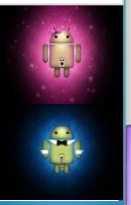
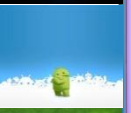
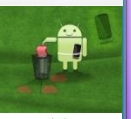
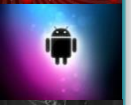
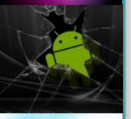
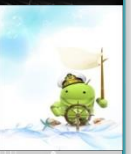




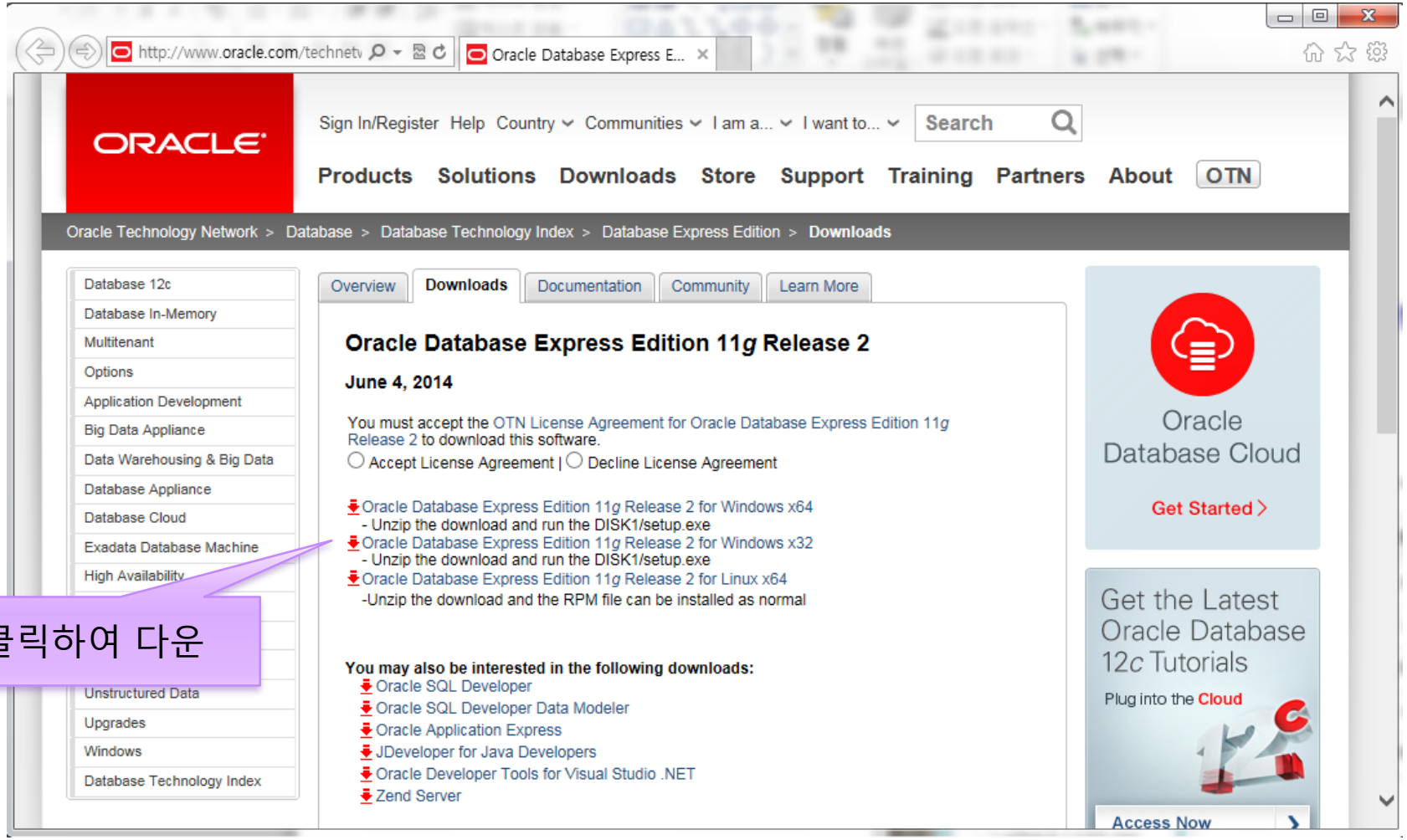





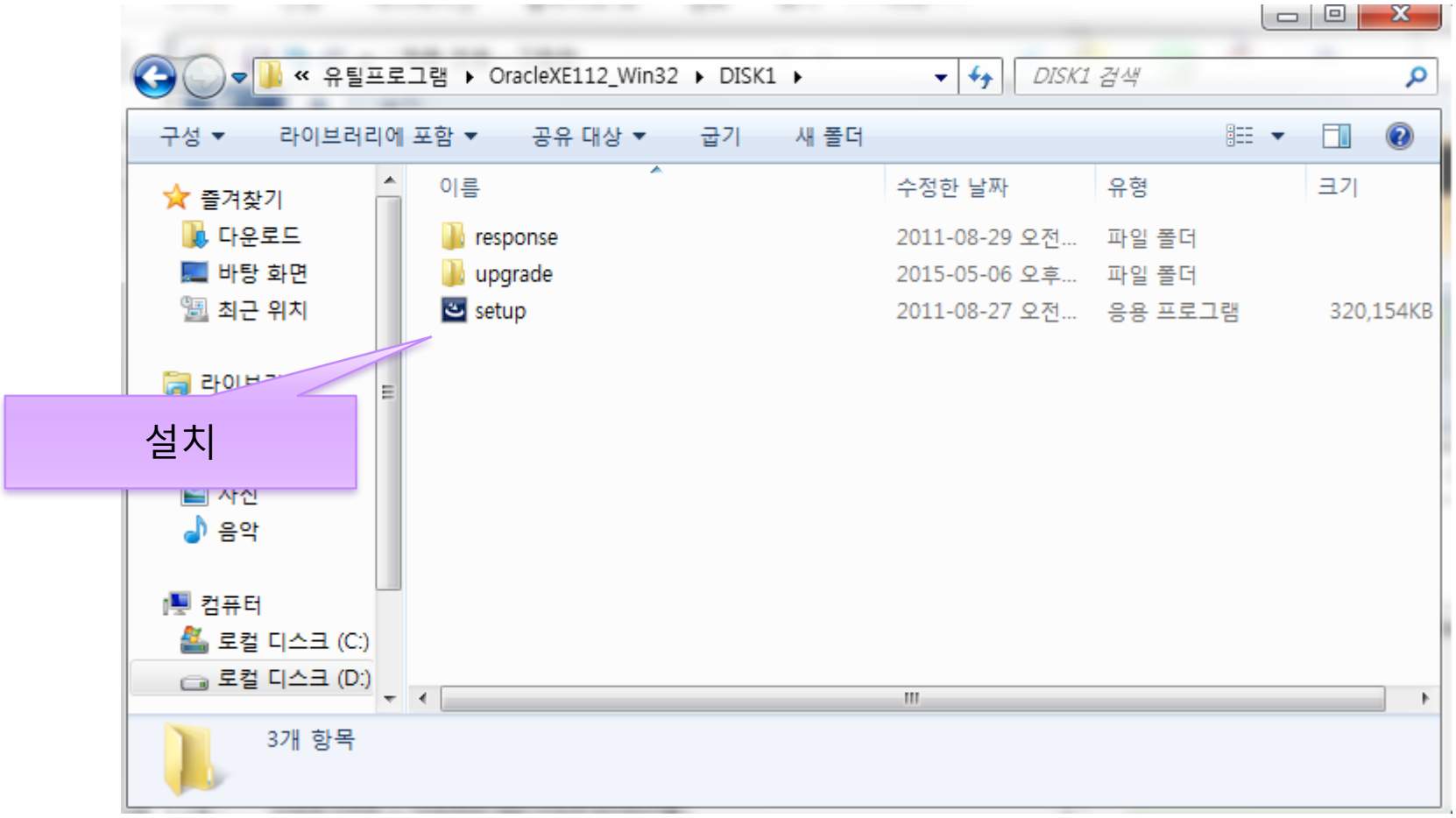
# 오라클 데이터베이스

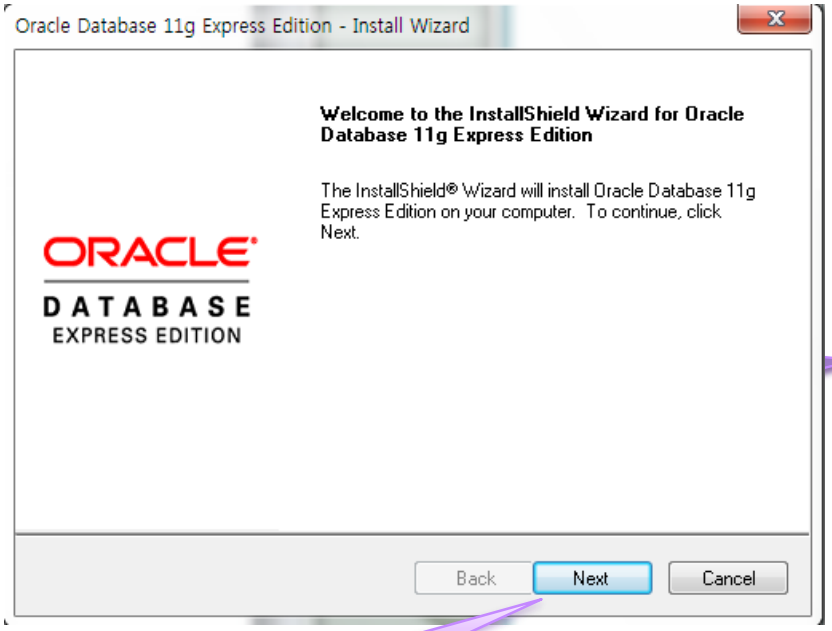
*설치 및 연동 테스트*

# 오라클 11g Windows 다운로드 주소

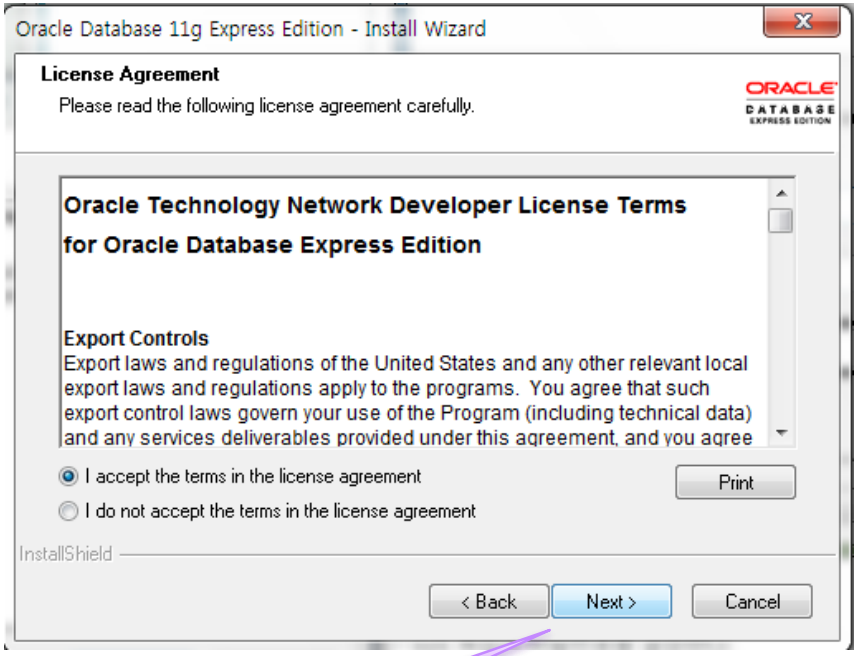
http://www.oracle.com/technetwork/database/database-technologies/express-edition/downloads/index.html



