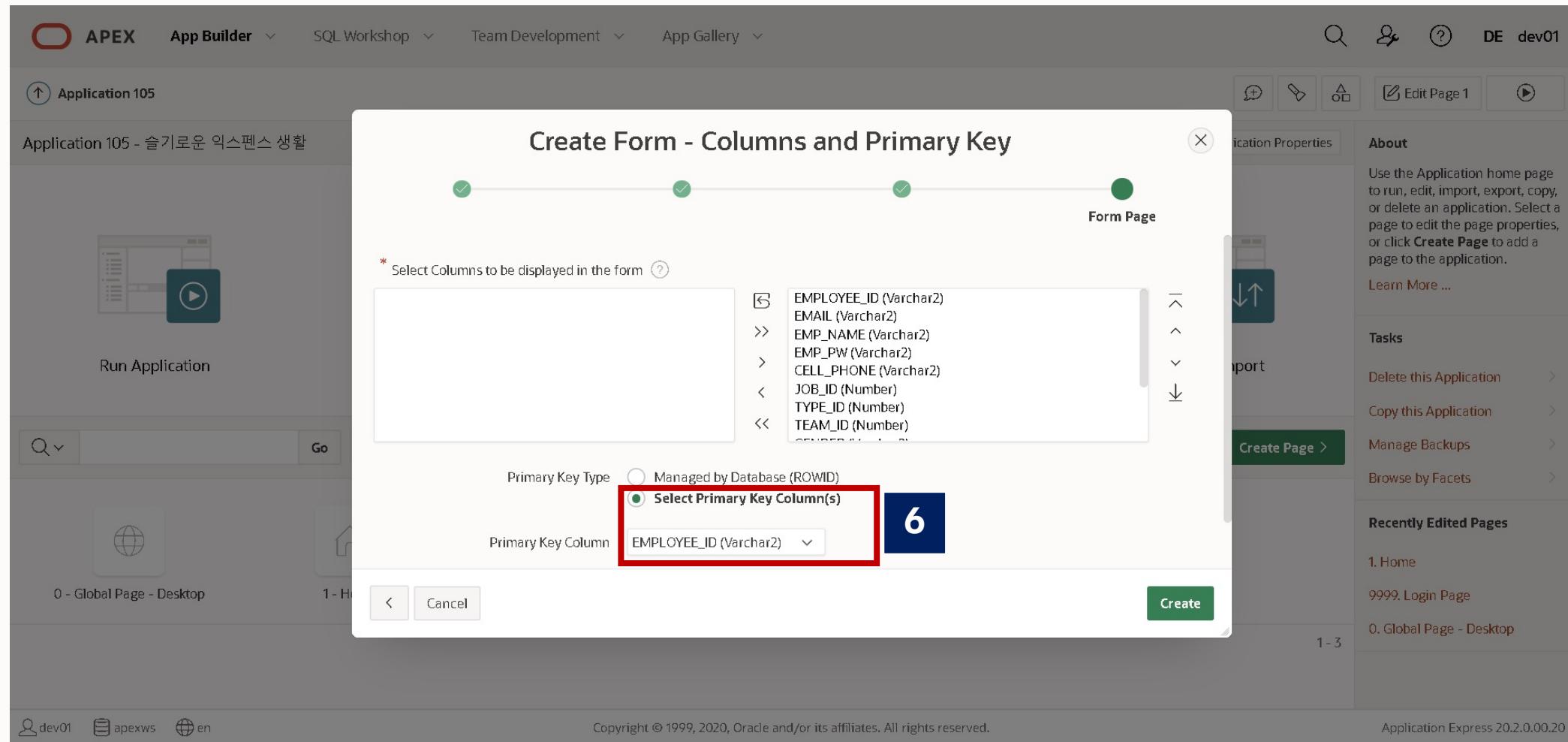
The "Select Columns to be shown in the report" section contains a list of columns from the EMPLOYEES table:

- EMPLOYEE_ID (Varchar2)
- EMAIL (Varchar2)
- EMP_NAME (Varchar2)
- EMP_PW (Varchar2)
- CELL_PHONE (Varchar2)
- TOR_ID (Number)

A blue box highlights the "EMPLOYEES (table)" input field, and a large blue number "5" is overlaid on the right side of the dialog. At the bottom right of the dialog is a green "Next >" button.

The background shows the APEX application builder interface with "Application 105" selected. The sidebar on the right lists tasks like "Delete this Application", "Copy this Application", and "Recently Edited Pages".

M02.2-1. Interactive Report with Form 생성과 데이터 소스 연결(8/8)



M02.2-1. Interactive Report with Form 생성 결과

The screenshot shows the Oracle APEX App Builder interface in the Page Designer mode for Application 100. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with search and user icons. The main workspace displays the 'Employees Report' page structure. On the left, a sidebar lists regions like Content Body (Report 1), Regions, and Post-Rendering. The central area shows the page header, navigation, breadcrumb bar, and content body sections. A modal window titled 'Report 1' is open over the content body. The bottom section contains a grid of icons for various report types: Breadcrumb, Calendar, Cards, Chart, Classic Report, Column Toggle Report, Faceted Search, Form, Help Text, Interactive Grid, Interactive Report, List, List View, PL/SQL Dynamic Content, and Reflow Report. The right side features a panel for 'Identification' (Name: Employees Report, Page Alias: employees-report, Title: Employees Report, Page Group: - Select -) and 'Appearance' (User Interface: Desktop, Page Mode: Normal, Page Template: Theme Default, Template Options: Use Template Defaults, CSS Classes). A red box highlights the 'Save' button in the top right corner.

M02.2-1. Interactive Report with Form 생성 결과

The screenshot shows a user interface for an application titled "슬기로운 익스펜스 생활". The left sidebar contains navigation links for "Home" and "직원 정보 관리". The main content area displays an interactive report with a search bar and a "Actions" dropdown. A message indicates "No data found." Below the search bar, two red callout boxes point to specific elements: one pointing to the "Create" button in the top right corner, and another pointing to the text "Form에 입력된 데이터 없음" (No data entered in the form).

- Form에 입력된 데이터 없음
- Form으로 이동

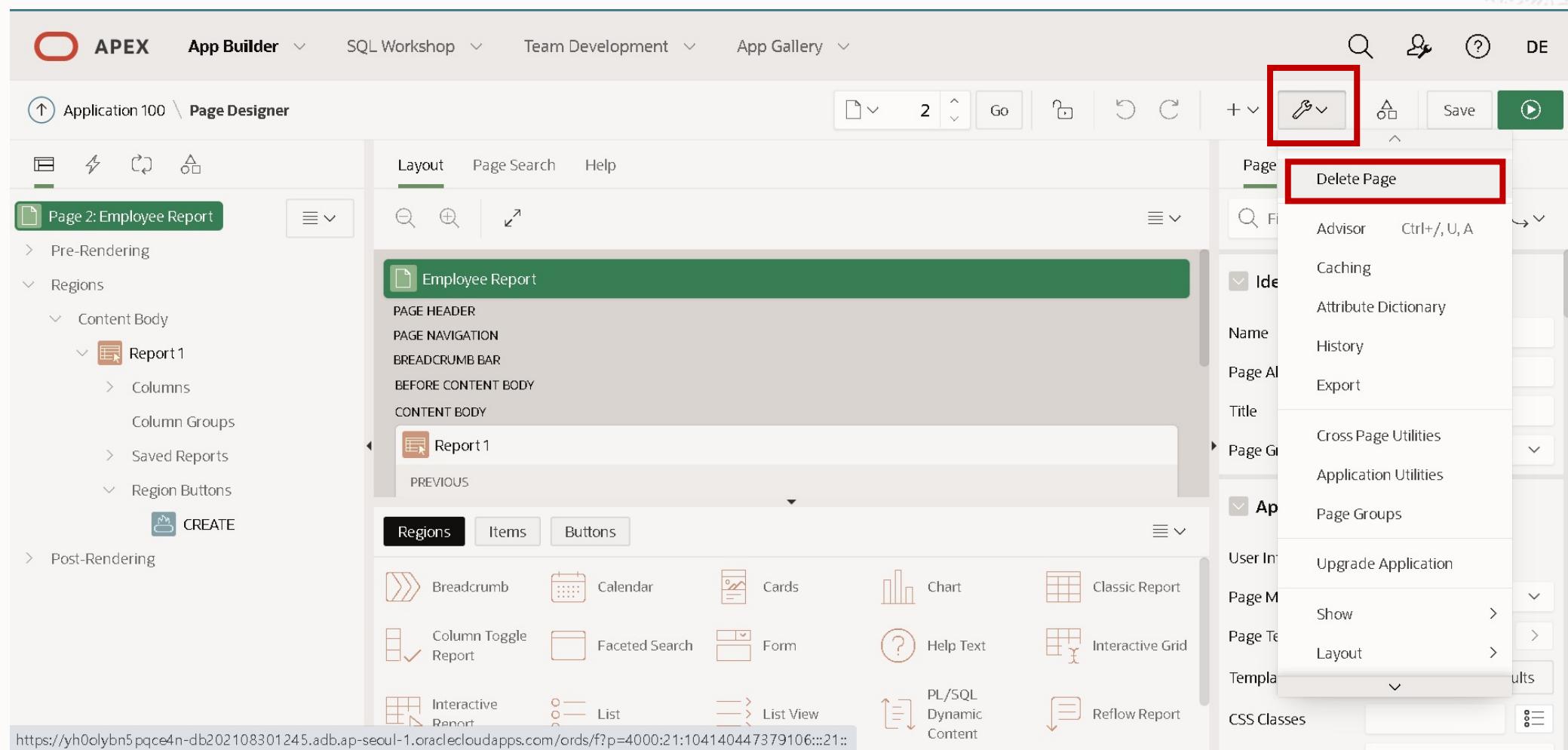
M02.2-1. Interactive Report with Form 생성 결과

The screenshot displays two views of an Employee Form. On the left, the 'Employee Form' page is shown with fields for Email, Emp Name, Emp Pw, Cell Phone, Job Id, and Type Id. A red box highlights three notes pointing to the form fields:

- 한줄에 한 item씩
- 모두 영문 출력
- 한글화 및 item 위치 변경 필요함(우측 결과물처럼)

On the right, the 'emp-form' configuration page is shown. It includes fields for 직원 ID (songhwa), 이메일 (okcode@gmail.com), 이름 (채승화), 핸드폰번호 (010-1234-1234), 입무유형 (의사), 직급 (교수), 성별 (여성), 생년월일 (1991-12-01), 사진등록 (Drag and Drop area with Choose File button), 사진출력 (Portrait photo of a woman with glasses), and buttons for Delete and Apply Changes.

[참고] Page 지우기



[참고] Navigation Menu의 목록 지우기(1/2)

APEX App Builder SQL Workshop Team Development App Gallery

Application 100 > Shared Components > Lists > List Details

List Details Unused Conditional Entries Utilization History

List Desktop Navigation Menu

Grid Edit Edit List Create Entry >

Sequence	Name	Parent Entry	Target	Conditional	Updated	Level	Authorization Scheme	Copy
10	Home	-	f?p=&APP_ID.1:&APP_SESSION.::&DEBUG.:	-	28 hours ago	1	-	
20	직원 정보 관리	-	f?p=&APP_ID.21:&APP_SESSION.::&DEBUG.::	-	28 hours ago	1	-	

Tasks

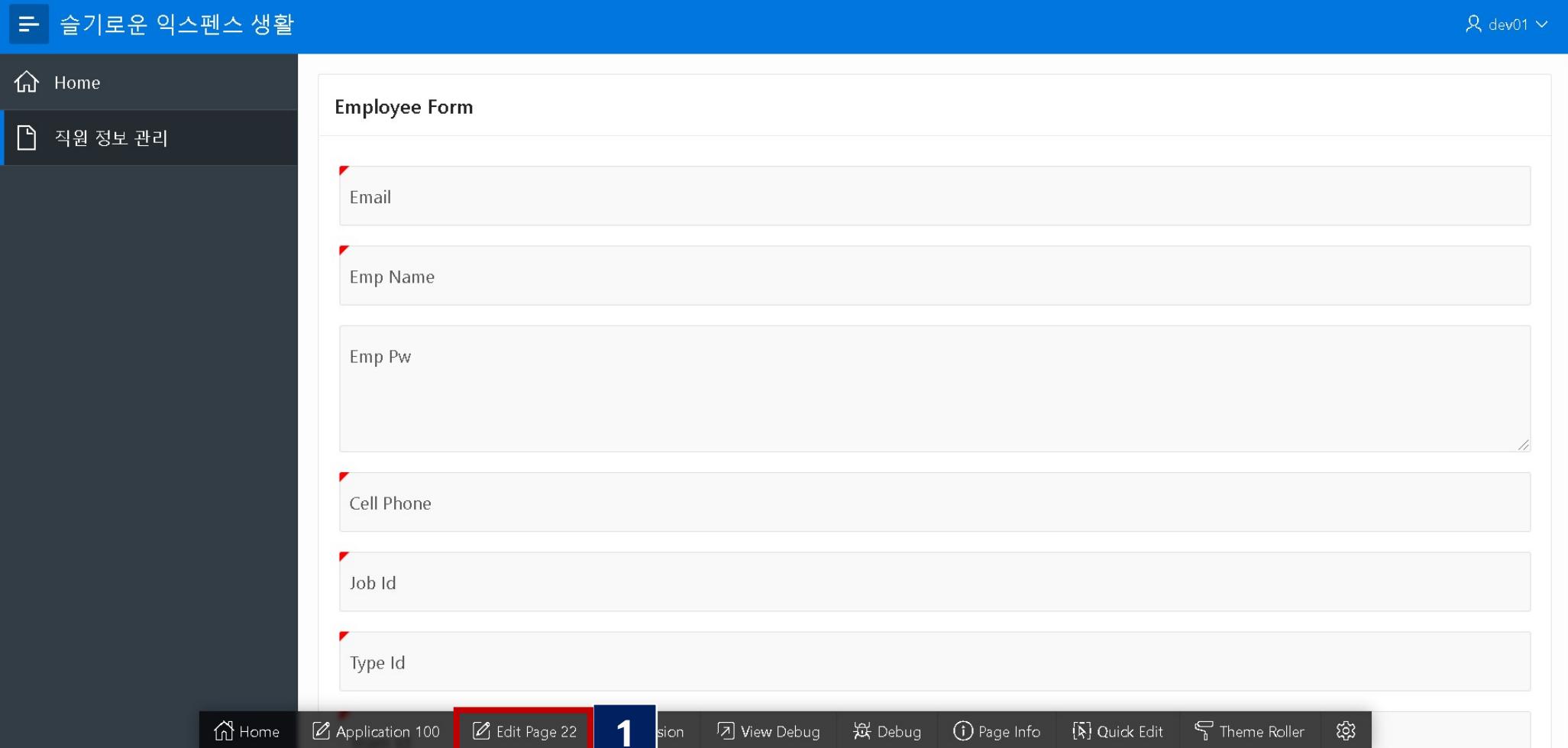
- Add this list to the current page >
- Copy List >
- Copy List Entries from one List to Another >
- Reparent List Entries within this List >
- Manage Orphaned List Entries >
- Resequence List Entries >

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[참고] Navigation Menu의 목록 지우기(2/2)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The user is logged in as DE dev01. The current page is 'List Entry' under 'Application 100 \ Shared Components \ Lists \ List Details \ Create / Edit'. The main content area displays the configuration for a 'List Entry' named 'Desktop Navigation Menu'. The 'Entry' tab is selected, showing fields for List (Desktop Navigation Menu), Parent List Entry (- No Parent List Item -), Sequence (20), Image/Class, Attributes, Alt Attribute, and List Entry Label (직원 정보 관리). The 'Target' tab is also visible. On the right side, there is a sidebar with sections for List Entry (Define the list entry. Each entry is typically a link to page in this application or a URL.), Tasks (Change Parent List, Font APEX Icons), Developer Resources (Font APEX Icons), List Entries (10Home, 20직원 정보 관리), and Page Items (P21_SEARCH_TEAMS, P21_SEARCH_GENDERS). The 'Delete' button in the top right corner of the main form is highlighted with a red box.

M02.2-2. 직원 정보 관리 Form 수정



The screenshot shows a web-based application interface for managing employee information. The top navigation bar is blue, featuring a menu icon, the text "슬기로운 익스펜스 생활", a search bar with placeholder "dev01", and a user icon. On the left, a dark sidebar contains "Home" and "직원 정보 관리" (Employee Information Management) links. The main content area is titled "Employee Form" and contains six input fields: "Email", "Emp Name", "Emp Pw", "Cell Phone", "Job Id", and "Type Id". At the bottom, there's a footer with links: "Home", "Application 100", "Edit Page 22" (which is highlighted with a red box), "1", "View Debug", "Debug", "Page Info", "Quick Edit", "Theme Roller", and a gear icon.

M02.2.Form 페이지 작업 내용

Page Item 명	설정 내용	설정 위치
EMP_PW CRE_DATE TEMP_PW	<ul style="list-style-type: none">Form에서 보이지 않도록	<ul style="list-style-type: none">Identification –Type: Hidden
EMP_ID	<ul style="list-style-type: none">Form에서 보이도록 설정	<ul style="list-style-type: none">Identification –Type: Text field
모든 항목 이름	<ul style="list-style-type: none">한글화	<ul style="list-style-type: none">Label – Label : 한글 이름 입력
JOB_ID TYPE_ID TEAM_ID	<ul style="list-style-type: none">LOV 설정	<ul style="list-style-type: none">Identification –Type: Select list → LOV : shared component – 해당 아이템 선택
GENDER	<ul style="list-style-type: none">LOV 설정	<ul style="list-style-type: none">Identification –Type: Radio group → LOV : shared component – 해당 아이템 선택
TYPE_ID	<ul style="list-style-type: none">업무 유형(JOB_ID: 의사)에 따른 직급 리스트(TYPE_ID: 교수, 펠로우 등) 가 나오도록 의존성 설정	<ul style="list-style-type: none">(1) TYPE_ID의 LOV : shared component 를 SQL Query로 변경(2) 부모 item을 설정(Cascading LOV : parent item : JOB_ID 설정)
Form CSS	<ul style="list-style-type: none">사진 크기 줄이기	<ul style="list-style-type: none">Form Page의 CSS 항목에서 In line에 SQL 쿼리 입력



M02.2-2. 직원 정보 관리 Form 수정 – 아이템 Hidden

The screenshot shows the Oracle APEX App Builder interface for Application 100 in Page Designer mode. The page has a layout with several items: P22_EMPLOYEE (grid), P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PW (highlighted with a red box and labeled 1), P22_CRE_DATE, and P22_TEMP_PW. The P22_EMP_PW item is currently selected. To its right is a sidebar titled 'Page Items' with a 'Type' dropdown menu open. The 'Type' dropdown is highlighted with a red box and labeled 2. The 'Hidden' option in the dropdown is also highlighted with a red box and labeled 3. A callout box with Korean text points to the 'P22_EMP_PW' item and the 'Hidden' option.

1 P22_EMP_PW

2 Type

3 Hidden

EMP_PW 아래로 이동, 3개 아이템 선택 후 Hidden 처리

M02.2-2. 직원 정보 관리 Form 수정 – PK=null 수정 (1/3)

The screenshot shows an Oracle APEX application page titled "Employee Form". The left sidebar has links for "Home" and "직원 정보 관리". The main content area displays several input fields: Email (containing "1"), Emp Name (containing "1"), Cell Phone (containing "1"), Job Id (containing "1"), Type Id (containing "1"), Team Id (containing "1"), and Gender (containing "1"). A yellow error message box at the top right states "1 error has occurred" with the message "ORA-01400: cannot insert NULL into ("APEXWS"."EMPLOYEES"."EMPLOYEE_ID")". A red callout box points to this error message, containing the following bullet points:

- 필수 항목 입력 후에 Error 발생
- Employee_ID 가 현재 null 인 것을 수정해야 함

At the bottom of the page, there is a navigation bar with icons for Home, Application 100, Edit Page 22, Session, View Debug, Debug, Page Info, Quick Edit, Theme Roller, and a gear icon.

M02.2-2. 직원 정보 관리 Form 수정 – PK=null 설정 (2/3)

The screenshot shows the Oracle APEX App Builder interface for modifying an application page. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery. A green banner at the top right indicates "Changes saved".

The left sidebar displays the page structure under "Application 100 \ Page Designer". It shows a "Regions" section with "Content Body" expanded, containing an "Employee Form" region. Inside this region, the "Items" section is listed, with the first item, "P22_EMPLOYEE_ID", highlighted by a red box and a blue number "1".

The main workspace shows a list of form items on the left and their properties on the right. The item "P22_EMPLOYEE_ID" is selected. The properties panel on the right is titled "1 Identification" and includes the following fields:

- Name:** P22_EMPLOYEE_ID
- Type:** Text Field (highlighted with a red box)
- Settings:** Value Protected (switch is on)
- Layout:** Sequence (10), Region (Employee Form)
- Appearance:** Format Mask (empty)

The status bar at the bottom shows buttons for CLOSE, HELP, DELETE, CHANGE, and CREATE, along with CANCEL, DELETE, SAVE, and CREATE buttons.

M02.2-2. 직원 정보 관리 Form 수정 – PK=null 수정 (3/3)

The screenshot shows two pages from an Oracle APEX application. The top page is the 'Employee Form' for creating a new employee record. It has fields for Email, Emp Name, Cell Phone, Job Id, Type Id, Team Id, Gender, Birth Day, and Emp Pic. A red callout box points to the 'New' button with the text: 'New(Emp_ID : (PK) 임의 데이터 및 필수 항목 입력시 form 생성 완료'. The bottom page shows the 'Employee List' with a single newly created row. The row has values: Email (1), Emp Name (1), Emp Pw (empty), Cell Phone (1), Job Id (1), Type Id (1), Team Id (1), Gender (1), Birth Day (empty), Emp Pic (empty), Cre Date (empty), and Temp Pw (empty). A green success message 'Row created.' with a checkmark is displayed on the right.

■ New(Emp_ID : (PK) 임의 데이터 및 필수 항목 입력시 form 생성 완료

■ Report의 1개 Row 생성 완료됨

Email	Emp Name	Emp Pw	Cell Phone	Job Id	Type Id	Team Id	Gender	Birth Day	Emp Pic	Cre Date	Temp Pw
1	1		1	1	1	1	1				

M02.2-2. 직원 정보 관리 Form 수정 - Item 한글화 (1/2)

The screenshot shows the Oracle APEX App Builder interface for modifying an Employee Form. The top navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The main area is titled "Application 100 \ Page Designer". The left sidebar shows the page structure with "Page 22: Employee Form" and its regions: Pre-Rendering, Content Body, and Items. The "Items" section is expanded, showing items like P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, etc. A red box labeled "1" highlights the "P22_EMPLOYEE_ID" item. The central workspace displays the "Employee Form" page with various sections: PAGE HEADER, PAGE NAVIGATION, BREADCRUMB BAR, BEFORE CONTENT BODY, and CONTENT BODY. The "ITEMS" section of the page shows the "P22_EMPLOYEE_ID" item highlighted with a green bar. The right panel, titled "Page Item", contains settings for the selected item. It includes fields for Name (P22_EMPLOYEE_ID), Type (Text Field), Label (직원 ID), and Settings (Subtype: Text, Trim Spaces: Leading and Trailing, Text Case: No Change, Submit when Enter pressed). A red box labeled "2" highlights the "Label" field in the "Page Item" panel.

M02.2-2. 직원 정보 관리 Form 수정 - Item 한글화 (2/2)

The screenshot shows the Oracle APEX App Builder interface for modifying a page item. The main area displays a list of items, and the right panel provides detailed configuration options. A red box highlights the 'Identification' section, which includes the item name 'P22_EMP_PIC' and its type 'File Browse...'. Another red box highlights the 'Label' section, where the label is set to '사진 등록'. A third red box highlights the 'Settings' section, specifically the 'Display As' dropdown set to 'Inline File Browse'. A callout box with the number '3' points to the 'Type' field, and another callout box with the number '2' points to the 'Label' field. A callout box with the number '1' points to the 'P22_EMP_PIC' item in the list of items.

■ Identification : File Browse
확인

1 P22_EMP_PIC

2 Label

3 Type

Identification

Name: P22_EMP_PIC

Type: File Browse...

Label

Label: 사진 등록

Settings

Display As: Inline File Browse

Dropzone Title:

Storage Type: BLOB column specified

MIME Type Column:

M02.2-2. 직원 정보 관리 Form 수정 - Item 추가 및 type 변경 (1/2)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with search and help icons.

The left sidebar displays the application structure for "Application 100". Under the "Items" section, there is a list of page items, one of which is highlighted with a red box and labeled "Duplicate".

The main workspace shows a form with several input fields:

- 22_TYPE_ID
- 22_TEAM_ID
- 22_GENDER
- 22_BIRTH_DAY
- 22_EMP_PIC (highlighted with a green bar)

Below the form, there are buttons for "CLOSE", "HELP", "DELETE", "CHANGE", and "CREATE".

The right panel contains the configuration details for the selected item "P22_EMP_PIC":

- Page Item**: P22_EMP_PIC
- Identification**: Name: P22_EMP_PIC, Type: File Browse...
- Label**: Label: 사진 등록
- Settings**: Display As: Inline File Browse, Storage Type: BLOB column specified, MIME Type Column: (empty)

M02.2-2. 직원 정보 관리 Form 수정 - Item 추가 및 type 변경 (2/2)

The screenshot shows the Oracle APEX App Builder's Page Designer interface. On the left, the Items panel lists various page items with their names and types. In the center, the main workspace displays a form layout with several input fields and a green highlighted region labeled 'P22_EMP_PIC_1'. On the right, the Page Item details panel is open for the item 'P22_EMP_PIC_1'. The 'Identification' section is highlighted with a red box and contains the text 'Identification : Display Image로 변경'. The 'Label' section is also highlighted with a red box and contains the text '사진 출력'. The 'Type' dropdown in the Identification section is set to 'Display Image' and is also highlighted with a red box. A large red number '3' is placed over the 'Type' dropdown, and a large red number '2' is placed over the 'Label' text. The 'Settings' section at the bottom includes options for 'Based On' (BLOB Column specifier), 'Alternative Text Column', 'Filename Column', and 'MIME Type Column'.

- Identification :
Display Image로 변경

3

2

P22_EMP_PIC_1

Identification

Name: P22_EMP_PIC_1

Type: Display Image

Label

사진 출력

Settings

Based On: BLOB Column specifier

Alternative Text Column:

Filename Column:

MIME Type Column:

M02.2-2. 직원 정보 관리 Form 수정 - Item 줄 바꾸기 설정

위치를 윗줄로 옮릴때 :
Layout - Start new Row
비활성화

4

M02.2. Form 중간 결과물

The screenshot shows a web-based application interface for managing employee information. The top navigation bar is blue and includes the title "슬기로운 익스펜스 생활" (Smart Expense Life), a search icon, and a user dropdown "dev01". The left sidebar has a dark theme with options: "Home" (selected) and "직원 정보 관리" (Employee Information Management). The main content area is titled "Employee Form" and contains the following fields:

- 직원 ID (Employee ID)
- 이메일 (Email)
- 이름 (Name)
- 전화번호 (Phone Number)
- 업무 유형 (Job Type)
- 직급 (Position)
- 팀 이름 (Team Name)
- 성별 (Gender)
- 생일 (Birthday) with a calendar icon
- 사진 등록 (Upload Photo) with a "Choose File" button and a camera icon.
- 사진 출력 (Print Photo) with a camera icon.

At the bottom of the form are two buttons: "Cancel" and "Create". The footer of the page includes links for "Home", "Application 100", "Edit Page 22", "Session", "View Debug", "Debug", "Page Info", "Quick Edit", "Theme Roller", and "Help".

M02.2-2. 직원 정보 관리 Form 수정 – Select List 출력 (1/3)

1

2

3

- Type: Number field
→ Select List로 변경
- List of Values : Shared component / Job Types

M02.2-2. 직원 정보 관리 Form 수정 – Select List 출력 (2/3)

The screenshot shows the Oracle APEX App Builder interface in the 'Page Designer' mode for Application 100. The left sidebar lists items under 'Employee Form': P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID (highlighted with a red box labeled 1), P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, P22_EMP_PW, P22_CRE_DATE, P22_TEMP_PW, Region Buttons (CANCEL, DELETE, SAVE, CREATE), and Post-Rendering.

The main area displays the 'Employee Form' page with several input fields: P22_EMPLOYEE_ID, P22_EMAIL, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID (highlighted with a red box labeled 2), P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, and P22_EMP_PIC_1. Below the form are buttons for CLOSE, HELP, DELETE, CHANGE, and CREATE.

The right panel shows the 'Page Item' configuration for P22_TYPE_ID. It is set to 'Select List' type (highlighted with a red box labeled 2). The 'Label' is set to 'EMP TYPES' (highlighted with a red box labeled 3). A callout box points from the 'Label' field to the text 'List of Values : Shared component / emp Types'.

The 'Identification' section includes fields for Name (P22_TYPE_ID) and Type (Select List). Other settings include 'List of Values' (selected), 'Display Extra Values' (on), 'Display Null Value' (on), and 'Null Display Value' (empty).

M02.2-2. 직원 정보 관리 Form 수정 – Select List 출력 (3/3)

The screenshot shows the Oracle APEX App Builder interface for modifying an Employee Form. The left sidebar lists items: P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID, P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, P22_EMP_PW, P22_CRE_DATE, P22_TEMP_PW, and Region Buttons (CANCEL, DELETE, SAVE, CREATE). The P22_TEAM_ID item is highlighted with a red box and labeled '1'. The main workspace displays the Employee Form with various input fields. The P22_TEAM_ID field is highlighted with a red box and labeled '2'. The configuration pane on the right shows the 'Identification' section where 'Name' is P22_TEAM_ID and 'Type' is set to 'Select List'. A red box highlights this 'Type' setting. A callout box labeled '3' points to the 'List of Values' dropdown, which is set to 'TEAMS'. A red box highlights this 'TEAMS' value. The configuration pane also includes options for 'Display Extra Values' (on), 'Display Null Value' (on), 'Null Display Value' (empty), and 'Null Return Value' (empty).

1 P22_TEAM_ID

2

3 List of Values : Shared component / Teams

Type TEAMS

M02.2-2. 직원 정보 관리 Form 수정 – Radio Group 출력

The screenshot shows the Oracle APEX App Builder interface for modifying a form. The left sidebar lists regions and items, with the 'P22_GENDER' item highlighted by a red box labeled '1'. The main area displays a preview of the Employee Form with several input fields. A callout box labeled '2' points to the 'Type' dropdown in the right-hand settings panel, which is set to 'Radio Group'. Another callout box labeled '3' points to the 'List of Values' section, where 'Shared component' is selected and 'GENDER TYPE' is chosen as the source. A callout box labeled '4' points to the 'Number of Columns' setting, which is set to 2. The status bar at the bottom shows a URL starting with 'yh0olybn5pqce4n-db202108252044.adb.ap-seoul-1.oraclecloudapps.com/...'.