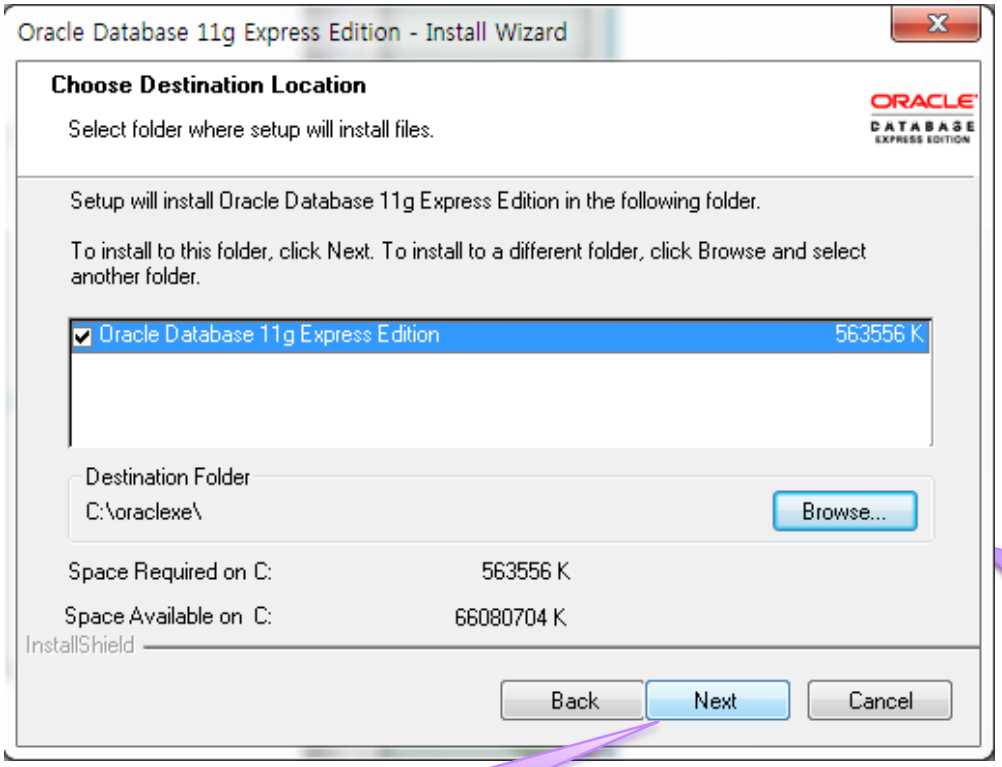

« 유틸프로그램 ▸ OracleXE112_Win32 ▸ DISK1 ▸
DISK1 검색
구성
라이브러리에 포함
공유 대상
굽기
새 폴더
즐겨찾기
다운로드
바탕 화면
최근 위치
음악
컴퓨터
로컬 디스크 (C:)
로컬 디스크 (D:)
이름
수정한 날짜
유형
크기
response
2011-08-29 오전...
파일 폴더
upgrade
2015-05-06 오후...
파일 폴더
setup
2011-08-27 오전...
응용 프로그램
320,154KB
3개 항목
설치


Oracle Database 11g Express Edition - Install Wizard
Welcome to the InstallShield Wizard for Oracle Database 11g Express Edition
The InstallShield® Wizard will install Oracle Database 11g Express Edition on your computer. To continue, click Next.
ORACLE
DATABASE
EXPRESS EDITION
Back
Next
Cancel

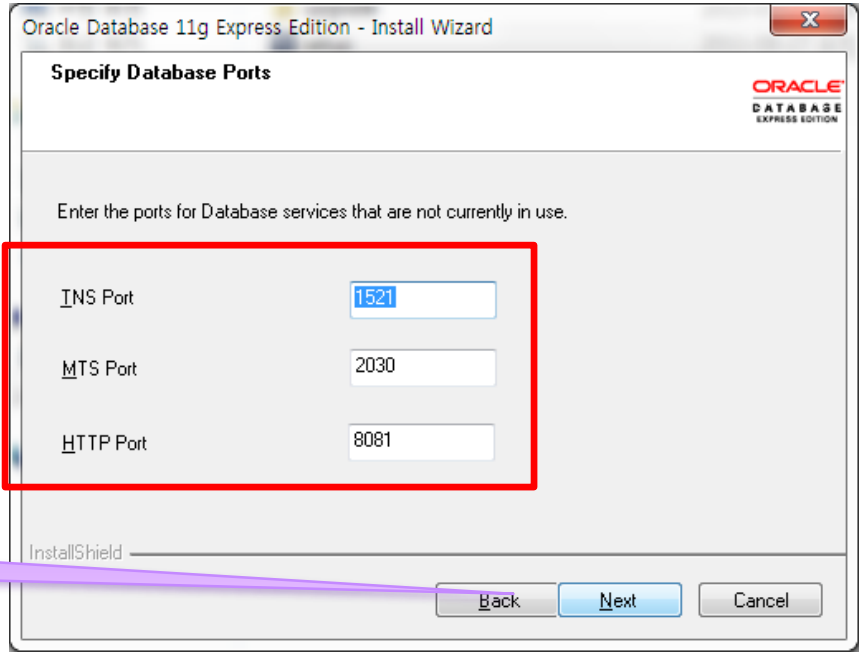
클릭


Oracle Database 11g Express Edition - Install Wizard
License Agreement
Please read the following license agreement carefully.
ORACLE
DATABASE
EXPRESS EDITION
Oracle Technology Network Developer License Terms for Oracle Database Express Edition
Export Controls
Export laws and regulations of the United States and any other relevant local export laws and regulations apply to the programs. You agree that such export control laws govern your use of the Program (including technical data) and any services deliverables provided under this agreement, and you agree
I accept the terms in the license agreement
I do not accept the terms in the license agreement
Print
InstallShield
< Back
Next >
Cancel

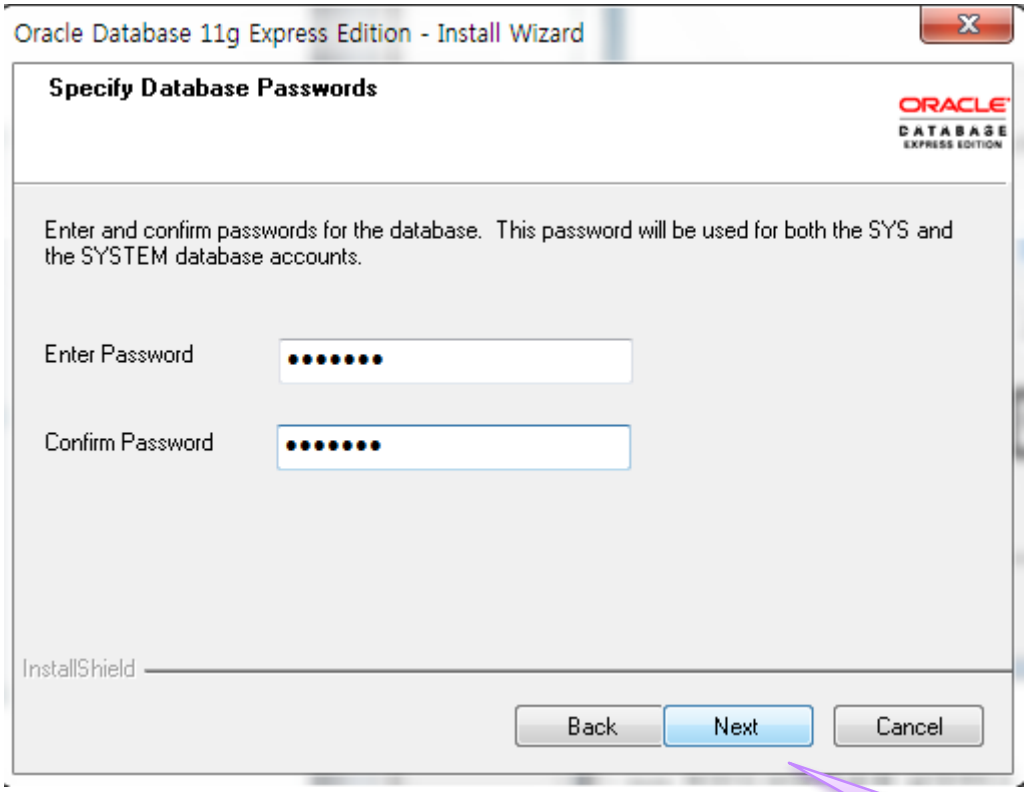
클릭


Oracle Database 11g Express Edition - Install Wizard
Choose Destination Location
Select folder where setup will install files.
ORACLE DATABASE EXPRESS EDITION
Setup will install Oracle Database 11g Express Edition in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Oracle Database 11g Express Edition 563556 K
Destination Folder
C:\oraclexe\
Browse...
Space Required on C: 563556 K
Space Available on C: 66080704 K
InstallShield
Back
Next
Cancel

클릭

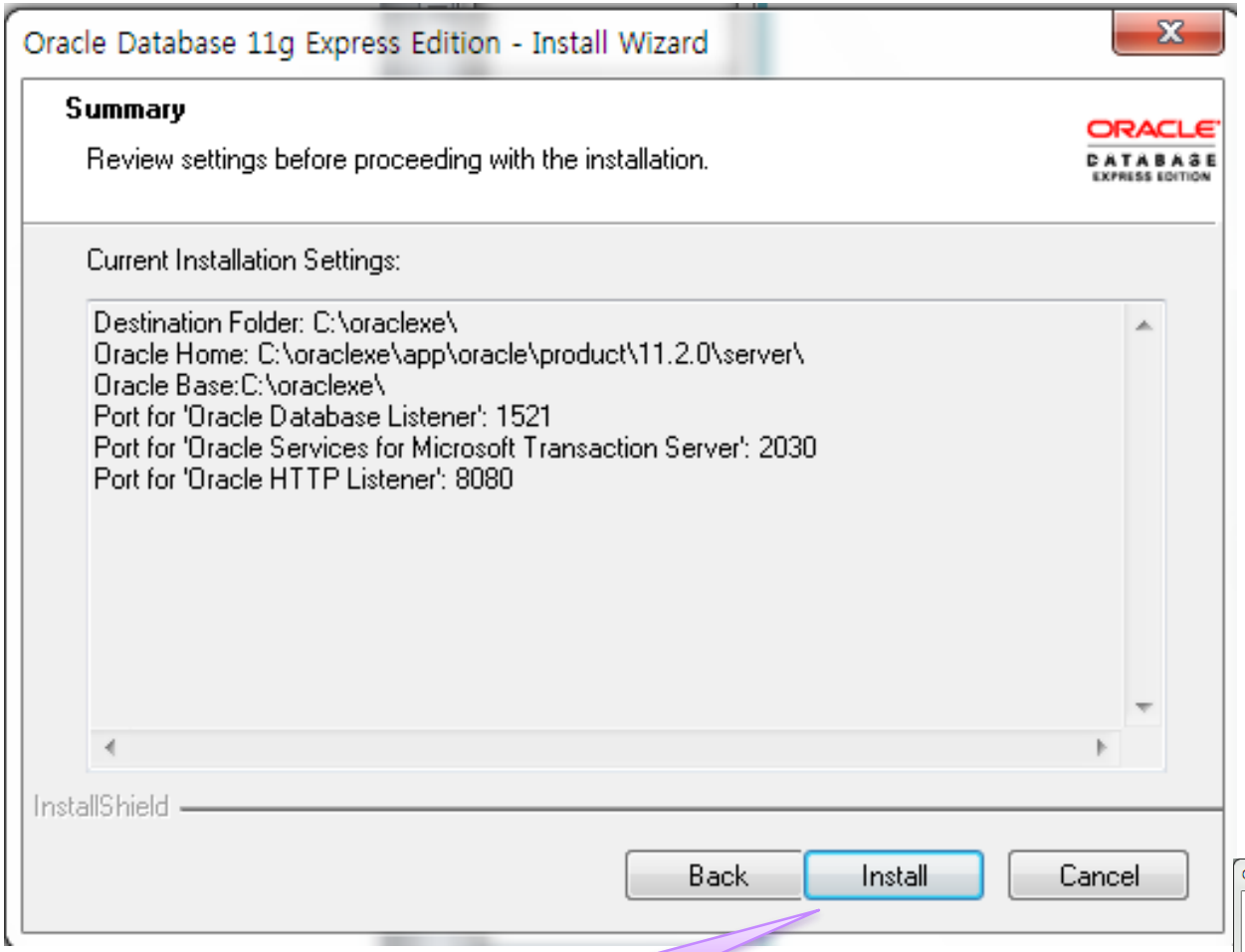

Oracle Database 11g Express Edition - Install Wizard
Specify Database Ports
ORACLE DATABASE EXPRESS EDITION
Enter the ports for Database services that are not currently in use.
TNS Port 1521
MTS Port 2030
HTTP Port 8081
InstallShield
Back
Next
Cancel