- Type: Number field
→ Radio Group 으로 변경
- 한줄에 남성, 여성 나오도록 :
Setting – Number of columns: 2
- List of Values :
Shared component / Gender Types

M02.2. Form 중간 결과물

Employee Form

직원 ID:

이름:

이메일:

전화 번호:

업무 유형:

성별 *: 남성 여성

setting

사진 등록:

Cancel

직급:

간호부장

간호사

교수

레시던트

본과실습생

수간호사

인턴

주임간호사

펠로우

팀 이름:

Create

Release 1.0

Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller

dev01

▪ 업무유형(의사, 간호사)에 따라 직급이 분류되어 나올 필요 있음

M02.2-2. 직원 정보 관리 Form 수정 - LOV 의존성 설정 (1/4)

The screenshot shows the Oracle APEX App Builder interface for Application 100, specifically the Page Designer. The page being edited is 'Employee Form' (Page 22). The left sidebar shows the page structure with regions like 'Pre-Rendering', 'Regions', and 'Content Body'. In the 'Content Body' region, there is an 'Employee Form' item containing several input fields: P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID, P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, P22_EMP_PW, and D22_CRF_DATE. The 'P22_TYPE_ID' field is highlighted with a red box and labeled with a blue number '1'. The right panel shows the 'List of Values' configuration for this item. A red box highlights the 'SQL Query' section, which contains the following SQL code:

```
select type_name, type_id from USER_TYPES where job_id = :P22_JOB_ID order by type_id
```

A red callout points to the 'SQL Query' label with the text '■ SQL Query로 지정'.

M02.2-2. 직원 정보 관리 Form 수정 - LOV 의존성 설정 (2/4)

The screenshot shows the Oracle APEX App Builder interface. On the left, the navigation pane displays 'Application 100 \ Page Designer' and the current page 'Page 22: Employee Form'. Under 'Regions', the 'Content Body' region is selected, showing the 'Employee Form' item. Within 'Employee Form', the 'Items' section lists various input fields like P22_EMPLOYEE_ID, P22_EMAIL, etc., and a dropdown item 'P22_TYPE_ID' which is currently selected.

A modal window titled 'Code Editor - SQL Query' is open over the page designer. It contains the following SQL code:

```
1 select type_name, type_id
2 from USER_TYPES
3 where job_id = :P22_JOB_ID
4 order by type_id
```

The entire code block is highlighted with a red rectangular box. Below the code, a preview of the resulting LOV query is shown:

```
select type_name, type_id from USER_TYPES where job_id =
:P22_JOB_ID order by type_id
```

To the right of the preview, the 'List of Values' configuration panel is visible, showing the 'SQL Query' tab with the same code. At the bottom of the modal are 'Cancel' and 'OK' buttons, and a 'Display Extra Values' toggle switch.

M02.2-2. 직원 정보 관리 Form 수정 - LOV 의존성 설정 (3/4)

The screenshot shows the Oracle APEX App Builder interface. A modal dialog titled "Pick Parent Item(s)" is open, listing various page items from the current page. The item "P22_JOB_ID" is highlighted with a red box. In the background, the "List of Values" configuration for this item is visible, with the "Cascading List of Values" checkbox also highlighted with a red box. A callout bubble points to this checkbox with the text "Cascading LOV에서 부모 아이템 설정".

Pick Parent Item(s)

Current Page Global Page

Name	Label
P22_EMPLOYEE_ID	직원 ID
P22_EMAIL	이메일
P22_EMP_NAME	이름
P22_CELL_PHONE	전화번호
P22_JOB_ID	업무 유형
P22_TYPE_ID	직급
P22_TEAM_ID	팀 이름
P22_GENDER	성별
P22_BIRTH_DAY	생일
P22_EMP_PIC	사진 등록

Cascading List of Values

Type SQL Query

SQL Query

```
select type_name, type_id  
from USER_TYPES  
where job_id = :P22_JOB_ID  
order by type_id
```

Display Extra Values

Display Null Value

Null Display Value

Null Return Value

Cascading List of Values

Parent Item(s)

Advanced

M02.2-2. 직원 정보 관리 Form 수정 - LOV 의존성 설정 (4/4)

The screenshot shows the Oracle APEX App Builder interface for modifying a page. The top navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The page title is "Application 100 \ Page Designer". The main area displays "Page 22: Employee Form" with a "Pre-Rendering" region and a "Regions" tree containing "Content Body" and "Employee Form". The "Employee Form" region is expanded, showing items: P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID, P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, P22_EMP_PW, and P22_CRF_DATE. The "P22_TYPE_ID" item is highlighted with a green border. On the right side, the "Page Item" panel is open, specifically the "List of Values" section. It shows a SQL query for selecting type_name and type_id from USER_TYPES where job_id = :P22_JOB_ID, ordered by type_id. Below the query, there are checkboxes for "Display Extra Values" and "Display Null Value", both of which are checked. Under the "Cascading List of Values" section, the "Parent Item(s)" dropdown is set to "P22_JOB_ID", which is also highlighted with a red border. Other settings in this section include "Items to Submit" and "Parent Required".

```
select type_name, type_id
from USER_TYPES
where job_id = :P22_JOB_ID
order by type_id
```

Parent Item(s) P22_JOB_ID

M02.2. Form 중간 결과물 - LOV 의존성 설정

슬기로운 익스펜스 생활 dev01

Home 직원 정보 관리

Employee Form

직원 ID 이메일

이름 전화번호

업무 유형
간호사

직급
간호사
주임간호사
수간호사
간호부장

팀 이름

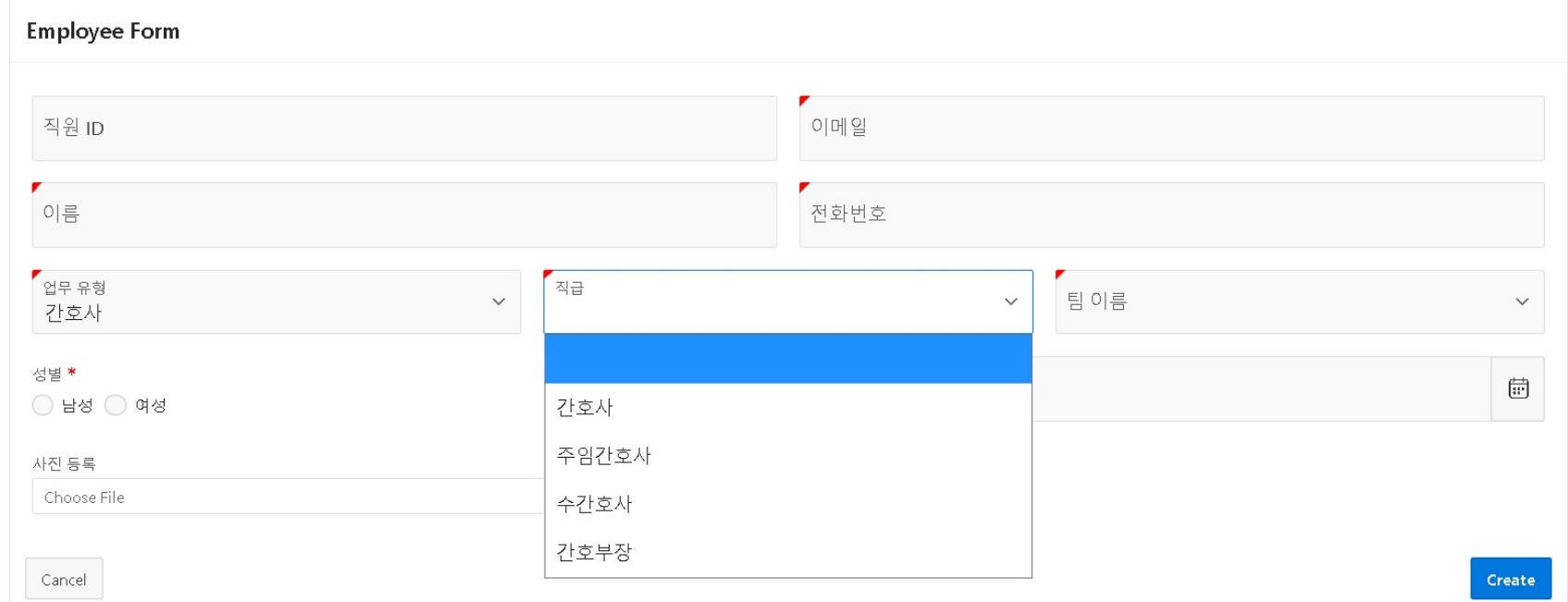
성별 *
 남성 여성

사진 등록
Choose File

Create

Cancel

Release 1.0 Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller



M02.2. Form 중간 결과물

Employee Form

직원 ID songhwa	이메일 demo@gmail.com	
이름 채송화	전화번호 100-1111-1111	
업무 유형 의사	직급 교수	팀 이름 신경외과
성별 *	남성	여성
생일 8/1/2021		
사진 등록 <input type="file"/> Choose File	Download	사진 출력 

■ 사진 크기 줄일 필요 있음

M02.2-2. 직원 정보 관리 Form 수정 – 사진 크기 줄임

The screenshot shows the Oracle APEX App Builder interface for modifying the Employee Form page (Page 22). The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The top right corner shows the user is logged in as DE dev01.

Region 1: The left sidebar displays the page structure under "Page 22: Employee Form". It shows the "Content Body" region containing the "Employee Form" item, which itself contains various input fields like P22_EMPLOYEE_ID, P22_EMAIL, etc. A red box highlights the title "Page 22: Employee Form".

Region 2: The right sidebar shows the "CSS" section, indicated by a red box. The "Inline" CSS block contains the rule: `img { width: 200px; height: 200px; }`. A red box also highlights this CSS code area.

The central workspace displays the "Employee Form" page with several input fields and buttons for COPY, EDIT, PREVIOUS, NEXT, DELETE, CHANGE, and CREATE.

M02.2. Form 중간 결과물 – 사진 크기

슬기로운 익스펜스 생활

dev01

Home

직원 정보 관리

Employee Form

직원 ID: songhwa

이메일: demo@gmail.com

이름: 채송화

전화번호: 100-1111-1111

업무 유형: 의사

직급: 교수

팀 이름: 신경외과

성별: 여성

생일: 8/1/2021

사진 등록

Choose File

Download

사진 출력

Cancel

Delete

Apply Changes

Release 1.0

Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller

M02.2-2. 직원 정보 관리 Form 페이지 전체 – Modal Dialog

The screenshot shows the Oracle APEX Page Designer interface for 'Page 22: Employee Form'. The left sidebar lists regions and items, while the main area displays the form layout with various input fields. A red box highlights the 'Page' tab in the top navigation bar. A blue box labeled '1' highlights the 'Page 22: Employee Form' entry in the 'Regions' list. A red box labeled '2' highlights the 'Template Options' section in the right sidebar, where 'Modal Dialog' is selected from a dropdown menu. A callout bubble points to this selection with the text: 'Appearance / Template options에서 모달 다이아로그로 변경' (Change to Modal Dialog in Appearance / Template options).

Application 100 \ Page Designer

Layout Page Search Help

Page

Filter Identification Appearance

User Interface Desktop

Page Mode Normal

Page Template Normal

Template Options Modal Dialog

CSS Classes Non-Modal Dialog

Media Type

Navigation Menu

Navigation

JavaScript

CSS

File URLs

Page 22: Employee Form

Pre-Rendering

Regions

Content Body

Employee Form

Items

P22_EMPLOYEE_ID

P22_EMAIL

P22_EMP_NAME

P22_CELL_PHONE

P22_JOB_ID

P22_TYPE_ID

P22_TEAM_ID

P22_GENDER

P22_BIRTH_DAY

P22_EMP_PIC

P22_EMP_PIC_1

P22_EMP_PW

P22_CDF_DATE

Employee Form

PAGE HEADER

PAGE NAVIGATION

BREADCRUMB BAR

BEFORE CONTENT BODY

CONTENT BODY

COPY EDIT PREVIOUS NEXT

ITEMS

P22_EMPLOYEE_ID P22_EMAIL

P22_EMP_NAME P22_CELL_PHONE

P22_JOB_ID P22_TYPE_ID

P22_TYPE_ID P22_TEAM_ID

P22_GENDER P22_BIRTH_DAY

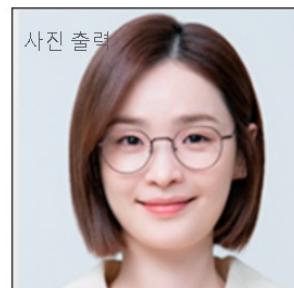
P22_BIRTH_DAY P22_EMP_PIC_1

REGION CONTENT

Appearance / Template options에서 모달 다이아로그로 변경

M02.2. Form 중간 결과물 - Modal Dialog

Employee Form

직원 ID songhwa	이메일 demo@gmail.com	
이름 채송화	전화번호 100-1111-1111	
업무 유형 의사	직급 교수	팀 이름 신경외과
성별 *	생일 8/1/2021	
<input type="radio"/> 남성 <input checked="" type="radio"/> 여성	<input type="button" value="선택"/>	
사진 등록	사진 출력	
<input type="button" value="Choose File"/>		
Download		

Release 1.0

Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller



APEX

ADB

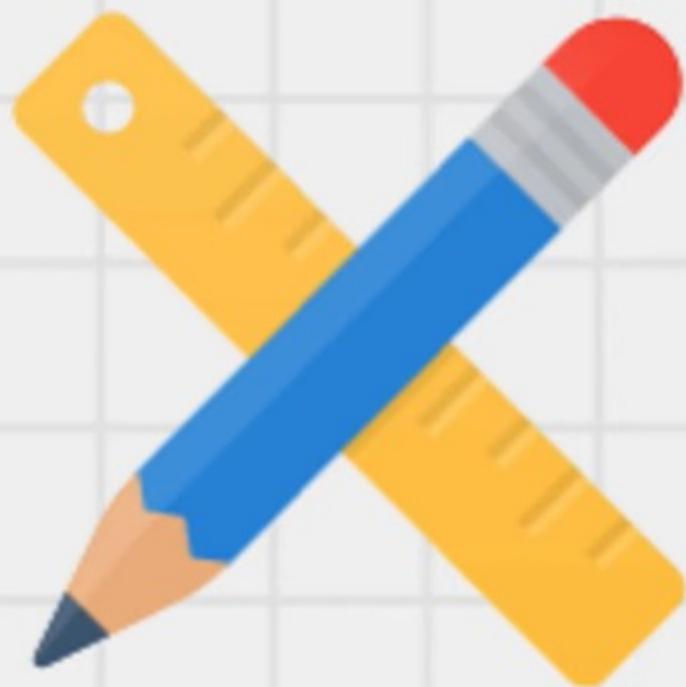
OCI



Oracle APEX - Beginner Workshop

M02. Report With Form: 03. 직원 정보 관리 세부설정

Low-code Dev



United

United Kingdom (475)

France (395)

Germany (300)

Italy (230)