클릭

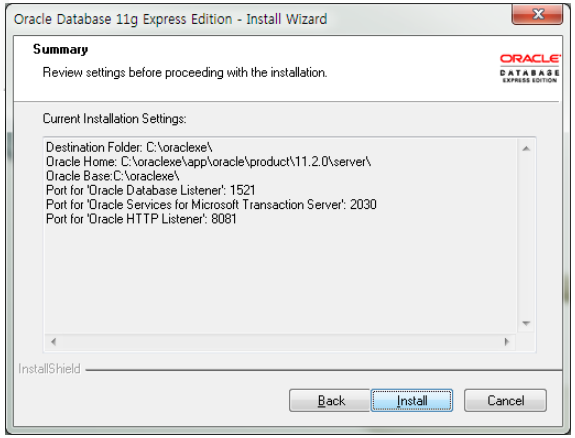


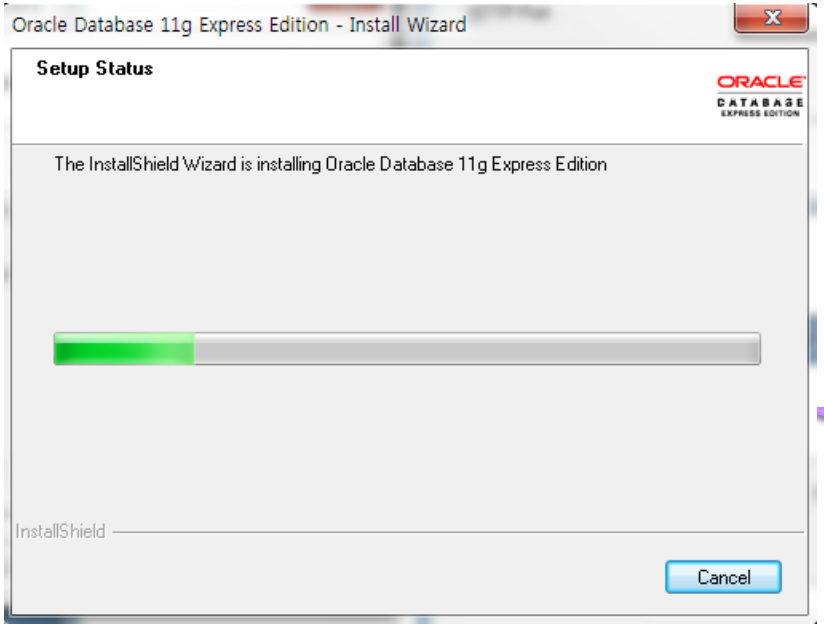

SYS/SYSTEM 계정 비밀번호 설정

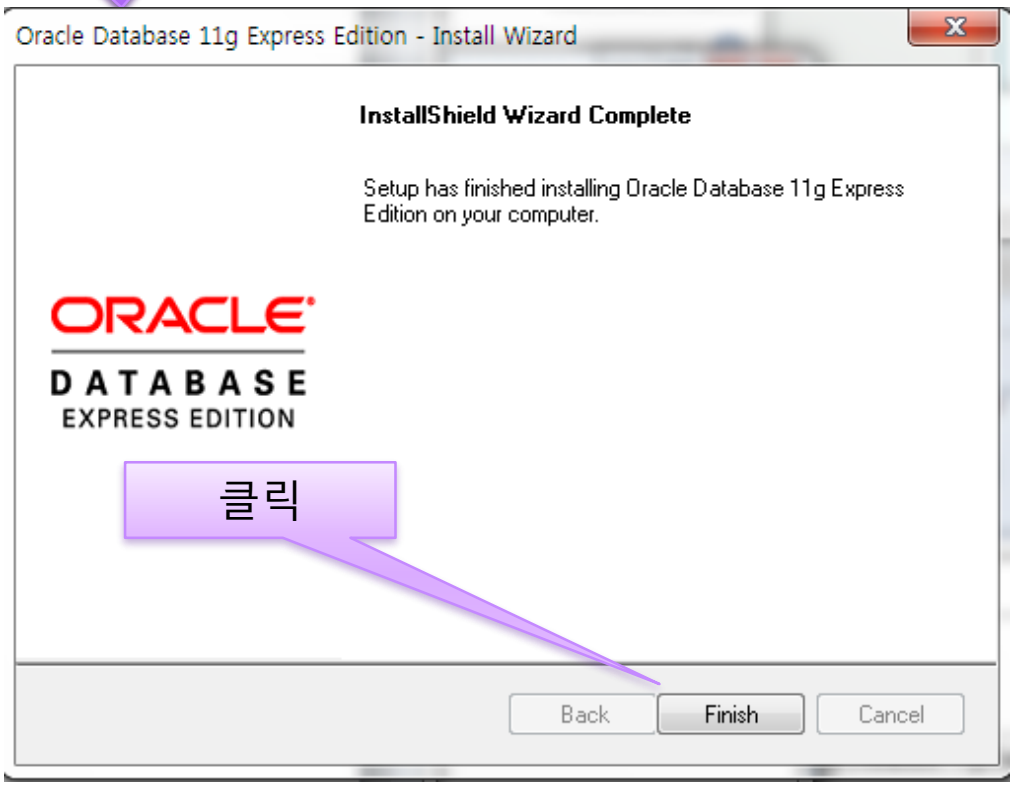
클릭


Oracle Database 11g Express Edition - Install Wizard
Summary
Review settings before proceeding with the installation.
ORACLE DATABASE EXPRESS EDITION
Current Installation Settings:
Destination Folder: C:\oraclexe\
Oracle Home: C:\oraclexe\app\oracle\product\11.2.0\server\
Oracle Base:C:\oraclexe\
Port for 'Oracle Database Listener': 1521
Port for 'Oracle Services for Microsoft Transaction Server': 2030
Port for 'Oracle HTTP Listener': 8080
InstallShield
Back
Install
Cancel

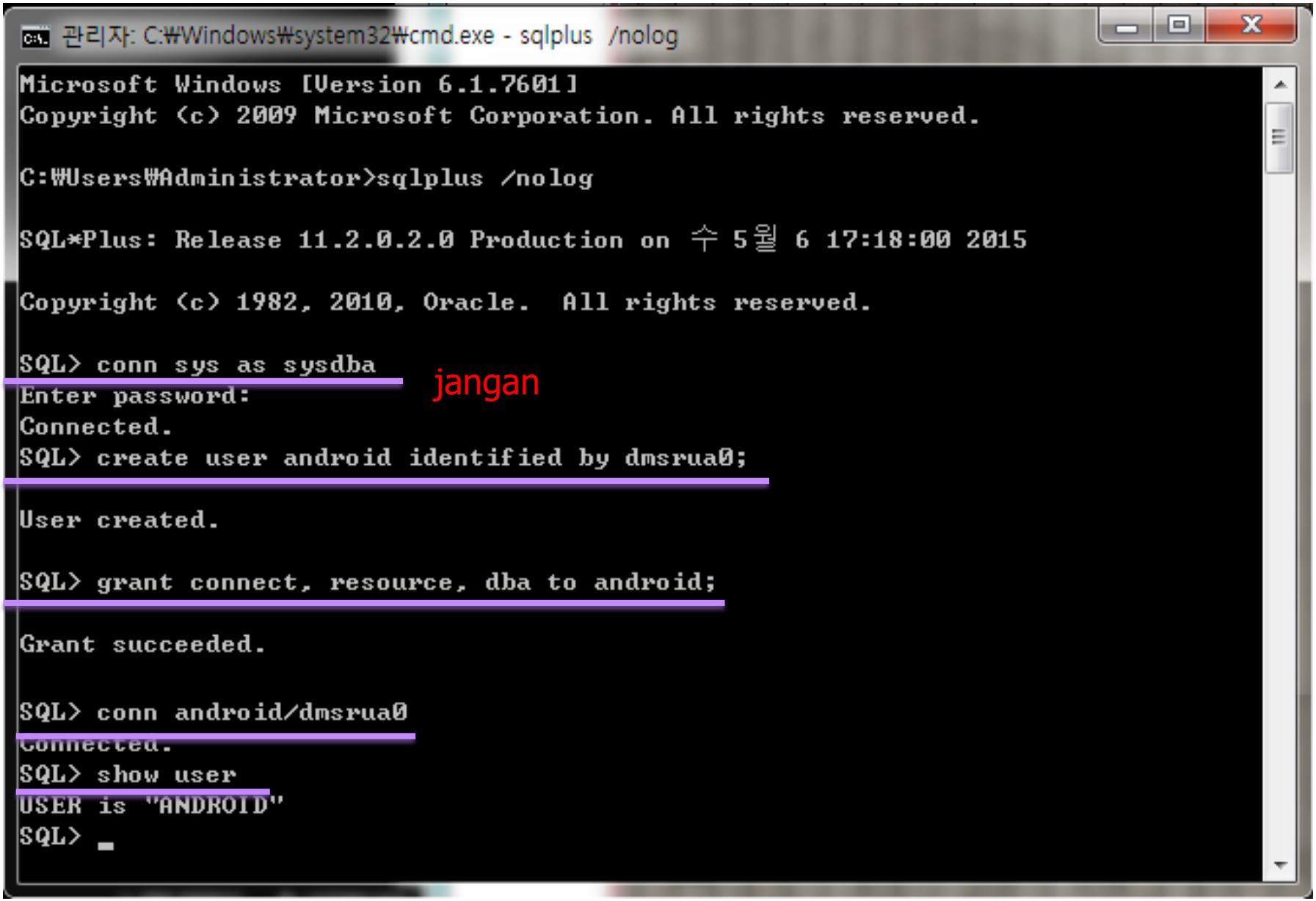
클릭


Oracle Database 11g Express Edition - Install Wizard
Summary
Review settings before proceeding with the installation.
Current Installation Settings:
Destination Folder: C:\oraclexe\
Oracle Home: C:\oraclexe\app\oracle\product\11.2.0\server\
Oracle Base:C:\oraclexe\
Port for 'Oracle Database Listener': 1521
Port for 'Oracle Services for Microsoft Transaction Server': 2030
Port for 'Oracle HTTP Listener': 8081
InstallShield
Back
Install
Cancel


Oracle Database 11g Express Edition - Install Wizard
Setup Status
ORACLE
DATABASE
EXPRESS EDITION
The InstallShield Wizard is installing Oracle Database 11g Express Edition
InstallShield
Cancel


Oracle Database 11g Express Edition - Install Wizard
InstallShield Wizard Complete
Setup has finished installing Oracle Database 11g Express Edition on your computer.
ORACLE
DATABASE
EXPRESS EDITION
클릭
Back
Finish
Cancel

# CMD 모드


관리자: C:₩Windows₩system32₩cmd.exe - sqlplus /nolog
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.
C:₩Users₩Administrator>sqlplus /nolog
SQL*Plus: Release 11.2.0.2.0 Production on 수 5월 6 17:18:00 2015
Copyright (c) 1982, 2010, Oracle. All rights reserved.
SQL> conn sys as sysdba
jangan
Enter password:
Connected.
SQL> create user android identified by dmsrua0;
User created.
SQL> grant connect, resource, dba to android;
Grant succeeded.
SQL> conn android/dmsrua0
Connected.
SQL> show user
USER is "ANDROID"
SQL>

SQL > conn sys as sysdba
**-> sys 계정으로 들어가서 새 계정 만들기 준비( 오라클 설치시 설정한 패스워드도 입력해 준다.)**

SQL > create user android identified by xxxx;
**-> xxxx 부분은 password이며 android 라는 계정을 새로 만들었다.**

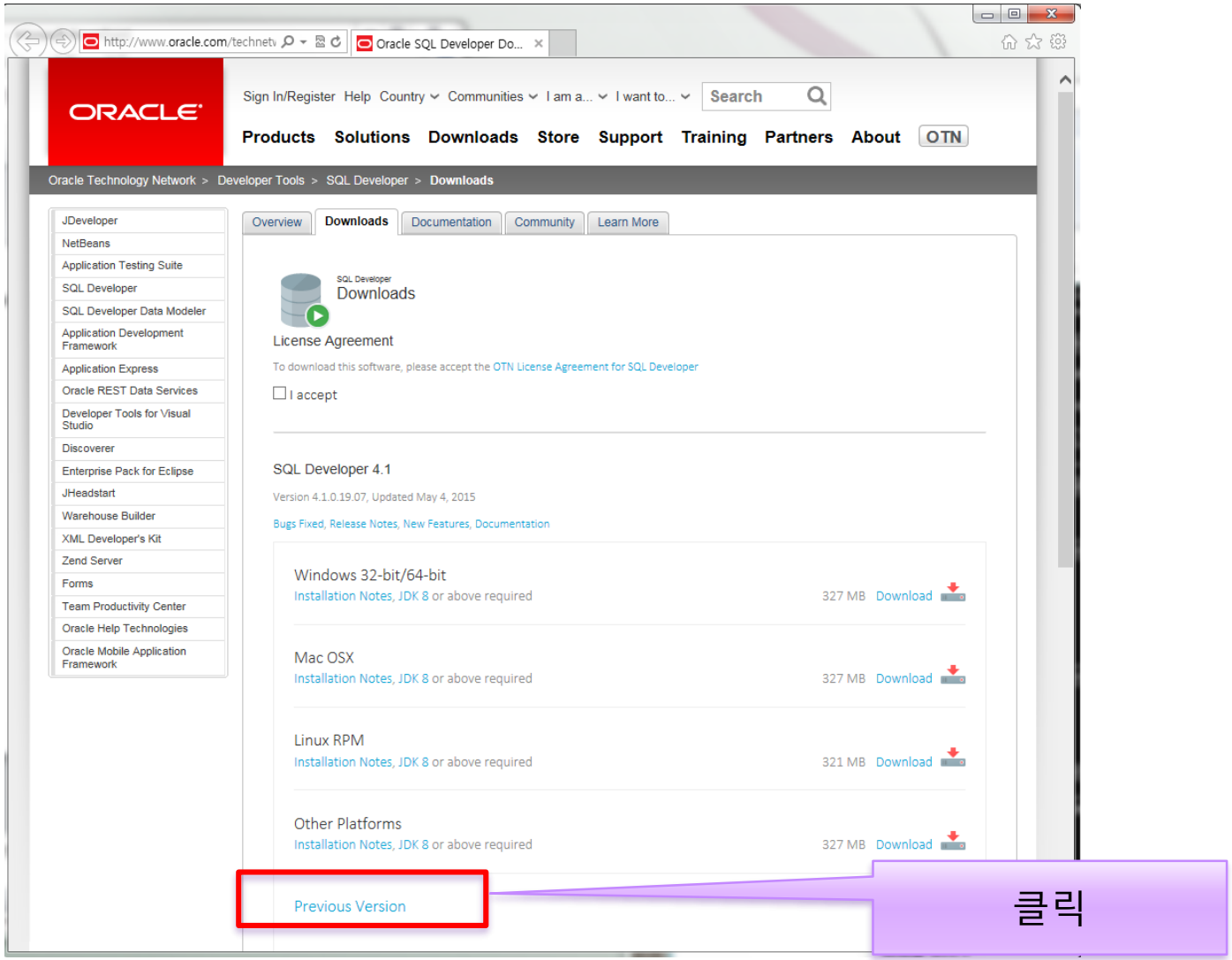
SQL > grant connect, resource, dba to android;
**-> android 계정에 권한 부여**

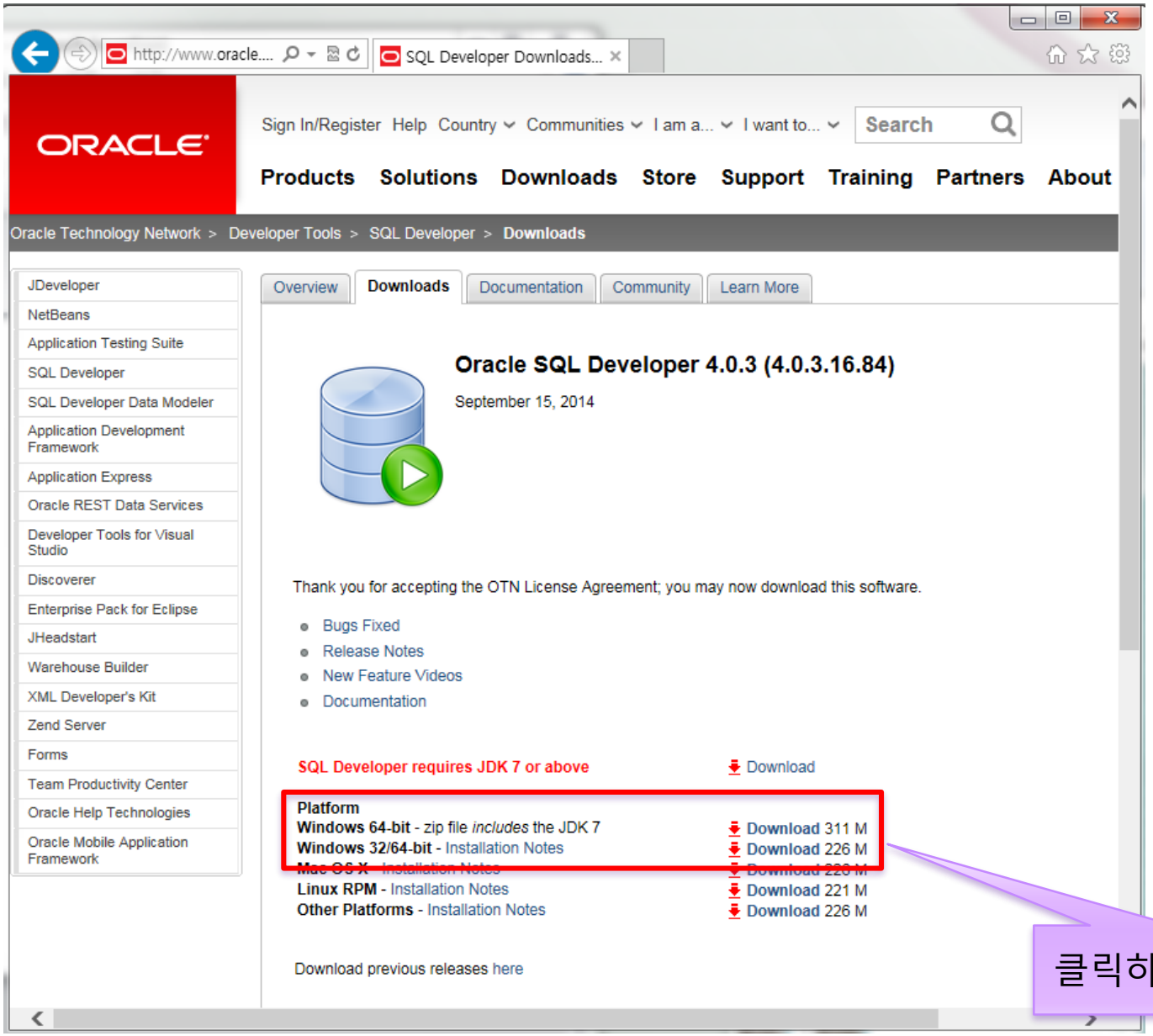
SQL > conn android/xxxx;
**-> android 계정으로 연결 , xxxx는 password**

SQL > show user;
**-> 현재 유저가android 뿐이다. 테이블도 없는 상태이다.**

# Oracle SQL developer

**http://www.oracle.com/technetwork/developer-tools/sql-developer/downloads/index.html**




http://www.oracle....
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Products Solutions Downloads Store Support Training Partners About
Oracle Technology Network > Developer Tools > SQL Developer > Downloads
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NetBeans
Application Testing Suite
SQL Developer
SQL Developer Data Modeler
Application Development Framework
Application Express
Oracle REST Data Services
Developer Tools for Visual Studio
Discoverer
Enterprise Pack for Eclipse
JHeadstart
Warehouse Builder
XML Developer's Kit
Zend Server
Forms
Team Productivity Center
Oracle Help Technologies
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Oracle SQL Developer 4.0.3 (4.0.3.16.84)
September 15, 2014
Thank you for accepting the OTN License Agreement; you may now download this software.
Bugs Fixed
Release Notes
New Feature Videos
Documentation
SQL Developer requires JDK 7 or above
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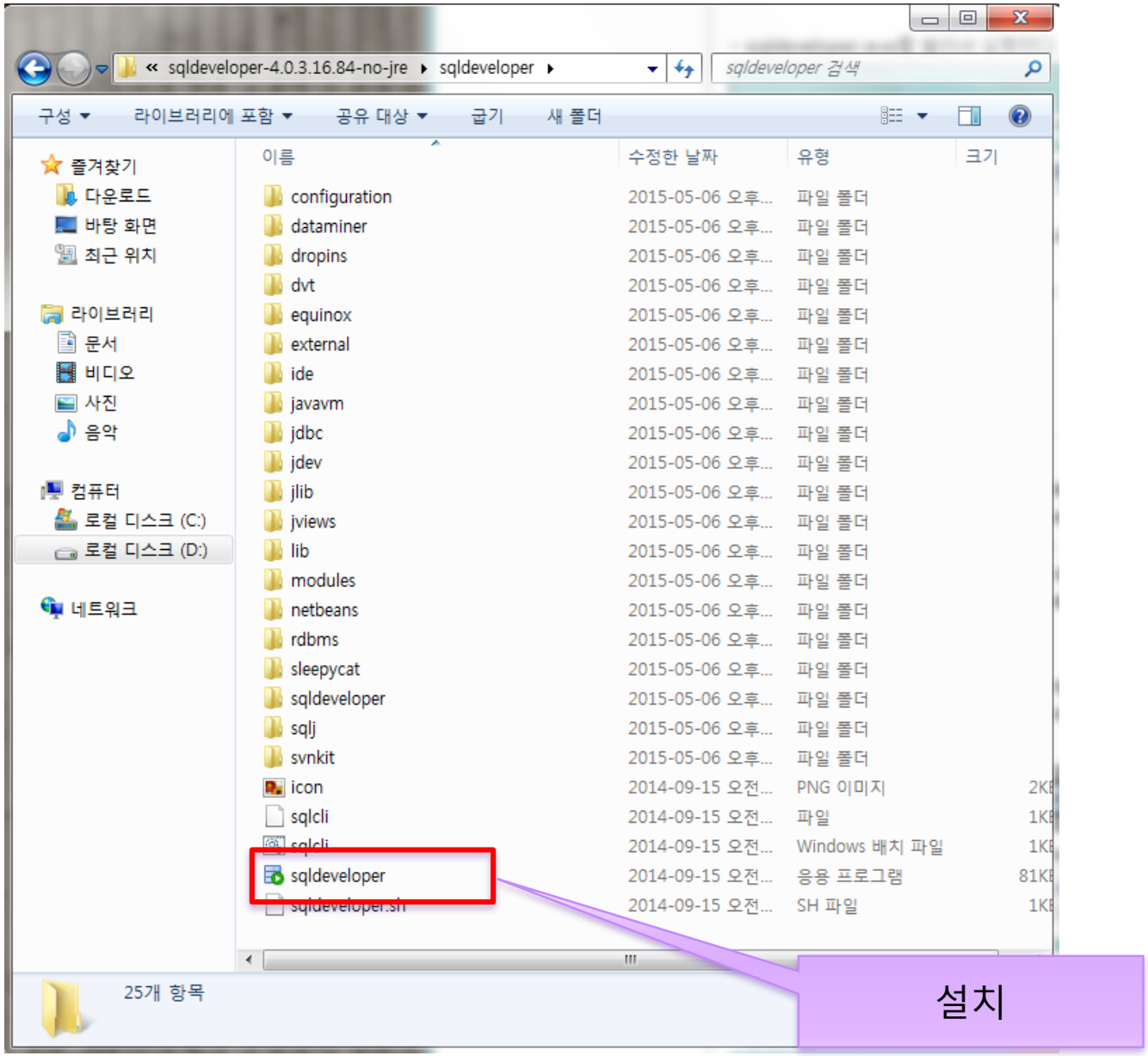
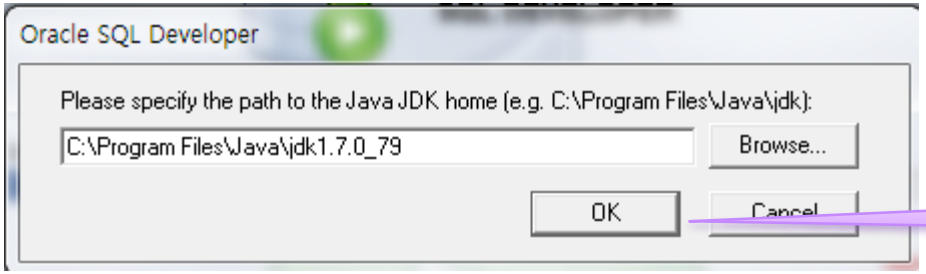
Platform
Windows 64-bit - zip file includes the JDK 7
Download 311 M
Windows 32/64-bit - Installation Notes
Download 226 M
Linux RPM - Installation Notes
Download 221 M
Other Platforms - Installation Notes
Download 226 M
Download previous releases here
클릭하여 다운로드