Nero
37 - 68

APEX

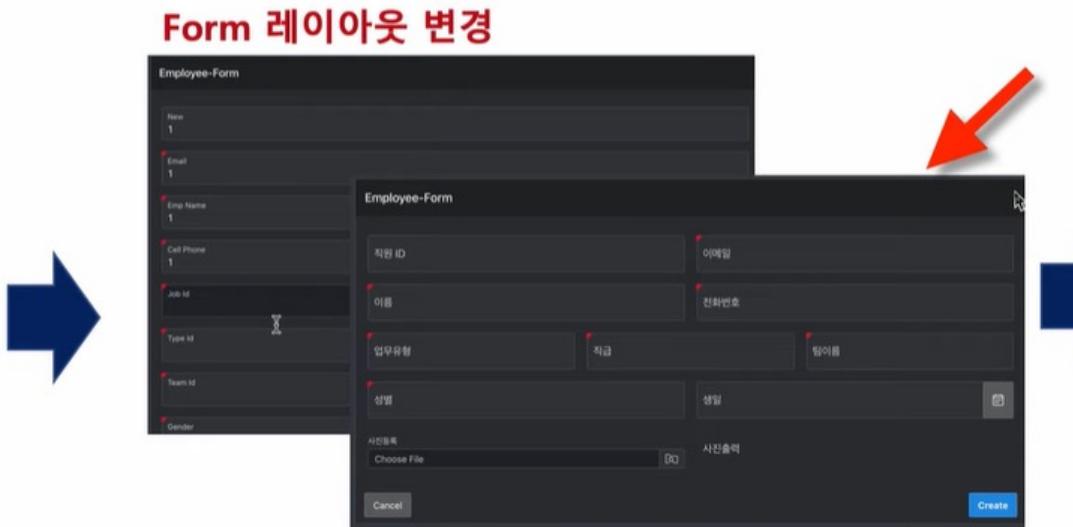
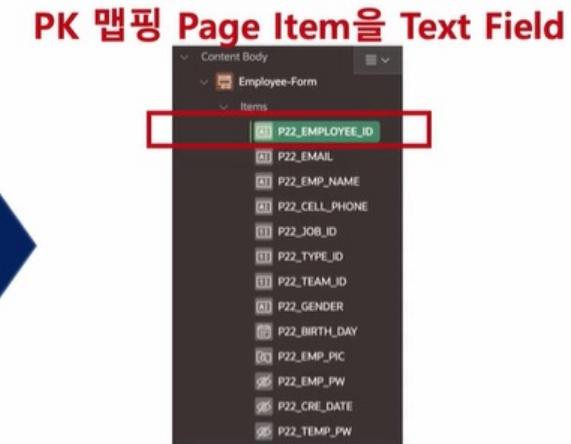
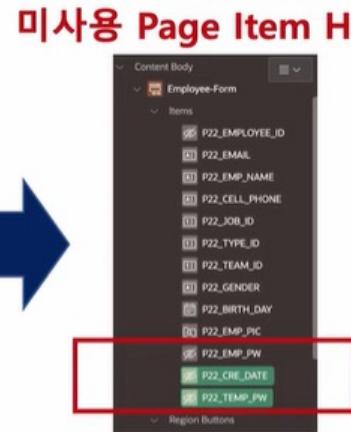
Karl Marx
1818 - 1883

OCI

Marco Polo
1254 - 1324

Low-Code

직원 정보 관리 Report 작업 절차 (1/3)



직원 정보 관리 Report 작업 절차 (2/3)

LoV Select List의 의존성 설정

이미지 크기 이슈

CSS 적용: 이미지 크기 조정

Form 모드 변경: Modal-Dialog

직원 정보 관리 Report 작업 절차 (3/3)

(Form) 이슈: 업데이트 가능한 PK PAGE ITEM
(P22_EMPLOYEE_ID)

(Form) 생일: 포맷
설정(년도-월-일)

(Form) 기본값 설정:
P22_CRE_DATE

(Form) 이메일 입력 데이터
검증 (Validation)

(Form) 전화번호 입력
데이터 검증 (Validation)

(Form) 생일 입력 데이터
검증 (Validation)

(리포트) PK 컬럼 출력

(리포트) 지정한 컬럼
정리(Hidden 처리)
•P21_EMP_PW, P21_TEMP_PW,
P21_CELL_PHONE, P21_EMP_PIC,
P21_BIRTHDAY

(리포트) 컬럼 이름 한글화

(리포트) 컬럼 값
대체(Lookup – 업무유형,
직급, 팀)

(리포트) 포맷 설정:
P21_BIRTHDAY,
P21_CRE_DATE
(년도-월-일)

(리포트) 꾸미기 – HERO

M02.3.Form 페이지 작업 내용

Page Item 명	설정 내용	설정 위치
Employee_ID	<ul style="list-style-type: none"> 보이게 변경(text field 타입) PK의 변경되지 않도록 	<ul style="list-style-type: none"> Identification –Type: Text field Read Only – Type : Item is not null, Item : P22_EMPLOYEE_ID
Email	<ul style="list-style-type: none"> Validation 	<ul style="list-style-type: none"> Create Validation (좌, Rendering) 세부Validation → (우) Validation – Type: Item matches Regular Expression, 정규식 입력(SQL) →(우) Error message
Emp_name	<ul style="list-style-type: none"> Validation 	<ul style="list-style-type: none"> 상동
Cell-Phone	<ul style="list-style-type: none"> Validation 	<ul style="list-style-type: none"> 상동
Job_ID	<ul style="list-style-type: none"> LOV 	<ul style="list-style-type: none"> Identification - Type : Select List → List of Values : Shared component, Job Types, Display extra value /Null 초록색
Type_ID	<ul style="list-style-type: none"> LOV 업무 유형에 종속되도록 설정 	<ul style="list-style-type: none"> Identification - Type : Select List → List of Values : SQL Query, SQL 쿼리 입력, Display extra value/null 초록색 Cascading List of Values : Parent item : P22_JOB_ID
Team_ID	<ul style="list-style-type: none"> LOV 	(Job ID) 상동
Gender	<ul style="list-style-type: none"> LOV 	<ul style="list-style-type: none"> Identification - Type : Radio Group (Job ID) 상동, Display extra value/Null 비활성화(회색)
Birth_day	<ul style="list-style-type: none"> Validation 	<ul style="list-style-type: none"> 상동
Emp_Pic	<ul style="list-style-type: none"> 복제 (Duplicate) 	<ul style="list-style-type: none"> Emp_Pic : Identification - File Browse Emp_Pic 1: Identification - Display Image
Cre_date	숨김 처리	Identification : Type : Hidden
공통	<ul style="list-style-type: none"> 한글화 줄 바꿈 (윗줄로 이동) YYYY-MM-DD 	<ul style="list-style-type: none"> Label – 한글로 입력 Layout : Start new Row 비활성화 Appearance : Format Mask



M02.3-1. 직원 정보 관리 Form 수정 - PK 변경 불가 (1/3)

The screenshot shows the Oracle APEX App Builder interface for modifying a page. On the left, the navigation pane shows 'Application 100 \ Page Designer' and the 'Employee Form' page. The main area displays the 'Employee Form' layout with various items like P22_EMPLOYEE_ID, P22_EMAIL, etc. A red box labeled '1' highlights the 'P22_EMPLOYEE_ID' item. A red callout box points to it with the text: 'Read-only : Type – Item is not NULL 선택'. Another red box labeled '2' highlights the 'Type' dropdown in the item properties, which is set to 'Item is NOT NULL'. The right side of the screen shows the expression editor with a list of conditions.

1 P22_EMPLOYEE_ID

2 Item is NOT NULL

▪ Read-only : Type
– Item is not NULL 선택

No Rows returned
Expression
Function Body
Request = Value
Request != Value
Request is contained in Value
Request is NOT contained in Value
Item = Value
Item != Value
Item is NULL

M02.3-1. 직원 정보 관리 Form 수정 - PK 변경 불가 (2/3)

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes 'APEX', 'App Builder', 'SQL Workshop', 'Team Development', 'App Gallery', and a user session 'DE dev01'. The main area is titled 'Application 100 \ Page Designer'.

The left sidebar shows the page structure: 'Page 22: Employee Form' under 'Pre-Rendering' and 'Regions'. The 'Content Body' region contains an 'Employee Form' item, which is expanded to show its 'Items' list. The item 'P22_EMPLOYEE_ID' is highlighted with a blue box and a red border, and a large blue number '1' is overlaid on it.

A modal window titled 'Pick Item' is open, showing a list of items. The 'Current Page' tab is selected. The list includes:

Name	Label
P22_EMPLOYEE_ID	직원 ID
P22_EMAIL	이메일
P22_EMP_NAME	이름
P22_CELL_PHONE	전화 번호
P22_JOB_ID	업무 유형
P22_TYPE_ID	직급
P22_TEAM_ID	팀 이름
P22_GENDER	성별
P22_BIRTH_DAY	생일
P22_EMP_PIC	사진 등록

The 'P22_EMPLOYEE_ID' row is also highlighted with a red border. To the right of the modal, a tooltip for the 'Read Only' item is displayed, showing the condition 'Item is NOT NULL'.

The bottom right corner of the screen has a red button with a white circle icon.

M02.3-1. 직원 정보 관리 Form 수정 - PK 변경 불가 (3/3)

Employee Form

직원 ID
flower

이름
채송화

업무 유형
의사

직급
교수

팀
응급의학과

성별 *

남성 여성 (선택)

생일
8/1/2021

사진 등록

Choose File

Download

사진 출력

Flower 입력된 후,
read only
설정으로 이제
변경이 안됨

이메일
demo@gmail.com

전화번호
100-0000-0000

M02.3-1. 직원 정보 관리 Form 수정 – 날짜 포맷 (Format Mask)

The screenshot shows the Oracle APEX App Builder interface. In the center, a modal window titled "Pick Format Mask" is open, displaying various date formats. A red box highlights the date "2004-01-12". A blue box labeled "2" is placed over this date. A red box labeled "1" is placed over the "P22_BIRTH_DAY" item in the page items list.

The right side of the screen shows the "Appearance" settings for the "P22_BIRTH_DAY" item. A red box labeled "3" is placed over the "Format Mask" field, which contains "YYYY-MM-DD".

A callout box with a red border points from the "Format Mask" field to the "Format Mask" section of the "Pick Format Mask" modal, containing the same value "YYYY-MM-DD".

▪ Birth_day : Appearance → Format mask의 새창에서 포맷 선택

URL: https://yh0olybn5pqce4n-db202108252044.adb.ap-seoul-1.oraclecloudapps.com/ords/f?p=4000:4500:102022804713256::NO::FB_FLOW_ID,FB_FLOW_PAGE_ID:100,21#

M02.3-1. 직원 정보 관리 Form 수정 – 생성일 Default 설정 (2/1)

The screenshot shows the Oracle APEX App Builder interface for modifying a form. The top navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. A green banner at the top right indicates "Changes saved". The main area is titled "Employee Form" and contains several items: P22_EMPLOYEE_ID, P22_EMP_NAME, P22_JOB_ID, P22_TYPE_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, and P22_EMAIL. The "P22_EMAIL" item is selected and highlighted with a red box. A context menu is open over this item, with the "Expression" option highlighted by a blue box and the number "2". The "Default" configuration panel is visible on the right, showing "Type: Expression" and "Language: PL/SQL". The "PL/SQL Expression" field contains the value "sysdate", which is also highlighted with a red box and the number "3".

1 P22_CRE_DATE

2 Expression

3 sysdate

▪ Cre_date :
Default : Type:
expression,
PL/SQL : sysdate

M02.3-1. 직원 정보 관리 Form 수정 – 생성일 Default 설정 (2/2)

The screenshot shows the 'Employee Form' page. It includes fields for Employee ID (직원 ID), Name (이름), Position (직급), Gender (성별), Birth Date (생일), and a photo upload section (사진 등록). The 'Employee ID' field is highlighted with a red border.

- Cre_date : form을 작성하면(좌) 오늘날짜로 create가 자동 default로 설정됨

The screenshot shows the 'Employee' list page with a table of employee data. A new row has been added, indicated by a green banner at the top right that says 'Row created.' The table columns include Email, Emp Name, Emp Pw, Cell Phone, Job Id, Type Id, Team Id, Gender, Birth Day, Email, Cre Date, and Temp Pw. The last row in the table represents the newly created employee.

Email	Emp Name	Emp Pw	Cell Phone	Job Id	Type Id	Team Id	Gender	Birth Day	Email	Cre Date	Temp Pw
demo@gmail.com	채송화		100-1111-1111	1	1	4	F	8/1/2021	Download	8/25/2021	
1	1		1	1	1	1	1				
demo@gmail.com	이익준		111-1111-1111	1	1	5	M	8/1/2021	Download	8/25/2021	

M02.3-1. 직원 정보 관리 Form 수정 – Validation (1/8)

The screenshot shows the Oracle APEX application builder interface. On the left, a sidebar lists the application structure: Application 100 \ Page 22: Employee Form. Under 'Regions > Content Body > Items', the 'P22_EMAIL' item is selected and highlighted with a green border. A context menu is open at this item, with the 'Create Validation' option highlighted by a red box and the number '1'. A tooltip window titled 'P22_EMAIL' contains the Korean text '우클릭하여 validation 생성' (Create validation by right-clicking). To the right of the items list, the page item 'P22_EMAIL' is being edited in the details panel. The 'Identification' tab shows the name 'P22_EMAIL' and type 'Text Field'. The 'Label' tab shows the label '이메일'. The 'Settings' tab includes options for Subtype (Text), Trim Spaces (None), Text Case (No Change), and 'Submit when Enter pressed' (which is turned on).

M02.3-1. 직원 정보 관리 Form 수정 – Validation (2/8)

The screenshot shows the Oracle APEX App Builder interface for Application 100, specifically the Page Designer for Page 22: Employee Form. The page title is "Employee Form".

Left Sidebar: Shows the navigation tree with "Page 22: Employee Form" selected under "Regions > Content Body > Employee Form > Items". The item "mail validation" is highlighted with a red box and labeled "2".

Center Content Area: Displays the "Employee Form" page layout with various input fields like P22_EMPLOYEE_ID, P22_EMAIL, etc.

Right Panel: Shows the "Validation" configuration for the "mail validation" item. It includes sections for "Validation" (with "Type: Expression" and "Language: PL/SQL") and "Error" (with "Error Message"). A red box labeled "3" highlights the "Validation" section. A callout box points from the "Validation" section to the "Validation" section in the sidebar, with the text "Validation의 ID를 mail validation으로 변경" (Change Validation's ID to mail validation).

Callout Boxes:

- Callout 1:** Points to the "Validation" section in the sidebar, with the text "Validation, Error 부분 설정" (Validation, Error part settings).
- Callout 2:** Points to the "Validation" section in the right panel, with the text "Validation의 ID를 mail validation으로 변경" (Change Validation's ID to mail validation).

M02.3-1. 직원 정보 관리 Form 수정 – Validation (3/8)

The screenshot shows the Oracle APEX App Builder interface for Application 100's Page Designer. The left sidebar lists regions like Content Body, Employee Form, and its items (P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME). Under Employee Form, there's a 'Validations' section with a 'mail validation' entry. The main area shows the 'Validation' configuration for the P22_EMAIL item. The 'Type' dropdown is set to 'Item matches Regular Expression' (highlighted by a red box, step 5). The 'Regular Expression' field contains the pattern `^[A-Za-z]+[A-Za-z0-9.]+@[A-Za-z]+\.[A-Za-z]{2,}$`. The 'Error' message is set to 'Mail 포맷이 아닙니다. 메일 형식이어야 합니다.' (Email format is incorrect. It must be an email address). The 'Display Location' is set to 'Inline with Field and its Label'. The 'Associated Item' is P22_EMP_NAME. A tooltip on the right explains the regular expression syntax. A blue box labeled '4' highlights the 'Item matches Regular Expression' type, and another blue box labeled '6' highlights the error message.

5 Item matches Regular Expression
Regular Expression `^[A-Za-z]+[A-Za-z0-9.]+@[A-Za-z]+\.[A-Za-z]{2,}$`

4 Item matches Regular Expression

6 Mail 포맷이 아닙니다. 메일 형식이어야 합니다.

■ 정규 표현식
(Regular expression)
입력식- 뒷장 참조

M02.3-1. 직원 정보 관리 Form 수정 – Validation (4/8)

슬기로운 익스펜스 생활

Home 직원 정보 관리

Employee Form

직원 ID
1J

이름
이익준

Mail 포맷이 아닙니다. 메일 형식이어야 합니다.