« sqldeveloper-4.0.3.16.84-no-jre ▸ sqldeveloper ▸
sqldeveloper 검색
구성
라이브러리에 포함
공유 대상
굽기
새 폴더
즐겨찾기
다운로드
바탕 화면
최근 위치
라이브러리
문서
비디오
사진
음악
컴퓨터
로컬 디스크 (C:)
로컬 디스크 (D:)
네트워크
이름
수정한 날짜
유형
크기
configuration 2015-05-06 오후... 파일 폴더
dataminer 2015-05-06 오후... 파일 폴더
dropins 2015-05-06 오후... 파일 폴더
dvt 2015-05-06 오후... 파일 폴더
equinox 2015-05-06 오후... 파일 폴더
external 2015-05-06 오후... 파일 폴더
ide 2015-05-06 오후... 파일 폴더
javavm 2015-05-06 오후... 파일 폴더
jdbc 2015-05-06 오후... 파일 폴더
jdev 2015-05-06 오후... 파일 폴더
jlib 2015-05-06 오후... 파일 폴더
jviews 2015-05-06 오후... 파일 폴더
lib 2015-05-06 오후... 파일 폴더
modules 2015-05-06 오후... 파일 폴더
netbeans 2015-05-06 오후... 파일 폴더
rdbms 2015-05-06 오후... 파일 폴더
sleepycat 2015-05-06 오후... 파일 폴더
sqldeveloper 2015-05-06 오후... 파일 폴더
sqlj 2015-05-06 오후... 파일 폴더
svnkit 2015-05-06 오후... 파일 폴더
icon 2014-09-15 오전... PNG 이미지 2KB
sqlcli 2014-09-15 오전... 파일 1KB
sqlcli 2014-09-15 오전... Windows 배치 파일 1KB
sqldeveloper 2014-09-15 오전... 응용 프로그램 81KB
sqldeveloper.sh 2014-09-15 오전... SH 파일 1KB
25개 항목
설치


Oracle SQL Developer
Please specify the path to the Java JDK home (e.g. C:\Program Files\Java\jdk):
C:\Program Files\Java\jdk1.7.0_79
Browse...
OK
Cancel

클릭


ORACLE
SQL DEVELOPER
로드 중...
Version 4.0.3
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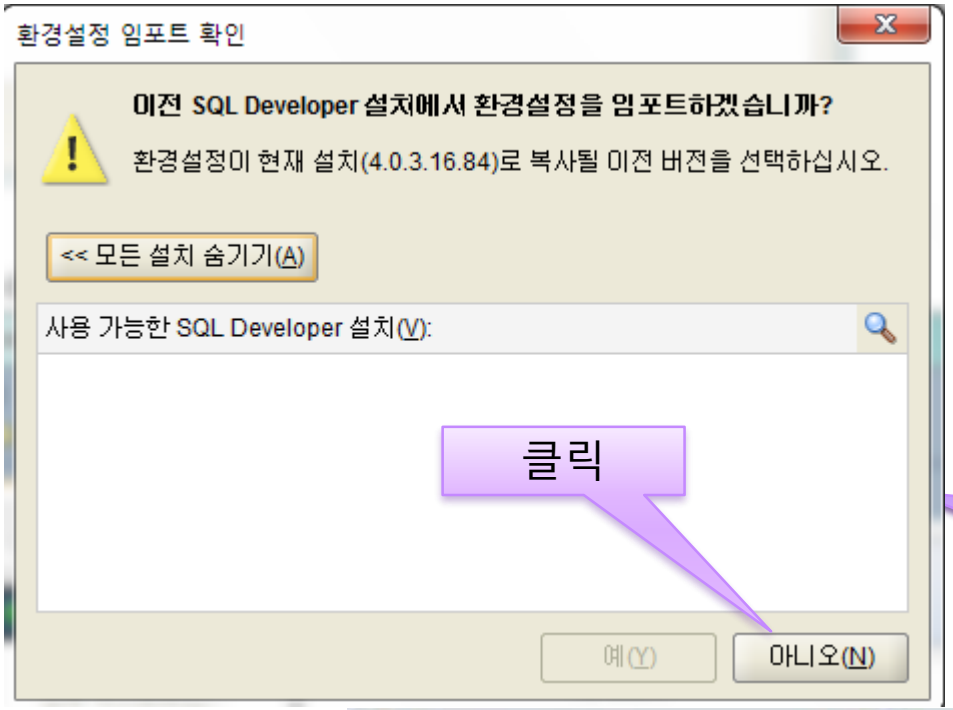
환경설정 임포트 확인
이전 SQL Developer 설치에서 환경설정을 임포트하겠습니까?
환경설정이 현재 설치(4.0.3.16.84)로 복사될 이전 버전을 선택하십시오.
<< 모든 설치 숨기기(A)
사용 가능한 SQL Developer 설치(V):
클릭
예(Y)
아니오(N)


ORACLE
SQL DEVELOPER
Windows를 복원하는 중
Version 4.0.3
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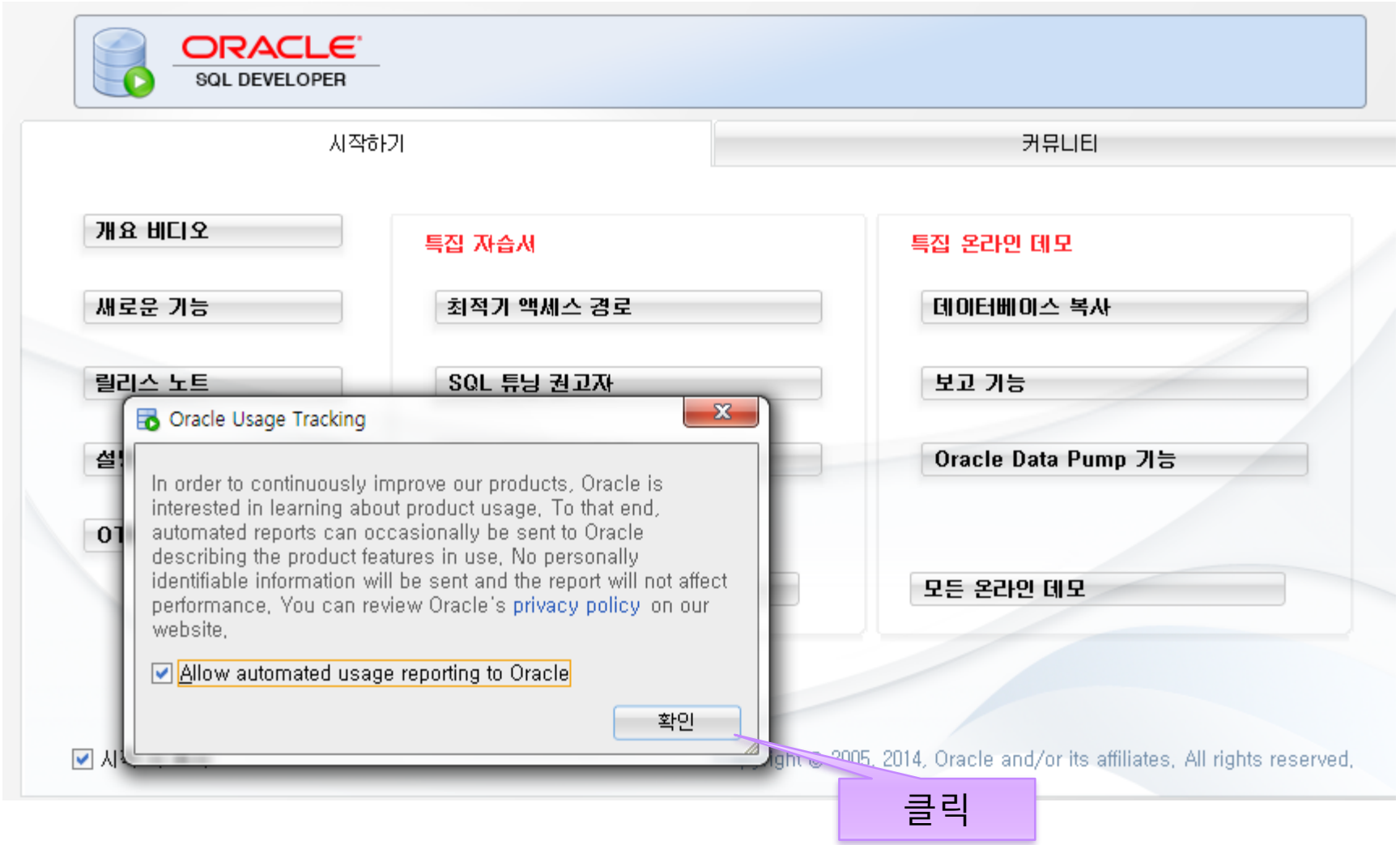
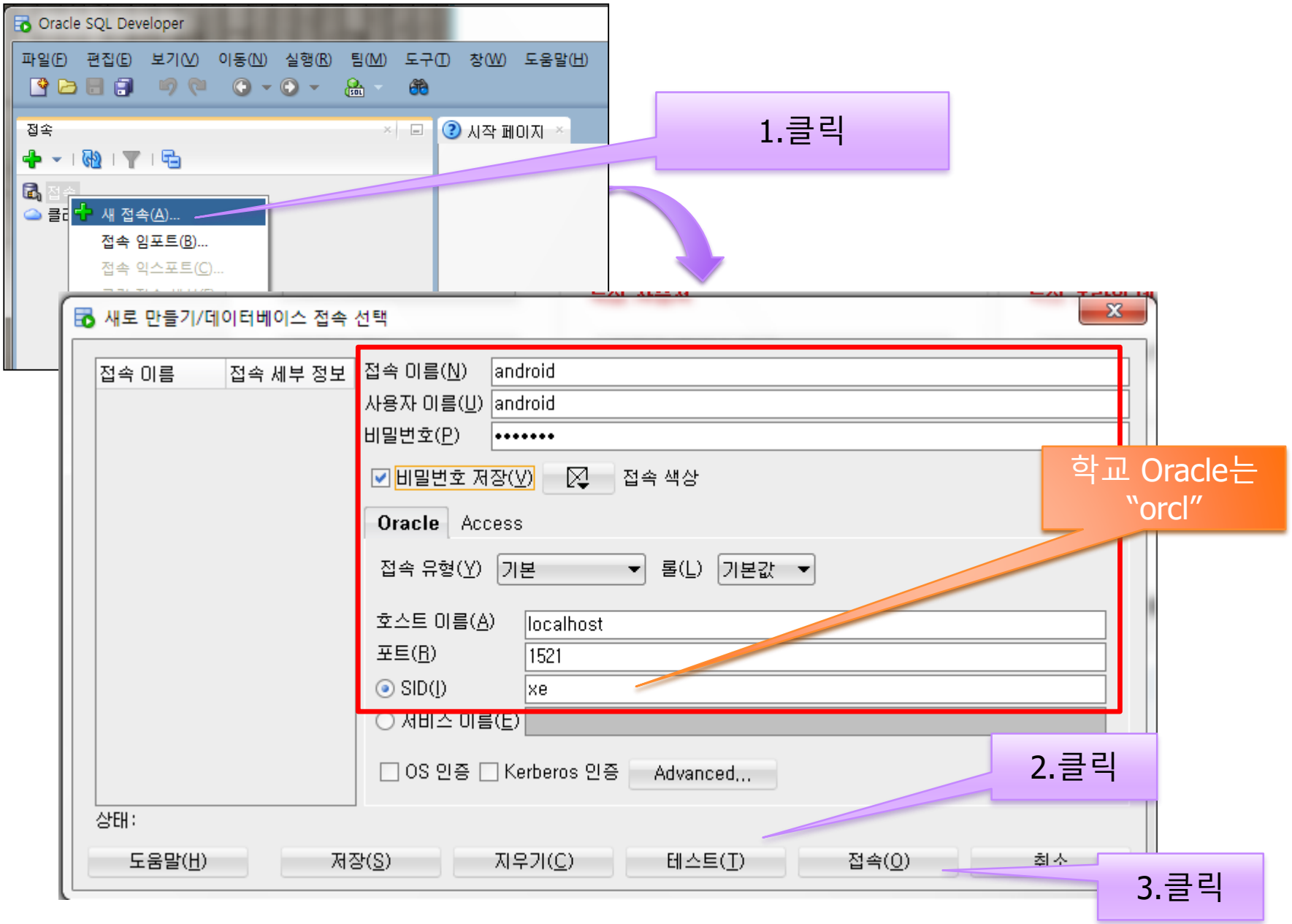
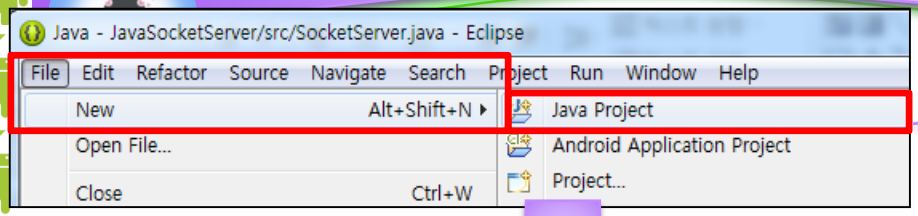
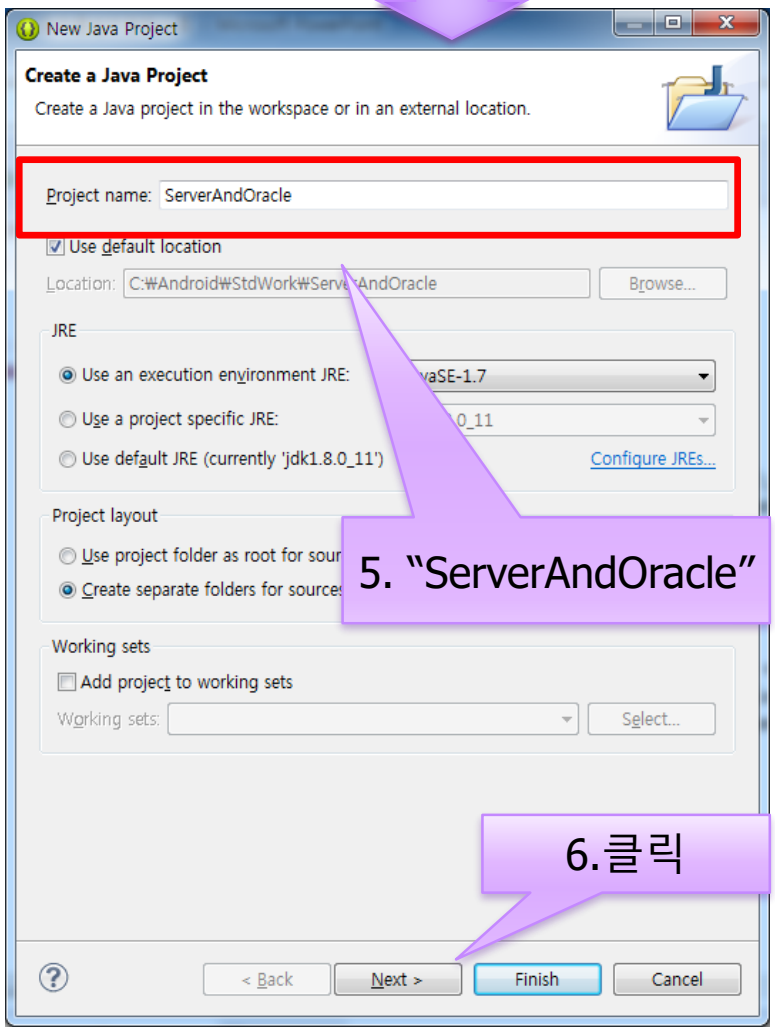