이메일
1

전화번호
111-1111-1111

업무 유형
의사

직급
교수

팀 이름
응급의학과

성별 *

남성 (checked) 여성

생일
2021-08-01

사진 등록

Choose File

Download

사진 출력



1 error has occurred

- Mail 포맷이 아닙니다. 메일 형식이어야 합니다. (i)

Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller Delete Apply Changes

M02.3-1. 직원 정보 관리 Form 수정 – Validation (5/8)

- Email

error message: Mail 포맷이 아닙니다. 메일 형식이어야 합니다.

(정규 표현식 – Regular expression)

`^[A-Za-z]+[A-Za-z0-9.]+@[A-Za-z0-9.-]+\.[A-Za-z]{2,4}$`

- 핸드폰 번호

Error message: 핸드폰 전화번호 형식이 아닙니다. (예 010-1234-1234)

(정규 표현식 – Regular expression) `^\d{3}-\d{3,4}-\d{4}$`

- 생년월일

Error message: 생일은 오늘 이전이어야 합니다.

(표현식 - Expression) `sysdate > to_date(:P22_BIRTH_DAY, 'YYYY-MM-DD')`



M02.3-1. 직원 정보 관리 Form 수정 – Validation (6/8)

The screenshot shows the Oracle APEX App Builder interface for modifying an Employee Form. The left sidebar displays the page structure with sections like Pre-Rendering, Regions, and Items. The main area shows the Employee Form with various input fields. The right sidebar is focused on the 'Validation' section, which is highlighted with a red box and labeled with a large blue number '2'. Within this section, a validation rule for the 'P22_CELL_PHONE' item is being configured. The validation type is set to 'Item matches F' with the regular expression '^d{3}-d{3,4}-d{4}\$'. The error message is defined as '핸드폰 전화번호 형식이 아닙니다. (예 010-1234-1234)'. A smaller blue box labeled '1' highlights the validation rule entry point in the sidebar.

1 cell phone validation

2 Validation

Editable Region - Select -

Type Item matches F

Item P22_CELL_PHONE

Regular Expression $^d\{3\}-d\{3,4\}-d\{4\}$$

Always Execute

Error Message

핸드폰 전화번호 형식이 아닙니다. (예 010-1234-1234)

M02.3-1. 직원 정보 관리 Form 수정 – Validation (7/8)

The screenshot shows the Oracle APEX App Builder interface for an application named "Application 100". The current page is "Page Designer". On the left, the "ITEMS" panel lists various form items: P22_EMP_NAME, P22_CELL_PHO, P22_JOB_ID, P22_TYPE_ID, P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, P22_EMP_PIC_1, P22_EMP_PW, P22_CRE_DATE, P22_TEMP_PW, P22_EMPLOYEE_ID, P22_EMAIL, P22_EMP_NAME, P22_CELL_PHONE, P22_JOB_ID, P22_TYPE_ID, P22_TEAM_ID, P22_GENDER, P22_BIRTH_DAY, P22_EMP_PIC, and P22_EMP_PIC_1. The "Validations" section under P22_BIRTH_DAY is highlighted with a red box and labeled "1".

The main content area displays the "Employee Form" page. The "Validation" panel on the right shows a configuration for a validation named "birthday validation". The validation is set to execute on "Expression" type, using PL/SQL language. The expression is: `sysdate > to_date(:P22_BIRTH_DAY, 'YYYY-MM-DD')`. The "Always Execute" toggle is turned off. The "Error" section contains a message in Korean: "생일은 오늘 이전이어야 합니다." (The birthday must be before today).

M02.3-1. 직원 정보 관리 Form 수정 – Validation (8/8)

슬기로운 익스펜스 생활

Home 직원 정보 관리

Employee Form

직원 ID
1J

이름
이익준

이메일
1

Mail 포맷이 아닙니다. 메일 형식이어야 합니다.

전화번호
1234

핸드폰 전화번호 형식이 아닙니다. (예 010-1234-1234)

업무 유형
의사

직급
교수

팀 이름
응급의학과

성별 *

남성 여성

생일
2021-09-01

생일은 오늘 이전이어야 합니다.

사진 등록

Choose File

Download

사진 출력

Home Application 100 Edit Page 22 Session View Debug Debug Page Info Quick Edit Theme Roller

3 errors have occurred

- Mail 포맷이 아닙니다. 메일 형식이어야 합니다. ⓘ
- 핸드폰 전화번호 형식이 아닙니다. (예 010-1234-1234) ⓘ
- 생일은 오늘 이전이어야 합니다. ⓘ

M02.3-2. 직원 정보 관리 Report 수정

슬기로운 익스펜스 생활 dev01

Home 직원 정보 관리

	Email	Emp Name	Emp Pw	Cell Phone	Job Id	Type Id	Team Id	Gender	Birth Day	Emp Pic	Cre Date	Temp Pw
	demo@gmail.com	채송화		100-1111-1111	1	1	4	F	8/1/2021	Download		
	1	1		1	1	1	1	1				
	demo@gmail.com	이익준		111-1111-1111	1	1	5	M	8/1/2021	Download	8/25/2021	

1 - 3

슬기로운 익스펜스 생활 dev01

Home 직원 정보 관리

직원 정보 관리
직원 정보를 관리하는 페이지입니다.

	직원 ID	Email	이름	전화번호	업무 유형	직급	팀	성별	등록일
	IJ	demo@gmail.com	이익준	111-1111-1111	의사	교수	응급의학과	남성	2021-08-25
	songhwa	demo@gmail.com	채송화	100-1111-1111	의사	교수	신경외과	여성	

1 - 2

M02.3-2. 직원 정보 관리 Report 수정 – PK 컬럼 출력

The screenshot shows the Oracle APEX App Builder interface for modifying a report. The main area displays the 'Employee Report' page with a 'Report 1' item. The left sidebar lists various columns: EMPLOYEE_ID, EMAIL, EMP_NAME, EMP_PW, CELL_PHONE, JOB_ID, TYPE_ID, TEAM_ID, GENDER, BIRTH_DAY, EMP_PIC, CRE_DATE, TEMP_PW, Column Groups, Saved Reports, and Region Buttons. A red box labeled '2' highlights the 'EMPLOYEE_ID' column in the 'Report 1' list.

Numbered callouts provide instructions:

- 1: A red box highlights the page number dropdown set to '21'. A callout box contains the text: "Hidden 컬럼 → Plain Text로 변경".
- 2: A red box highlights the 'EMPLOYEE_ID' column in the 'Report 1' list.
- 3: A red box highlights the 'Type' dropdown set to 'Plain Text'. A callout box contains the text: "Hidden 컬럼 → Plain Text로 변경".
- 4: A red box highlights the 'Heading' field containing the Korean text '직원 ID'.

The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, App Gallery, and user DE dev01. The bottom right corner features a large red button with a white circle icon.

M02.3-2. 직원 정보 관리 Report 수정 – Hidden 컬럼화

Application 100 \ Page Designer

Layout Page Search Help

Employees Report

PAGE HEADER
PAGE NAVIGATION
BREADCRUMB BAR
BEFORE CONTENT BODY
CONTENT BODY
Report1

RIGHT OF INTERACTIVE REPORT SEARCH BAR

CREATE

Sub Regions

Column Groups

Saved Reports

EMPLOYEE_ID

EMAIL

EMP_NAME

EMP_PW

CELL_PHONE

JOB_ID

TYPE_ID

TEAM_ID

GENDER

BIRTH_DAY

EMP_PIC

CRE_DATE

TEMP_PW

Filter

Identification

Type

- Plain Text
- Plain Text (based on List of Values)
- Link
- Display Image
- Download BLOB
- Percent Graph
- Remove HTML
- Hidden Column
- Sequence

M02.3-2. 직원 정보 관리 Report 수정 – 컬럼 한글화

The screenshot shows the Oracle APEX App Builder interface for modifying a report. The top navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The search bar contains 'Navigate to Next Page (Alt+Shift+Page Down)'. The main area is titled 'Application 100 \ Page Designer'.

The left sidebar lists columns: EMPLOYEE_ID, EMAIL, EMP_NAME, EMP_PW, CELL_PHONE, JOB_ID, TYPE_ID, TEAM_ID, GENDER, BIRTH_DAY, EMP_PIC, CRE_DATE, TEMP_PW. The 'EMPLOYEE_ID' column is selected and highlighted with a green border.

The center pane displays the 'Employees Report' page structure, including PAGE HEADER, PAGE NAVIGATION, BREADCRUMB BAR, BEFORE CONTENT BODY, and CONTENT BODY regions. The 'CONTENT BODY' region contains a 'Report1' item.

A yellow callout box highlights the following column mappings:

- Employee_ID : 직원 ID
- Email : 이메일
- Emp_name : 이름
- Cell_Photo : 전화번호
- Job_ID : 업무 유형
- Type_ID : 직급
- Team_ID : 팀명
- Gender : 성별
- Cre_date : 등록일

A red arrow points from the '직원 ID' label in the callout box to the 'Heading' field in the right-hand column configuration panel. The 'Heading' field is set to '직원 ID' and is highlighted with a red border.

The right-hand panel shows the column configuration for 'EMPLOYEE_ID':

- Column Name: EMPLOYEE_ID
- Type: Plain Text
- Heading: 직원 ID (highlighted)
- Alignment: Center
- Single Row View: Enabled
- Layout: Standard

M02.3-2. 직원 정보 관리 Report 수정 – 날짜 포맷

The screenshot shows the Oracle APEX App Builder interface for modifying a report. The left sidebar displays the 'Content Body' section, specifically the 'Report 1' item under 'Columns'. A red box labeled '1' highlights the 'CRE_DATE' column entry. The main workspace shows the 'Employee Report' page with a 'Report 1' region. A blue box labeled '2' highlights the 'Format Mask' field in the 'Appearance' panel on the right, which is set to 'YYYY-MM-DD'. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, App Gallery, and a user session for 'DE dev01'.

APEX App Builder

Application 100 \ Page Designer

Layout Page Search Help

Employee Report

PAGE HEADER
PAGE NAVIGATION
BREADCRUMB BAR
BEFORE CONTENT BODY
CONTENT BODY

Report 1

PREVIOUS ITEMS REGION CONTENT

SUB REGIONS NEXT

RIGHT OF INTERACTIVE REPORT SEARCH

CREATE

1 CRE_DATE

2 Format Mask YYYY-MM-DD

Use Column Heading

Layout

Sequence 12

Column Alignment

Group - Select -

Appearance

Column Formatting

HTML Expression

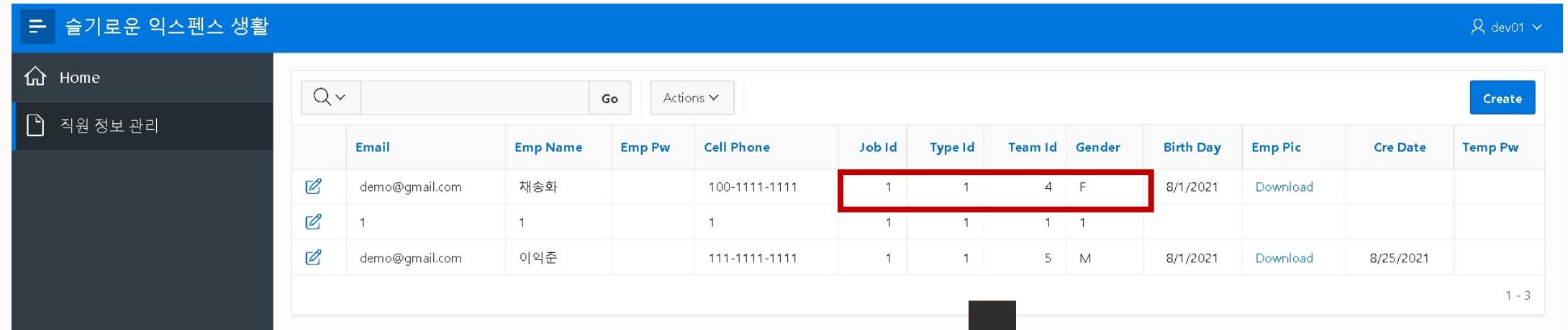
Column Filter

Column

Filter

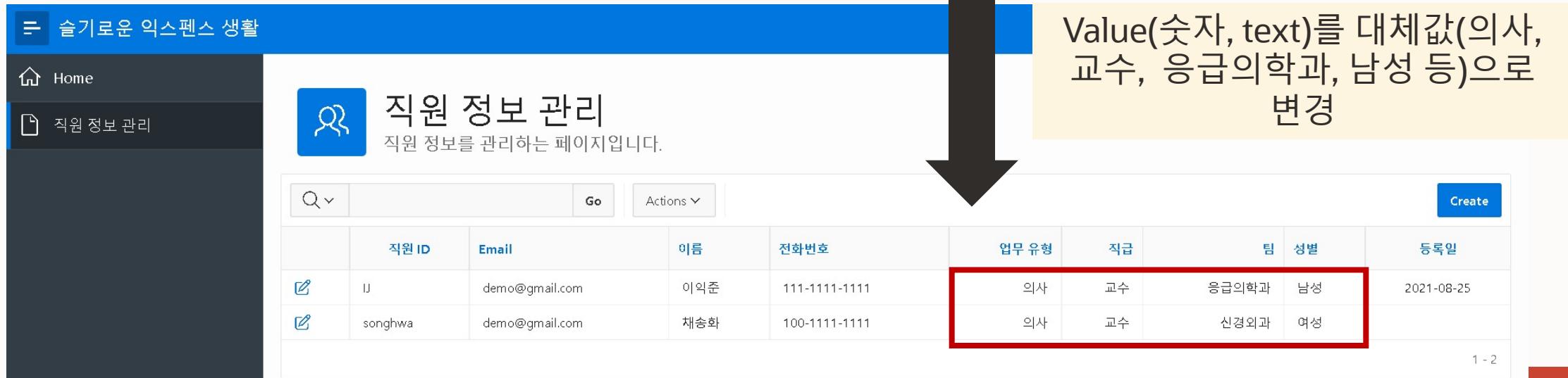
Save

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (1/6)



	Email	Emp Name	Emp Pw	Cell Phone	Job Id	Type Id	Team Id	Gender	Birth Day	Emp Pic	Cre Date	Temp Pw
	demo@gmail.com	채송화		100-1111-1111	1	1	4	F	8/1/2021	Download		
	1	1		1	1	1	1	1				
	demo@gmail.com	이익준		111-1111-1111	1	1	5	M	8/1/2021	Download	8/25/2021	

Value(숫자, text)를 대체값(의사, 교수, 응급의학과, 남성 등)으로 변경



	직원 ID	Email	이름	전화번호	업무 유형	직급	팀	성별	등록일
	IJ	demo@gmail.com	이익준	111-1111-1111	의사	교수	응급의학과	남성	2021-08-25
	songhwa	demo@gmail.com	채송화	100-1111-1111	의사	교수	신경외과	여성	

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (2/6)

The screenshot shows the Oracle APEX App Builder interface in the 'Page Designer' mode for Application 100. The left sidebar lists various components like Content Body, Report 1, and Columns. A red box labeled '1' highlights the 'JOB_ID' column entry in the 'Columns' section. The main workspace displays the 'Employee Report' page with a 'Report 1' region. A context menu is open over the 'JOB_ID' column entry in the report, with a red box labeled '2' highlighting the 'Plain Text (based on List of Values)' option. A callout bubble points to this option with the text 'Plain text based on List of values'. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, App Gallery, and user information (DE dev01).