ORACLE
SQL DEVELOPER
시작하기
커뮤니티
개요 비디오
새로운 기능
릴리스 노트
특집 자습서
최적기 액세스 경로
SQL 튜닝 권고자
특집 온라인 데모
데이터베이스 복사
보고 기능
Oracle Data Pump 기능
모든 온라인 데모
Oracle Usage Tracking
In order to continuously improve our products, Oracle is interested in learning about product usage. To that end, automated reports can occasionally be sent to Oracle describing the product features in use. No personally identifiable information will be sent and the report will not affect performance. You can review Oracle's privacy policy on our website.
Allow automated usage reporting to Oracle
확인
클릭


Oracle SQL Developer
파일(F) 편집(E) 보기(V) 이동(N) 실행(R) 팀(M) 도구(T) 장(W) 도움말(H)
접속
시작 페이지
새 접속(A)...
접속 임포트(B)...
접속 익스포트(C)...
1.클릭
새로 만들기/데이터베이스 접속 선택
접속 이름
접속 세부 정보
접속 이름(N) android
사용자 이름(U) android
비밀번호(P) •••••••
비밀번호 저장(V)
접속 색상
Oracle
Access
접속 유형(Y) 기본
롤(L) 기본값
호스트 이름(A) localhost
포트(R) 1521
SID(I) xe
서비스 이름(E)
OS 인증
Kerberos 인증
Advanced...
학교 Oracle는 "orcl"
2.클릭
상태:
도움말(H)
저장(S)
지우기(C)
테스트(T)
접속(O)
취소
3.클릭

# 프로젝트 생성

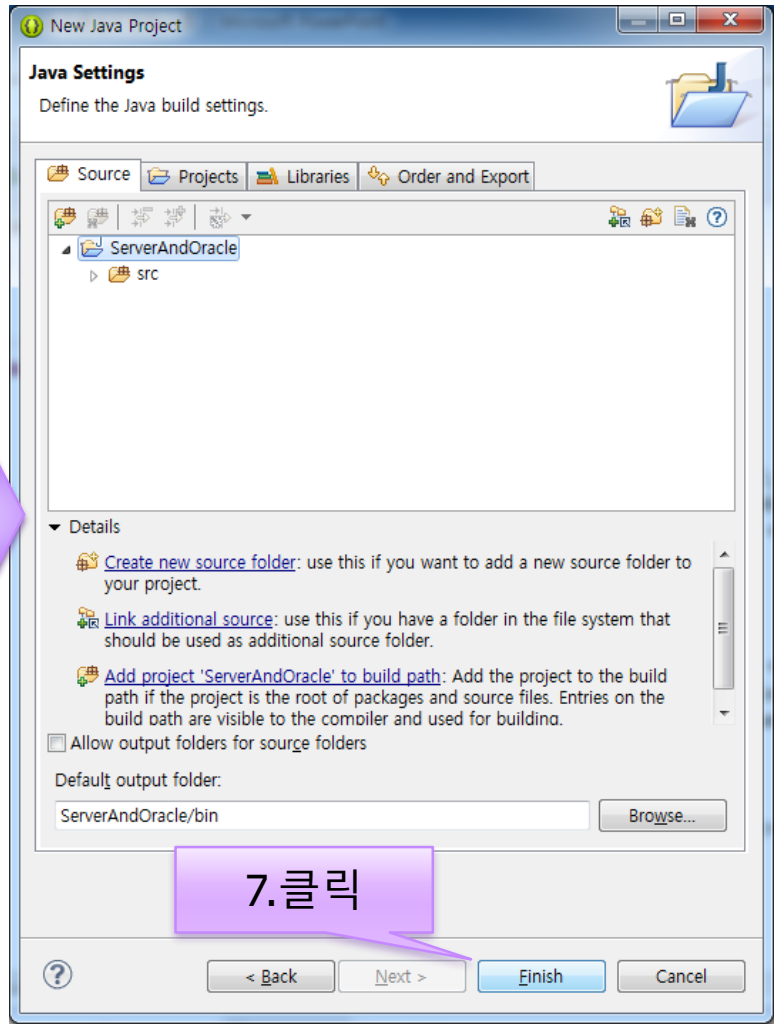



4.클릭

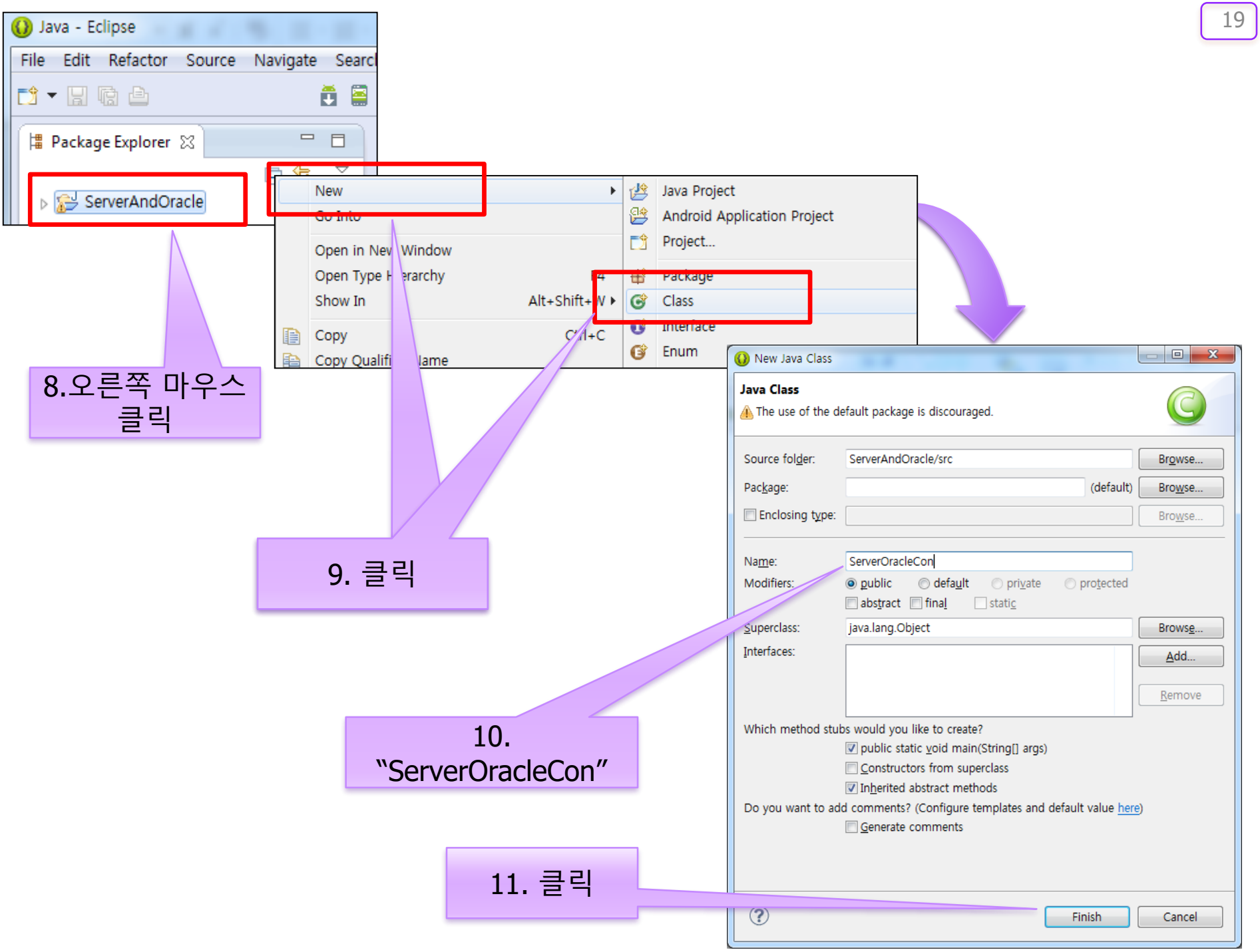



5. "ServerAndOracle"

6.클릭




7.클릭


Java - Eclipse
File Edit Refactor Source Navigate
Package Explorer
ServerAndOracle
New
Open in New Window
Show In Alt+Shift+W
Copy
Java Project
Android Application Project
Project...
Package
Class
Interface
Enum
8.오른쪽 마우스 클릭
9. 클릭
New Java Class
Java Class
The use of the default package is discouraged.
Source folder: ServerAndOracle/src
Package:
(default)
Enclosing type:
Name: ServerOracleCon
Modifiers: public default private protected
abstract final static
Superclass: java.lang.Object
Interfaces:
Which method stubs would you like to create?
public static void main(String[] args)
Constructors from superclass
Inherited abstract methods
Do you want to add comments? (Configure templates and default value here)
Generate comments
10. "ServerOracleCon"
11. 클릭
Finish
Cancel