1 JOB_ID

2 Plain Text (based on List of Values)

Plain text based on List of values

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (3/6)

The screenshot shows the Oracle APEX App Builder interface in the Page Designer mode. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with user information for DE dev01. The main workspace displays an Employee Report page. On the left, the Content Body pane shows a list of columns for Report 1, with the JOB_ID column currently selected. The right side of the screen shows the report structure with regions like PAGE HEADER, PAGE NAVIGATION, BREADCRUMB BAR, BEFORE CONTENT BODY, and CONTENT BODY. In the CONTENT BODY region, there is a Report 1 item. The Identification section on the right shows the Column Name as JOB_ID and the Type as Plain Text (base). A red callout box highlights the 'List of Values' section, which is expanded to show 'JOB TYPES' as the value. A red box labeled '3' surrounds the entire 'List of Values' configuration area. The bottom right corner features the Oracle logo.

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (4/6)

The screenshot shows the Oracle APEX App Builder interface for modifying a report. The left sidebar lists columns: EMPLOYEE_ID, EMAIL, EMP_NAME, EMP_PWD, CELL_PHONE, JOB_ID, TYPE_ID, TEAM_ID, GENDER, BIRTH_DAY, EMP_PIC, CRE_DATE, TEMP_PWD, and Column Groups. The 'TYPE_ID' column is highlighted with a red box and labeled '1'. The main area displays the 'Employee Report' page with a 'Report 1' section. A callout box with a red border and the text 'Plain text based on List of values' points to the 'Type' field in the 'Identification' panel. The 'Type' field is set to 'Plain Text (base)' and is also highlighted with a red box and labeled '2'. The 'List of Values' panel is open, showing 'List of Values' with 'EMP TYPES' selected and 'Heading' set to '직급'. The 'List of Values' panel is also highlighted with a red box and labeled '3'.

▪ Plain text based
on List of values

1

2

3

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (5/6)

The screenshot shows the Oracle APEX App Builder interface for modifying a report. The left sidebar lists columns: TEAM_ID, GENDER, BIRTH_DAY, EMP_PIC, CRE_DATE, TEMP_PW, and others. A red box labeled '1' highlights the 'TEAM_ID' column. The main area displays the 'Employee Report' page with a 'Report 1' section. A red box labeled '2' points to the 'Identification' panel where 'Type' is set to 'Plain Text (based on List of values)'. Another red box labeled '3' points to the 'List of Values' panel where 'List of Values' is set to 'TEAMS'. A callout box with the text 'Plain text based on List of values' is positioned between the 'Identification' and 'List of Values' panels.

1 [TEAM_ID]

2 Plain text based on List of values

3 TEAMS

M02.3-2. 직원 정보 관리 Report 수정 – LOV Value 대체(look up) (6/6)

The screenshot shows the Oracle APEX App Builder interface for 'Application 100 \ Page Designer'. The left sidebar shows the 'Content Body' section with 'Report1' selected. Under 'Report1', the 'Columns' section is expanded, showing columns like EMPLOYEE_ID, EMAIL, etc., and the 'GENDER' column highlighted with a red box and labeled '1'. The main workspace displays the 'Employee Report' page, which includes a 'Report 1' region. The 'Identification' panel on the right shows the 'GENDER' column with its 'Type' set to 'Plain Text (based on List of values)' (labeled '2'). Below this, the 'List of Values' panel shows a dropdown menu for 'GENDER TYPE' (labeled '3'). A callout box points from the 'List of Values' panel to the text 'Plain text based on List of values'.

▪ Plain text based on List of values

1 GENDER

2 Plain Text (based on List of Values)

3 GENDER TYPE

M02.3-2. 직원 정보 관리 Report 수정 – 리포트 꾸미기(Hero) (1/5)

직원 정보 관리
직원 정보를 관리하는 페이지입니다.

- 아이콘, 제목, 설명 추가

	직원 ID	Email	이름	전화번호	업무 유형	직급	팀	성별	등록일
	IJ	demo@gmail.com	이익준	111-1111-1111	의사	교수	응급의학과	남성	2021-08-25
	songhwa	demo@gmail.com	채송화	100-1111-1111	의사	교수	신경외과	여성	

M02.3-2. 직원 정보 관리 Report 수정 – 리포트 꾸미기(Hero) (2/5)

The screenshot shows the Oracle APEX App Builder interface for an application named "Application 100". The current page is "Page 21: Employee Report".

Step 1: A red box highlights the "Create Region" button in the context menu of the "Content" section. A callout box with Korean text "Content body 우클릭해서 create region (리전 생성)" points to this button.

Step 2: A red box highlights the "New" button in the "Content Body" section. A callout box with Korean text "새로운 Region (NEW)를 올려서 report1 위에 놓음" points to this button.

The "Property Editor" panel on the right shows a warning message: "No components currently selected."

M02.3-2. 직원 정보 관리 Report 수정 – 리포트 꾸미기(Hero) (3/5)

The screenshot shows the Oracle APEX App Builder interface for editing a page named "Employee Report".

Left Sidebar: Shows the page structure with regions like "Content Body" containing "직원 정보 관리" and "Report 1".

Center Content Area: Displays the "Employee Report" page with a green header bar labeled "직원 정보 관리". Below it is a table with columns: COPY, EDIT, PREVIOUS, NEXT, ITEMS, REGION CONTENT, and SUB REGIONS. Buttons at the bottom include CLOSE, HELP, DELETE, CHANGE, and CREATE.

Right Panel (Hero Region): Contains the following settings:

- Identification:** Title is set to "직원 정보 관리" (Employee Information Management).
- Source:** Text is set to "<p> 직원 정보를 관리하는 페이지입니다.</p>" (This page manages employee information).
- Layout:** Sequence is 10, Parent Region is "Content Body", Position is "Content Body", Start New Row is enabled, Column is "Automatic", and Column Span is "Automatic".

Annotations:

- Annotation 1 points to the "Title" field in the Identification section, which is highlighted with a red border.
- Annotation 2 points to the "Text" field in the Source section, which is also highlighted with a red border.

M02.3-2. 직원 정보 관리 Report 수정 – 리포트 꾸미기(Hero) (4/5)

Appearance >
template : Hero로
변경

The screenshot shows the Oracle APEX App Builder interface. The top navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The left sidebar shows the page structure: Application 100 \ Page Designer, Page 21: Employee Report, Pre-Rendering, Regions (Content Body: 직원 정보 관리, Report 1), and Post-Rendering. The main content area displays the 'Employee Report' page with a green header bar labeled '직원 정보 관리'. On the right, the 'Region' panel is open, showing various container types like Blank with Attributes (No Grid), Buttons Container, Cards Container, Carousel Container, Collapsible, Content Block, and Hero. A large blue button labeled '1' is positioned over the 'Hero' item, which is highlighted with a red box. A callout box with the text 'Appearance > template : Hero로 변경' points to the 'Hero' item. The sidebar also includes sections for Type (Text, Standard, Tabs Container, Title Bar, Wizard Container), Template (Standard, Use Template Defaults, Scroll - Default), Template Options, CSS Classes, and Icon.

M02.3-2. 직원 정보 관리 Report 수정 – 리포트 꾸미기(Hero) (5/5)

The screenshot shows the Oracle APEX Application Builder interface. On the left, the navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. Below the navigation bar, the application is identified as Application 100 \ Page Designer.

The main workspace displays the Page 21: Employee Report. The Content Body region contains a section labeled "직원 정보 관리" (Employee Information Management) and a "Report 1" item.

A modal window titled "Pick Icon" is open, showing a search bar with "users" and two icon options: "fa-users" and "fa-users-chat". The "fa-users" icon is highlighted with a red box and a blue number "3".

To the right of the modal, the "Appearance" settings for the "Hero" template are visible. The "Icon" field is set to "fa-users" and is also highlighted with a red box and a blue number "4".

A callout box with a red border points from the "Icon" field in the Appearance settings to the "fa-users" icon in the Pick Icon modal, containing the text: "■ Icon 선택 > 새로운 창에서 fa-users 아이콘 선택".

The URL at the bottom of the page is: https://yh0olybn5pqce4n-db202108252044.adb.ap-seoul-1.oraclecloudapps.com/ords/f?p=4000:4500:28723976374497:::FB_FLOW_ID,FB_FLOW_PAGE_ID,F4000_P4150_GOTC



APEX ADB OCI

Oracle APEX - Beginner Workshop



M02. Report With Form: 04. 직원 정보 검색

Low-code Dev

Oracle

APEX

OCI

Marco Polo
1254 - 1324

Low-Code

Karl Marx
1818 - 1883

Nero
37 - 68

Politics
United States (1,300)
United Kingdom (475)
France (395)
Germany (305)
Italy (230)

M02.4-1. 직원 정보 검색 (1/14)

☰ 슬기로운 익스펜스 생활

🔍 dev01 ▾

직원 정보 관리

직원 정보를 관리하는 페이지입니다.

▪ 검색 부분 추가

	직원 ID	이메일	이름	전화번호	업무 유형	직급	팀명	성별	등록일
	I	demo@gmail.com	이익준	100-1000-1000	의사	교수	산부인과	남성	
	AWN	demo@gmail.com	안정원	100-1111-1111	의사	교수	산부인과	남성	
	JUN	demo@gmail.com	김준완	100-1000-1000	의사	교수	소아과	남성	
	flower	demo@gmail.com	채송화	100-0000-0000	의사	교수	응급의학과	여성	
	jang	demo@gmail.com	장겨울	100-0000-0000	의사	펠로우	신경외과	여성	

1 - 5

M02.4-1. 직원 정보 검색 (2/14)

The image shows two side-by-side panels of the Oracle APEX page configuration interface for 'Page 21: Employee Report'.
The left panel (Step 1) shows the 'Regions' section expanded. A red box highlights the 'Content Body' item under 'Regions'. A red callout points to the 'Create Region' button, which is also highlighted with a red box. The right panel (Step 2) shows the 'Post-Rendering' section expanded. A red box highlights the 'New' button, which is also highlighted with a red box. A red callout points to the text 'New 자동 생성되면 위치 변경' (Change location if automatically generated). Both panels have a red box around the title 'Page 21: Employee Report'.

1 Content Body

Create Region

2 New

New 자동 생성되면 위치 변경

M02.4-1. 직원 정보 검색 (3/14)

The screenshot shows the Oracle APEX Page Designer interface for Application 100, Page 21: Employee Report. The left sidebar shows the page structure with regions like Content Body and Post-Rendering. The main area displays the 'CONTENT BODY' region with a 'Search' button highlighted by a red box and labeled '4'. A callout box points from this button to a text box containing the instruction: 'Identification의 Title : Search로 변경'. On the right, the 'Identification' region is open, showing its configuration: 'Title' set to 'Search' and 'Type' set to 'Static Content'. A blue box labeled '3' points to the 'Title' field. Another callout box points from this field to the same text box: 'Identification의 Title : Search로 변경'. The bottom status bar indicates 'RIGHT OF INTERACTIVE REPORT SEARCH BAR'.

4

3

Identification의 Title :
Search로 변경

Identification

Title: Search

Type: Static Content

RIGHT OF INTERACTIVE REPORT SEARCH BAR

M02.4-1. 직원 정보 검색 (4/14)

The screenshot shows the Oracle APEX page builder interface. On the left, a context menu is open over a 'Search' item, which is highlighted with a red box. The menu items are:

- Create Region
- Create Sub Region
- Create Page Item** (highlighted with a red box)
- Create Button** (highlighted with a red box)
- Create Dynamic Action
- Duplicate
- Delete
- Copy to other Page...
- Expand All Below
- Collapse All Below

A red box also highlights the 'Search' item in the menu. To the right, the page structure is displayed under 'Page 21: Employee Report'. The structure includes:

- Pre-Rendering
- Regions
 - Content Body
 - 직원 정보 관리
 - Search
 - Items
 - P21_NEW
 - P21_NEW_1
 - Region Buttons
 - New
- Report 1
- Post-Rendering

Search 우클릭하여
Page item 2개 (검색부분)
Button 1개 (검색버튼) 생성

M02.4-1. 직원 정보 검색 (5/14)

6

The screenshot shows the Oracle APEX App Builder interface. On the left, the navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. Below the navigation bar, the application structure is shown: Application 100 \ Page Designer. The main content area displays a page titled "Page 21: Employee Report". The page has a "Layout" section with "Page Search" and "Help" buttons. The "CONTENT BODY" section contains a "Regions" tree with "Content Body" expanded, showing "직원 정보 관리" and "Search". Under "Search", the "Items" section lists "P21_SEARCH_TEAMS" and "P21_NEW_1". A red box highlights "P21_SEARCH_TEAMS". The "REGION CONTENT" section below contains "CLOSE", "HELP", "DELETE", "CHANGE", and "CREATE" buttons, along with a "BELOW REGION" button.

P21_SEARCH_TEAMS
정확하게!!
*** 뒤에 SQL문에 쓰임

The right side of the screen shows the "Identification" tab of the "Page Item" properties for "P21_SEARCH_TEAMS". The properties are as follows:

- Name: P21_SEARCH_TEAMS
- Type: Checkbox Group
- Label: 팀명
- Number of Columns: 5
- List of Values: Shared Component (Type: TEAMS)
- Display Extra Values: Enabled

The "List of Values" tab is also visible, showing the same configuration for the shared component.

M02.4-1. 직원 정보 검색 (6/14)

The screenshot shows the Oracle APEX App Builder interface. On the left, the navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The current page is Application 100 \ Page Designer, specifically Page 21: Employees Report.

In the center, the page content area displays a search region with two items: P21_SEARCH_TEAMS and P21_SEARCH_GENDERS. The P21_SEARCH_GENDERS item is highlighted with a red box and a large yellow callout bubble containing the text:

P21_SEARCH_GENDERS
정확하게!!
*** 뒤에 SQL문에 쓰임

To the right of the page content, the Page Item properties panel is open for the P21_SEARCH_GENDERS item. The properties are as follows:

- Type:** Checkbox Grp
- Label:** 성별
- Number of Columns:** 2
- List of Values:** GENDER TYP
- Display Extra Values:** Enabled (indicated by a green checkmark)

The overall interface shows a clean, modern design with a light gray background and blue header elements. The sidebar on the left contains various navigation links and a report section labeled "Report1".

M02.4-1. 직원 정보 검색 (7/14)

The screenshot shows the Oracle APEX App Builder interface for Application 100. The left sidebar lists regions like 'Content Body' and 'Report 1'. The main area displays a search interface with two dropdown items: 'P21_SEARCH_TEAMS' and 'P21_SEARCH_GENDERS'. A large red box highlights the 'Identification' section of the right sidebar, specifically the 'Button Name' field which contains 'Search'. Other sections visible in the sidebar include 'Layout', 'Appearance', 'Behavior', 'Advanced', and 'Server-side Condition'.

8

APEX App Builder

Application 100 \ Page Designer

Layout Page Search Help

Pre-Rendering

Regions

Content Body

직원 정보 관리

Search

Items

P21_SEARCH_TEAMS

P21_SEARCH_GENDERS

Region Buttons

Report 1

Columns

EMPLOYEE_ID

EMAIL

EMP_NAME

EMP_PW

CELL_PHONE

JOB_ID

TYPE_ID

Report 1

SEARCH

IDENTIFICATION

Button Name: Search

Label: Search

Layout

Appearance

Behavior

Action: Submit Page

Execute Validations: On

Warn on Unsaved Changes: Do Not Check

Database Action: - Select -

Advanced

Server-side Condition

DE dev01

M02.4-1. 직원 정보 검색 (8/14)

Search 를 없애고

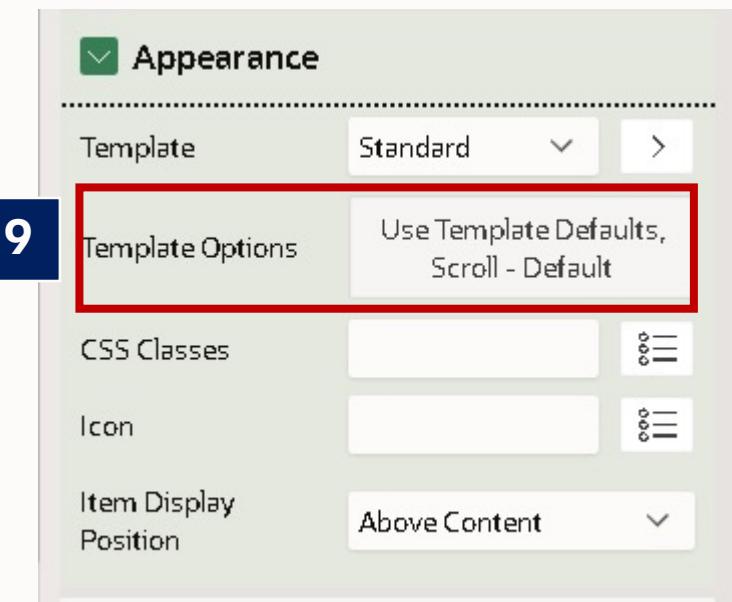
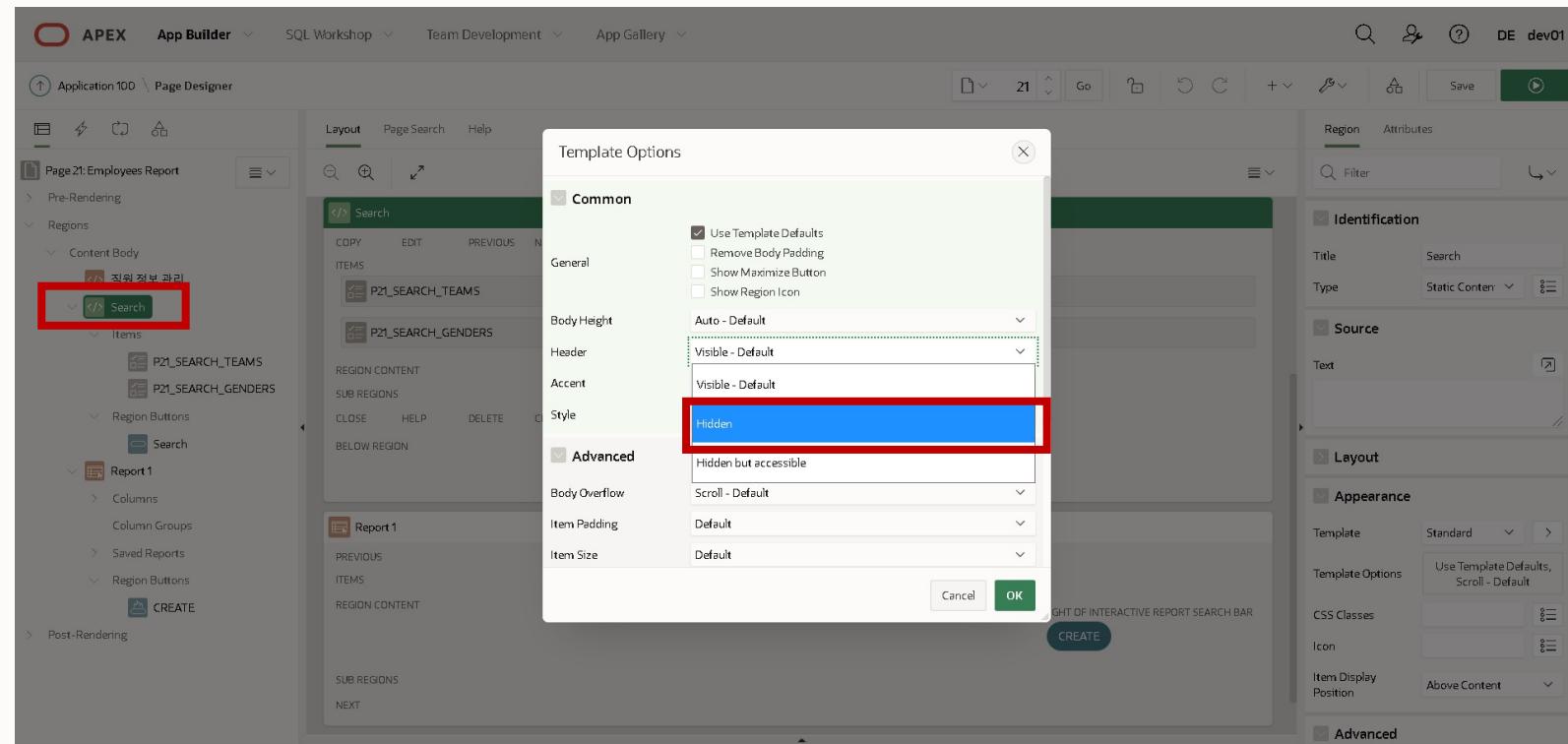
버튼을 파란색으로 변경

직원 ID	이메일	이름	전화번호	업무 유형	직급	팀명	성별	등록일
JUN	demo@gmail.com	김준완	100-1000-1000	의사	교수	소아과	남성	
IJ	demo@gmail.com	이익준	100-1000-1000	의사	교수	산부인과	남성	
AHN	demo@gmail.com	안정원	100-1111-1111	의사	교수	산부인과	남성	
flower	demo@gmail.com	채송화	100-0000-0000	의사	교수	응급의학과	여성	
jang	demo@gmail.com	장겨울	100-0000-0000	의사	펠로우	신경외과	여성	

1 - 5

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller

M02.4-1. 직원 정보 검색 (9/14)



M02.4-1. 직원 정보 검색 (10/14)

The screenshot shows the Oracle APEX App Builder interface for a page named "Page 21: Employees Report".

Left Sidebar: Shows the page structure with regions like "Content Body" containing "직원 정보 관리" and "Search" items, and "Report 1". A red box highlights the "Search" button in the "Region Buttons" section.

Center Content: Displays a search interface with two input fields: "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS". Below these are buttons for "CLOSE", "HELP", "DELETE", "CHANGE", and "CREATE". A large blue box with the number "10" is overlaid on the right side of the interface.

Right Panel (Toolbox): Provides configuration options for the "Search" button, including:

- Identification:** Button Name: Search, Label: Search.
- Layout:** (Expanded)
- Appearance:** (Expanded) - includes "Hot" toggle switch, which is highlighted with a red box.
- Behavior:** Action: Submit Page, Execute Validations: checked, Warn on Unsaved Changes: Do Not Check, Database Action: - Select -.

M02.4-1. 직원 정보 검색 (11/14)

슬기로운 익스펜스 생활

dev01

Home

직원 정보 관리

직원 정보 관리

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성별

남성 여성

Search

직원 ID	Email	이름	전화번호	업무 유형	직급	팀	성별	등록일
KimJW	demo@gmail.com	김준완	111-1111-1111	의사	교수	간담췌외과	남성	2021-08-25
YangSH	demo@gmail.com	양석형	100-1111-1111	간호사	간호부장	신경외과	남성	2021-08-25
20210008	demo@gmail.com	주종수	000-0000-0000	의사	교수	응급의학과	남성	2021-08-25
20210009	demo@gmail.com	천명태	000-1111-1111	간호사	간호부장	신경외과	남성	2021-08-25
IJ	demo@gmail.com	이익준	111-1111-1111	의사	교수	응급의학과	남성	2021-08-25
DellH	demo@gmail.com	드개한	111-0000-0000	의사	폐로	산부인과	남성	2021-08-25

Actions

Create

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller Page Info

M02.4-1. 직원 정보 검색 (12/14)

< Report 조회 조건 >

where

InStr(''||:P21_SEARCH_TEAMS||':',
'':||TEAM_ID||':') > 0

and TEAM_ID IS NOT NULL

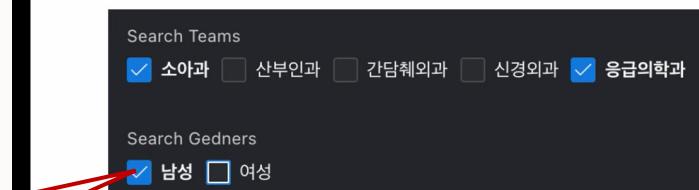
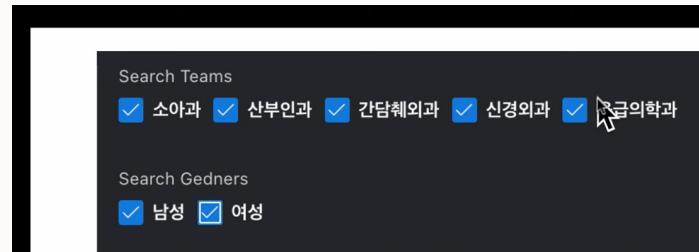
and

InStr(''||:P21_SEARCH_GENDERS||':',
'':||GENDER||':') > 0

and GENDER IS NOT NULL

P21_SEARCH_TEAMS,
P21_SEARCH_GENDERS의 Key 값을
받아서 검색하는데 사용함

→ 이를 위해 Report의 SQL 쿼리에 위의
조회조건을 추가함



:P21_SEARCH_TEAMS → 1:2:3:4:5

'':||:P21_SEARCH_TEAMS||':' → :1:2:3:4:5:

'':||TEAM_ID||':' → (채송화) → :4: (TRUE)

'':||TEAM_ID||':' → (이익준) → :3: (TRUE)

:P21_SEARCH_GENDERS → M:F

'':||:P21_SEARCH_GENDER||':' → :M:F:

'':|| GENDER ||':' → (채송화) → :F: (TRUE)

'':|| GENDER ||':' → (이익준) → :M: (TRUE)

:P21_SEARCH_TEAMS → 1:5

'':||:P21_SEARCH_TEAMS||':' → :1:5:

'':||TEAM_ID||':' → (채송화) → :4: (FALSE)

'':||TEAM_ID||':' → (이익준) → :3: (FALSE)

:P21_SEARCH_GENDERS → M

'':||:P21_SEARCH_GENDER||':' → :M:

'':|| GENDER ||':' → (채송화) → :F: (False)

'':|| GENDER ||':' → (이익준) → :M: (True)

M02.4-1. 직원 정보 검색 (13/14)

The screenshot shows the Oracle APEX App Builder interface. On the left, the navigation pane displays the application structure with a report titled "Report 1" highlighted (step 11). The main workspace shows the "Page Designer" for "Page 21: Employees Report". The "Source" tab is selected in the right-hand panel, which contains the SQL query for the report:

```
select
    "EMPLOYEE_ID", "EMAIL", "EMP_NAME", "EMP_PW",
    "CELL_PHONE", "JOB_ID", "TYPE_ID", "TEAM_ID",
    "GENDER", "BIRTH_DAY", sys.dbms_lob.getlength("EMP_PIC") "EMP_PIC", "CRE_DATE", "TEMP_PW"
  from "EMPLOYEES"
```

A red callout box with the text "Source > SQL 쿼리의 우측 새창 아이콘을 클릭해서 앞서 복사한 where 절 추가" points to the "Source" tab header. Step 12 indicates the next step in the process.

M02.4-1. 직원 정보 검색 (14/14)

The screenshot shows the Oracle APEX App Builder interface. On the left, the page structure is visible with a blue box labeled '13' over the 'Content Body' section. The central area is a 'Code Editor - SQL Query' window containing the following code:

```
1 select "EMPLOYEE_ID", "EMAIL", "EMP_NAME", "EMP_PW", "CELL_PHONE", "JOB_ID", "TYPE_ID", "TEAM_ID", "GENDER", "BIRTH_DAY", sv
2 where InStr(''||:P21_SEARCH_TEAMS||':', ':||TEAM_ID||:') > 0
3 and TEAM_ID IS NOT NULL
4 and InStr(''||:P21_SEARCH_GENDERS||':', ':||GENDER||:') > 0
5 and GENDER IS NOT NULL
6
```

A red box highlights the first five lines of the query. The right side of the screen shows the 'Report 1' configuration in the 'Identification' tab, with 'Title' set to 'Report 1' and 'Type' set to 'Interactive Rep'. In the 'Source' tab, the 'Location' is 'Local Database' and 'Type' is 'SQL Query'. A red box highlights the 'Edit' icon next to the 'SQL Query' field. The 'SQL Query' field contains a simplified version of the code:

```
select
"EMPLOYEE_ID", "EMAIL", "EMP_NAME", "EMP_PW",
"CELL_PHONE", "JOB_ID", "TYPE_ID", "TEAM_ID",
```

At the bottom, there are sections for 'Page Items to Submit' and 'Optimizer Hint'.

M02.4-1. 직원 정보 검색 – default value 설정 (1/6)

슬기로운 익스펜스 생활 dev01

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성별
 남성 여성

(이때 check box 선택이 없는 상태에서 시작하자.)

Search

Actions ▾

Create

Page 들어 갔을 때 데이터가 보이도록 설정하고 싶음
(default로 팀명, 성별의 모든 값을 선택하는 설정 추가)

No data found.

Release 1.0

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller

M02.4-1. 직원 정보 검색 – default value 설정 (2/6)

The screenshot shows the Oracle APEX App Builder interface for an application named "Application 100". The current page is "Page 21: Employees Report". On the left, the page structure tree shows a region named "Items" containing two items: "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS". The "P21_SEARCH_TEAMS" item is highlighted with a red box and a large blue number "1" to its left. In the center, there is a search bar with the placeholder "Search". To the right, the "PageItem" panel is open, showing various configuration tabs for the selected item. The "Default" tab is also highlighted with a red box. The "Type" dropdown is set to "- Select -". Below it, the "Server-side Condition" section is expanded, showing another "Type" dropdown set to "- Select -".

M02.4-1. 직원 정보 검색 – default value 설정 (3/6)

The screenshot shows the Oracle APEX App Builder interface for a page named "Page 21: Employees Report". The left sidebar displays the page structure with sections like "Regions", "Content Body", "Report 1", and "Post-Rendering". The main area shows a "Search" region containing two items: "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS". The "P21_SEARCH_TEAMS" item is highlighted with a red box and has a tooltip: "SQL Query returning colon delimited list". The "P21_SEARCH_GENDERS" item is also visible. To the right, the "Page Item" palette is open, showing various options for the selected item. A blue box labeled "2" is positioned near the "SQL Query returning Colon Delimited List" option in the palette.

SQL Query returning
colon delimited list

RIGHT OF INTERACTIVE REPORT SEARCH BAR

CREATE

2

M02.4-1. 직원 정보 검색 – default value 설정 (4/6)

The screenshot shows the Oracle APEX App Builder interface. A modal dialog titled "Code Editor - SQL Query Colon" is open, displaying the following SQL query:

```
1 select team_id from TEAMS
```

A red box highlights the message "Is required!" above the code editor. The "Default" tab is selected in the configuration sidebar on the right, and the "Type" dropdown is set to "SQL Query Colon".