ServerOracleCon.java

```java
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

public class ServerOracleCon {

    public static void main(String[] args) {
            Statement stmt = null;
            String sql = null;
            ResultSet rs = null;

            try{
                Class.forName("oracle.jdbc.driver.OracleDriver");
                System.out.println("드라이버 로딩 성공!!");
                String url = "jdbc:oracle:thin:@192.168.21.19:1521:xe";

                String user = "android", pwd = "dmsrua)";
                System.out.println("DB와의 연결을 시도합니다.");
```

12. 추후 확인

13. 코딩

ServerOracleCon.java

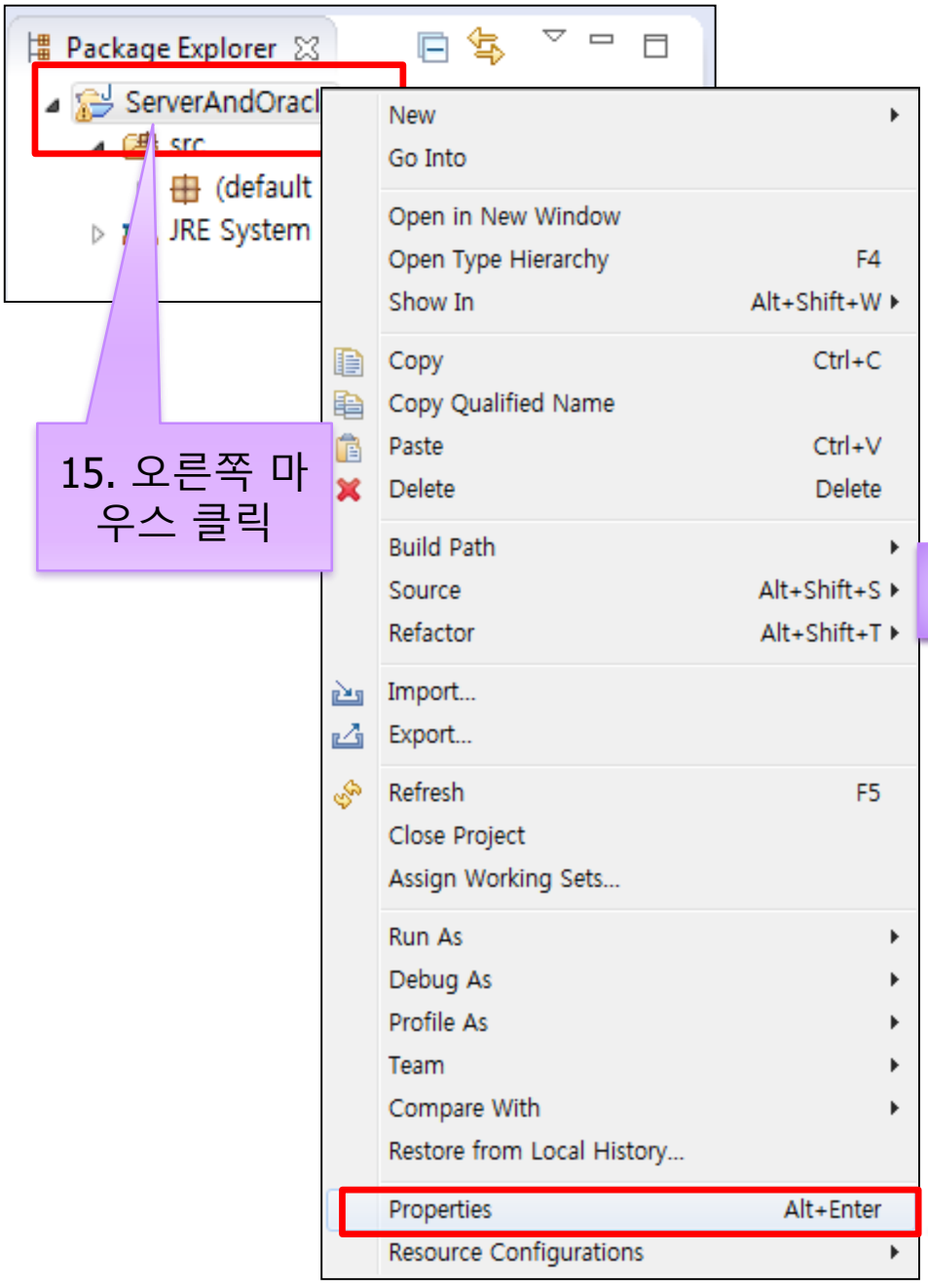
```
18
19              String user = "android", pwd = "dmsrua)";
20              System.out.println("DB와의 연결을 시도합니다.");
21
22              try{
23                  Connection con = DriverManager.getConnection(url, user, pwd);
24
25                  System.out.println("DB와의 연결을 성공하였습니다.");
26                  sql = "SELECT * FROM DBTEST";
27                  stmt = con.createStatement();
28                  rs = stmt.executeQuery(sql);
29                  while(rs.next()){
30                      System.out.println("ID: " + rs.getString(1) + " NAME : "
31                              + rs.getString(2) + "\n");
32                  }
33                  rs.close();
34                  stmt.close();
35              }catch(SQLException e){
36                  e.printStackTrace();
37              }
38
39          }catch(ClassNotFoundException e){
40              e.printStackTrace();
41
42          }
43      }
44  }
```

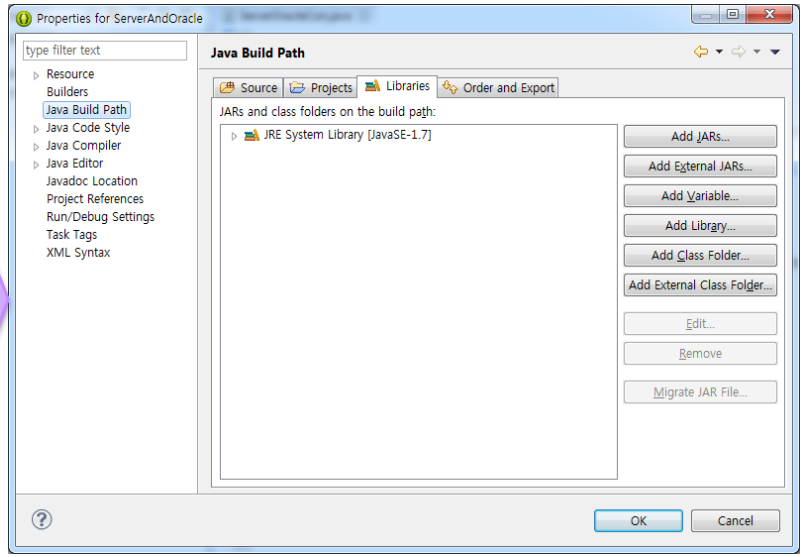
사용자 ID/Password

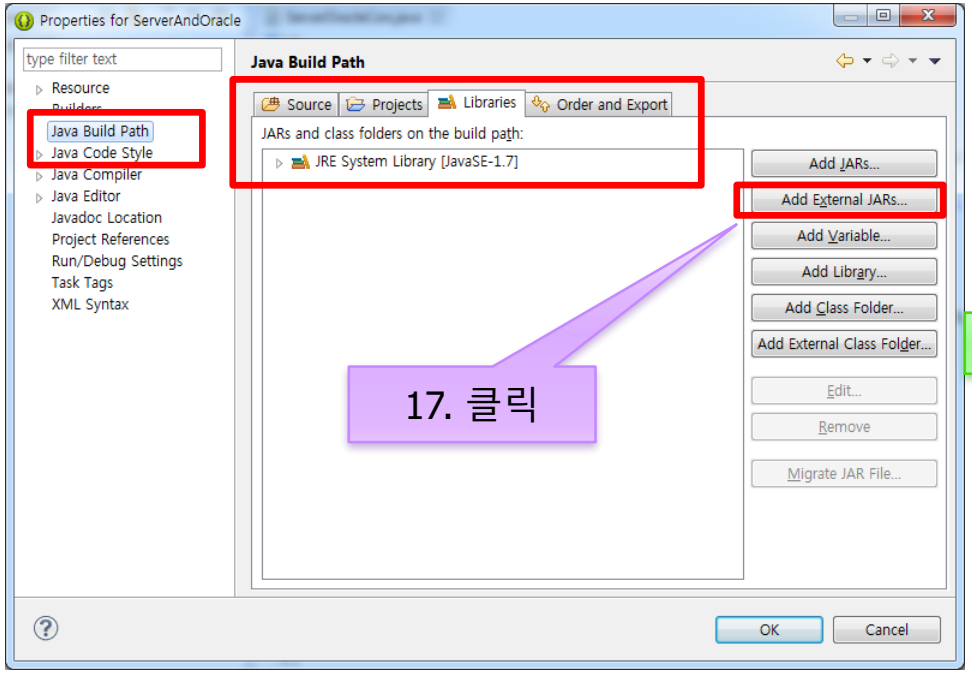
DB 연결

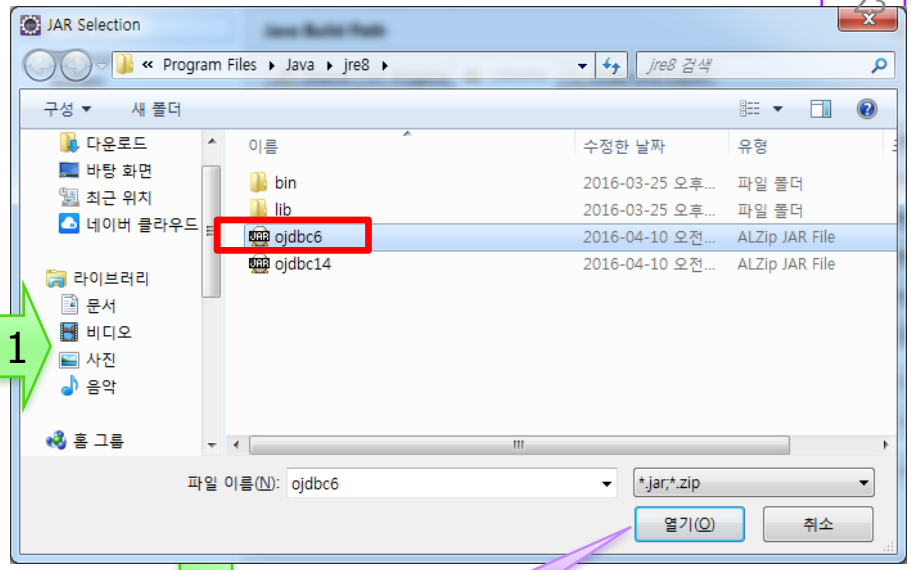
Query

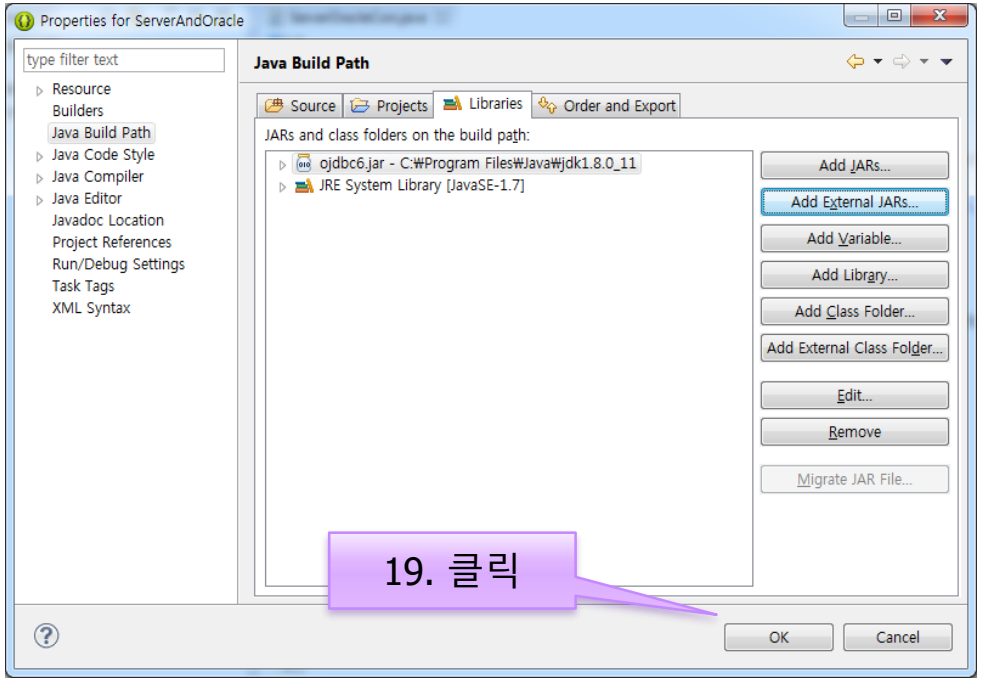
14. 코딩


Package Explorer
ServerAndOracl
src
(default
JRE System
15. 오른쪽 마우스 클릭
New
Go Into
Open in New Window
Open Type Hierarchy F4
Show In Alt+Shift+W
Copy Ctrl+C
Copy Qualified Name
Paste Ctrl+V
Delete Delete
Build Path
Source Alt+Shift+S
Refactor Alt+Shift+T
Import...
Export...
Refresh F5
Close Project
Assign Working Sets...
Run As
Debug As
Profile As
Team
Compare With
Restore from Local History...
Properties Alt+Enter
Resource Configurations
16. 클릭