< Default 값 지정 >

P21_SEARCH_TEAMS 칼럼에 대해서

select team_id from TEAMS

3

M02.4-1. 직원 정보 검색 – default value 설정 (5/6)

The screenshot shows the Oracle APEX App Builder interface for an application named "Application 100". The current page is "Page 21: Employees Report". On the left, the page structure shows a "Content Body" region containing two search items: "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS". A large blue number "4" is overlaid on the page structure area. The "P21_SEARCH_GENDERS" item is highlighted with a red box. On the right, the "Page Item" inspector is open, specifically the "Default" tab. This tab shows the "Type" set to "Static" and the "Static Value" field containing the value "M:F", which is also highlighted with a red box. Other tabs in the inspector include "Cascading List of Values", "Advanced", "Source", and "Help".

M02.4-1. 직원 정보 검색 – default value 설정 (6/6)

☰ 슬기로운 익스펜스 생활

🔍 dev01 ▾

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성별
 남성 여성

Search

이제, Page 들어가면 기본으로 값이 모두 선택되어 있음.
따라서, 아래 리포트 내용이 모두 출력됨

직원 ID	이메일	이름	전화번호	업무 유형	직급	팀명	성별	등록일
IJ	demo@gmail.com	이익준	100-1000-1000	의사	교수	산부인과	남성	
ahn	demo@gmail.com	안정원	100-1111-1111	의사	교수	산부인과	남성	
JUN	demo@gmail.com	김준완	100-1000-1000	의사	교수	소아과	남성	
flower	demo@gmail.com	채송화	100-0000-0000	의사	교수	응급의학과	여성	
jang	demo@gmail.com	장겨울	100-0000-0000	의사	펠로우	신경외과	여성	

1 - 5

Release 1.0

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller ⚙️

☰

M02.4-2. 직원 정보 Dynamic Search (1/10)

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🔍 dev01 ▾

직원 정보 관리

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DYNAMIC SEARCH란?

page item(팀명, 성별)의 값(소아과, 남성 등)이 변경될 때마다 아래 report가 바뀌는 event를 실행하여
동적 검색이 되는 것

** page item, report 설정 필요

팀명
 소아과 산부인과 간담췌외과 신경외과 응급의학과

성별
 남성 여성

Search

작원 ID	이메일	이름	전화번호	업무 유형	직급	팀명	성별	등록일
IJ	demo@gmail.com	이익준	100-1000-1000	의사	교수	산부인과	남성	
ahn	demo@gmail.com	안정원	100-1111-1111	의사	교수	산부인과	남성	
JUN	demo@gmail.com	김준완	100-1000-1000	의사	교수	소아과	남성	
flower	demo@gmail.com	채송화	100-0000-0000	의사	교수	응급의학과	여성	
jang	demo@gmail.com	장겨울	100-0000-0000	의사	펠로우	신경외과	여성	

1 - 5

Release 1.0

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller ⚙

M02.4-2. 직원 정보 Dynamic Search (2/10)

The screenshot shows the Oracle APEX App Builder interface for creating a dynamic search feature. The top navigation bar includes links for APEX, App Builder, SQL Workshop, Team Development, and App Gallery, along with user information for DE dev01. The main workspace is titled "Application 100 \ Page Designer" and displays "Page 21: Employees Report".

The left sidebar contains a tree view of page components:

- Pre-Rendering
- Regions
 - Content Body
 - 직원 정보 관리
 - Search
 - Items
 - P21_SEARCH_TEAMS (highlighted with a red box)
 - P21_SEARCH_GENDERS
 - Region Buttons
 - Search
 - Report 1
 - Columns
 - Column Groups
 - Saved Reports
 - Region Buttons
 - CREATE
 - Post-Rendering

A context menu is open over the "P21_SEARCH_TEAMS" item, with the "Create Dynamic Action" option highlighted by a red box.

The right panel shows the "PageItem" configuration for "P21_SEARCH_TEAMS", including sections for Identification, Label, Settings, Layout, Appearance, Validation, List of Values, Cascading List of Values, Advanced, Source, and Default. The Default section shows a SQL query: "select team_id from TEAMS".

M02.4-2. 직원 정보 Dynamic Search (3/10)

P21_SEARCH_TEAMS가 변화할 때
Dynamic actions이 발생함

2

APEX App Builder SQL Workshop Team Development App Gallery DE dev01

Application 100 Page Designer

Layout Page Search Help

Page 21: Employees Report

Regions Content Body Search Items P21_SEARCH_TEAMS Dynamic Actions change teams True False P21_SEARCH_GENDERS Report 1 PREVIOUS ITEMS REGION CONTENT SUB REGIONS NEXT CREATE

SEARCH

COPY EDIT PREVIOUS NEXT

ITEMS P21_SEARCH_TEAMS P21_SEARCH_GENDERS

REGION CONTENT

SUB REGIONS

CLOSE HELP DELETE CHANGE CREATE

Search

Dynamic Action

Filter Identification Name change teams Execution Options Sequence 10 When Event Change Selection Type Item(s) Item(s) P21_SEARCH_TEAMS Client-side Condition Advanced Server-side Condition Security

M02.4-2. 직원 정보 Dynamic Search (4/10)

P21_SEARCH_TEAMS가 변화= True
일 때 action = Refresh

3 [Show]

M02.4-2. 직원 정보 Dynamic Search (5/10)

The screenshot shows the Oracle APEX App Builder interface for a page named "Employees Report".

Left Sidebar: Shows the page structure with regions like "Content Body" and "Search". Under "Search", there are two items: "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS".

Center Panel: Displays the "Search" component configuration. It includes sections for "ITEMS" (with "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS"), "REGION CONTENT", and "SUB REGIONS". There are buttons for "CLOSE", "HELP", "DELETE", "CHANGE", and "CREATE". A "Search" button is at the bottom.

Right Panel (Actions): Shows the configuration for the "P21_SEARCH_TEAMS" item. A red box highlights the "Action" section, specifically the "Refresh" button under "Dynamic Actions". A blue box labeled "4" highlights the "Affected Elements" section, which contains a "Region" dropdown set to "Report1".

Text Callout: A red callout box points to the "action = Refresh" section in the "Affected Elements" panel, containing the text: "action = Refresh 인 곳은 Region 중 Report1 임".

M02.4-2. 직원 정보 Dynamic Search (6/10)

The screenshot shows the Oracle APEX App Builder interface for creating a page. On the left, the 'Regions' section is expanded, showing the 'Content Body' region with a 'Search' item. The 'Dynamic Actions' section under 'P21_SEARCH_GENDERS' is selected, highlighted with a red box. A tooltip '5' is shown above this section. In the center, a modal window titled 'Search' displays two items: 'P21_SEARCH_TEAMS' and 'P21_SEARCH_GENDERS'. The 'P21_SEARCH_GENDERS' item is selected and has a tooltip '우클릭해서 Dynamic actions 생성' (Create Dynamic actions by right-clicking) pointing to it. On the right, the 'Dynamic Action' configuration panel is open, showing a 'Identification' section with 'Name: changegender' and an 'Execution Options' section with 'Sequence: 20'. The 'When' condition is set to 'Event: Change' and 'Selection Type: Item(s)' with 'Item(s): P21_SEARCH_GENDERS'. A large red box highlights the 'Identification' and 'Execution Options' sections.

P21_SEARCH_GENDERS가 변화할 때
Dynamic actions이 발생함

5

우클릭해서 Dynamic actions 생성

APEX App Builder

Application 100 \ Page Designer

Layout Page Search Help

COPY EDIT PREVIOUS NEXT

ITEMS

P21_SEARCH_TEAMS

P21_SEARCH_GENDERS

REGION CONTENT

Label: 성별

Type: Checkbox Group

CLOSE HELP DELETE CHANGE

Start New Row: Yes

BELLOW REGION

CREATE

Search

Dynamic Action

Filter

Identification

Name: changegender

Execution Options

Sequence: 20

When

Event: Change

Selection Type: Item(s)

Item(s): P21_SEARCH_GENDERS

Client-side Condition

Advanced

Server-side Condition

Security

PREVIOUS

ITEMS

REGION CON

SUB REGIONS

NEXT

RIGHT OF INTERACTIVE REPORT SEARCH BAR

CREATE

M02.4-2. 직원 정보 Dynamic Search (7/10)

The screenshot shows the Oracle APEX App Builder interface for an application named "Application 100". The page being edited is "Page 21: Employees Report".

The left sidebar shows the page structure:

- Regions
 - Content Body
 - Items
 - P21_SEARCH_TEAMS
 - P21_SEARCH_GENDERS** (highlighted with a red box)

The main area displays the "Search" component for the "P21_SEARCH_GENDERS" item. It includes fields for "COPY", "EDIT", "PREVIOUS", and "NEXT". Below these are sections for "ITEMS" (containing "P21_SEARCH_TEAMS" and "P21_SEARCH_GENDERS") and "REGION CONTENT".

A red callout box highlights the "P21_SEARCH_GENDERS" item and contains the following text:

P21_SEARCH_GENDERS가
변화= True 일 때
action = Refresh 인 곳은
Region 중 Report1 임

The right side of the screen shows the "Identification" panel with two numbered steps:

- Step 6: Shows the "Action" dropdown set to "Refresh".
- Step 7: Shows the "Affected Elements" section where "Report1" is selected under "Region".

The bottom right corner of the slide has a large red box covering the footer area.

M02.4-2. 직원 정보 Dynamic Search (8/10)

The screenshot shows the Oracle APEX App Builder interface for Application 100's Page Designer. The left sidebar displays the Content Body with two search items: P21_SEARCH_TEAMS and P21_SEARCH_GENDERS. The P21_SEARCH_TEAMS item has a Dynamic Action named 'change teams' associated with it. The P21_SEARCH_GENDERS item also has a Dynamic Action named 'change gender'. In the center, a modal window titled 'Pick Page Items to Submit' lists the page items: P21_SEARCH_TEAMS (Label: 팀명) and P21_SEARCH_GENDERS (Label: 성별). A red box highlights these two items. On the right, the 'Source' section of the Report1 configuration is shown, with a red box highlighting the 'Page items to Submit' field. A red arrow points from the 'Source' field to the 'Page items to Submit' list in the modal. A blue box labeled '8' points to the 'Report1' section in the sidebar. A blue box labeled '9' points to the 'Source' section on the right.

8

Dynamic action 이벤트
발생하면 Report1의
변화부분을 설정

9

Source > Page items to submit을 누른 후
P21_SEARCH_TEAMS,
P21_SEARCH_GENDERS
각각 클릭

M02.4-2. 직원 정보 Dynamic Search (9/10)

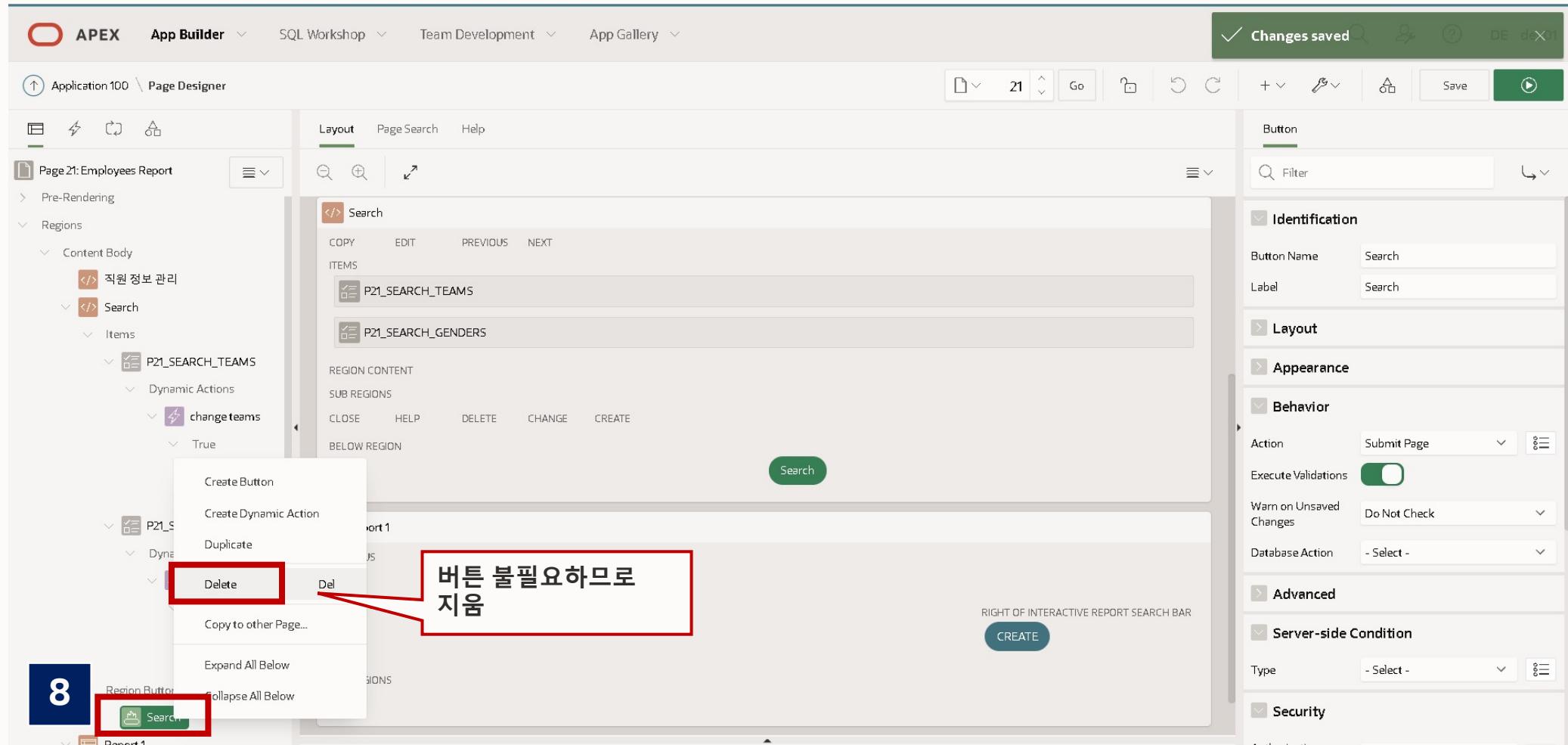
The screenshot shows the Oracle APEX Application Builder's Page Designer. On the left, the navigation bar includes APEX, App Builder, SQL Workshop, Team Development, and App Gallery. The current application is Application 100, and the page is Page Designer.

The main area displays the Page Designer interface. The left sidebar shows the Content Body with sections for Search, Items, P21_SEARCH_TEAMS, P21_SEARCH_GENDERS, Report1, and Report. The right sidebar shows the Region section with tabs for Identification, Source, Attributes, and Printing. The Identification tab shows the Title as Report1 and Type as Interactive Report. The Source tab shows the Location as Local Database and Type as SQL Query. The SQL Query is defined as:

```
select
    "EMPLOYEE_ID","EMAIL","EMP_NAME","EMP_PW","CELL_PHONE","JOB_ID","TYPE_ID","TEAM_ID","GENDER","BIRTH_DAY",sys.dbms_lob.getlength("EMP_PIC")"EMP_PIC","CRE
```

The Page Items to Submit section contains the items P21_SEARCH_TEAMS, P21_SEARCH_GENDERS, which are highlighted with a red box. A callout box below this section states: "2개 item이 들어가 있음. 2개 submit 하면 다이내믹 액션 실행(change item → report refresh)".

M02.4-2. 직원 정보 Dynamic Search (10/10)



M02.4-2. Dynamic 검색 실행 결과

☰ 슬기로운 익스펜스 생활 dev01 ▾

직원 정보 관리

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성별
 남성 여성

	직원 ID	이메일	이름	전화번호	업무 유형	직급	팀명	성별	등록일
	JUN	demo@gmail.com	김준완	100-1000-1000	의사	교수	소아과	남성	
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1 - 3

Release 1.0

Home Application 100 Edit Page 21 Session View Debug Debug Page Info Quick Edit Theme Roller