Properties for ServerAndOracle
type filter text
Resource
Builders
Java Build Path
Java Code Style
Java Compiler
Java Editor
Javadoc Location
Project References
Run/Debug Settings
Task Tags
XML Syntax
Java Build Path
Source
Projects
Libraries
Order and Export
JARs and class folders on the build path:
JRE System Library [JavaSE-1.7]
Add JARs...
Add External JARs...
Add Variable...
Add Library...
Add Class Folder...
Add External Class Folder...
Edit...
Remove
Migrate JAR File...
OK
Cancel

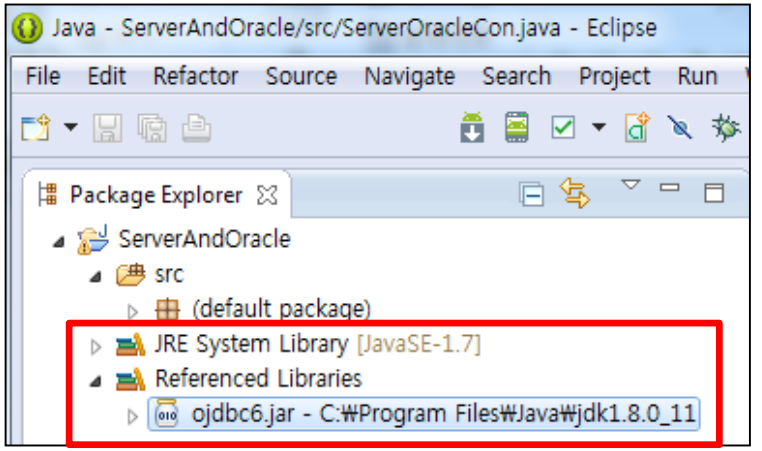

Properties for ServerAndOracle
type filter text
Resource
Builders
Java Build Path
Java Code Style
Java Compiler
Java Editor
Javadoc Location
Project References
Run/Debug Settings
Task Tags
XML Syntax
Java Build Path
Source
Projects
Libraries
Order and Export
JARs and class folders on the build path:
JRE System Library [JavaSE-1.7]
Add JARs...
Add External JARs...
Add Variable...
Add Library...
Add Class Folder...
Add External Class Folder...
Edit...
Remove
Migrate JAR File...
17. 클릭
OK
Cancel


JAR Selection
Program Files ▸ Java ▸ jre8 ▸
jre8 검색
구성
새 폴더
다운로드
바탕 화면
최근 위치
네이버 클라우드
라이브러리
문서
비디오
사진
음악
홈 그룹
이름
수정한 날짜
유형
bin
2016-03-25 오후...
파일 폴더
lib
2016-03-25 오후...
파일 폴더
ojdbc6
2016-04-10 오전...
ALZip JAR File
ojdbc14
2016-04-10 오전...
ALZip JAR File
1
파일 이름(N): ojdbc6
*.jar;*.zip
열기(O)
취소
18. 클릭

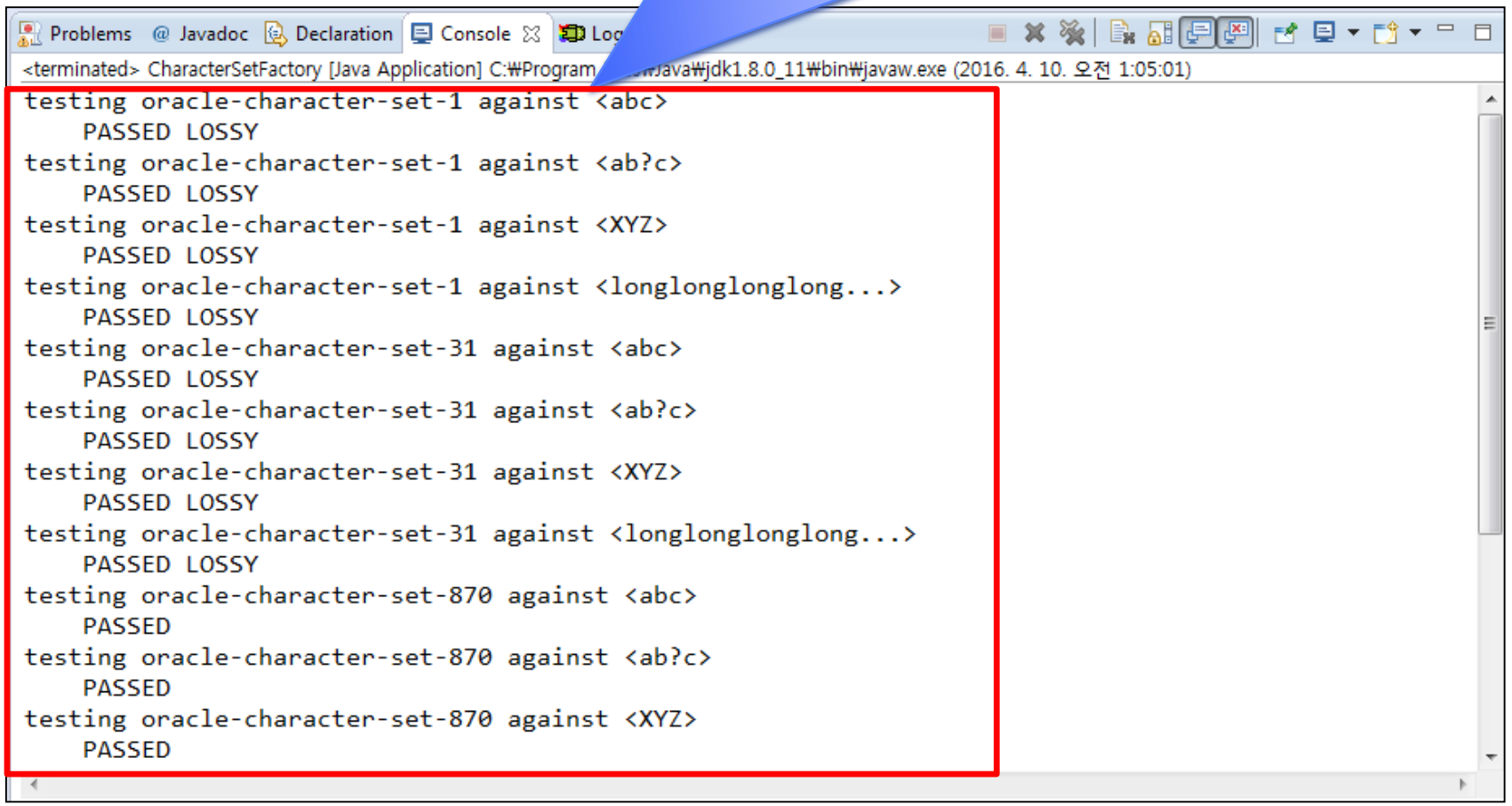

Properties for ServerAndOracle
type filter text
Resource
Builders
Java Build Path
Java Code Style
Java Compiler
Java Editor
Javadoc Location
Project References
Run/Debug Settings
Task Tags
XML Syntax
Java Build Path
Source
Projects
Libraries
Order and Export
JARs and class folders on the build path:
ojdbc6.jar - C:₩Program Files₩Java₩jdk1.8.0_11
JRE System Library [JavaSE-1.7]
Add JARs...
Add External JARs...
Add Variable...
Add Library...
Add Class Folder...
Add External Class Folder...
Edit...
Remove
Migrate JAR File...
19. 클릭
OK
Cancel

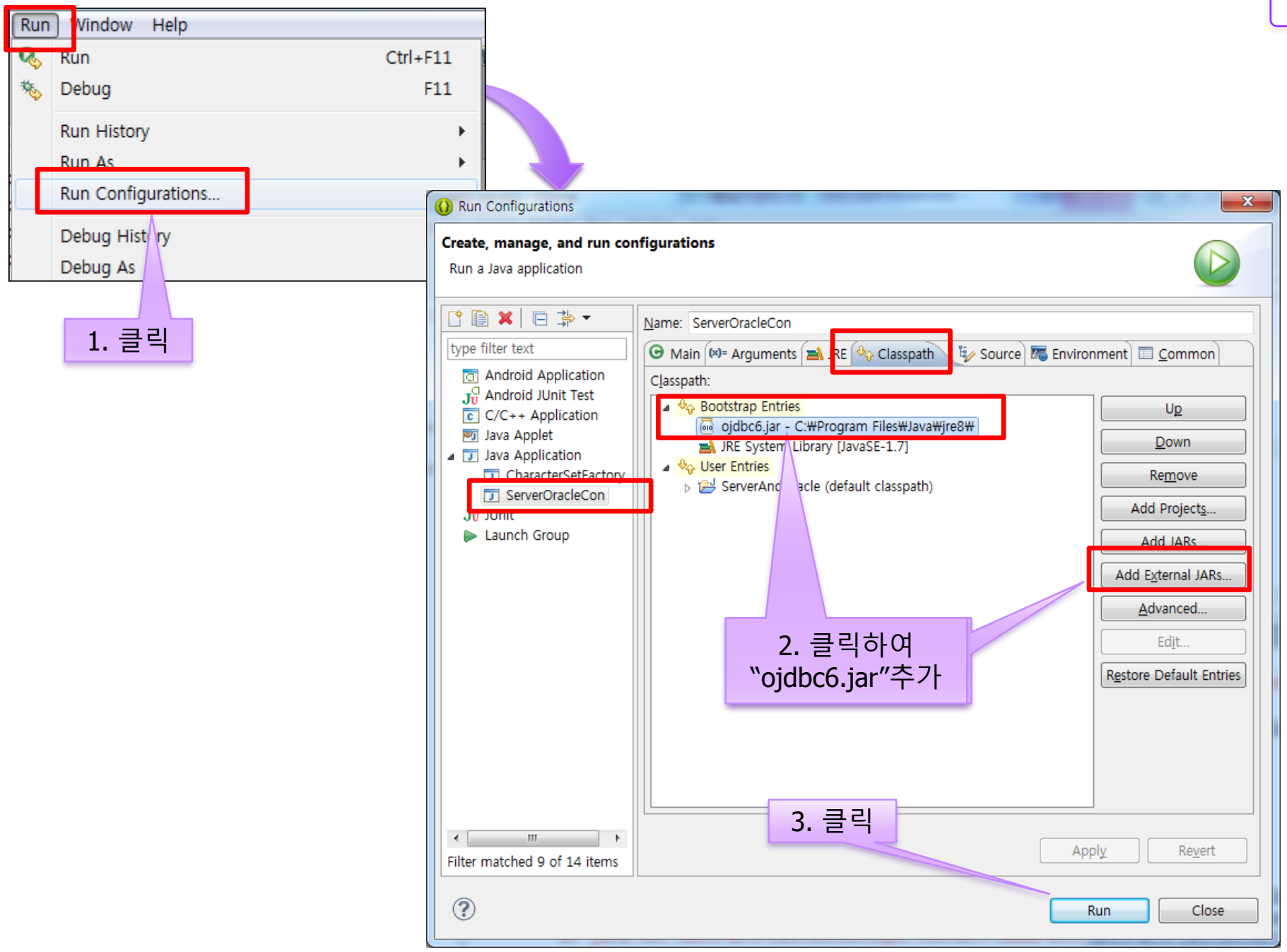
2

3

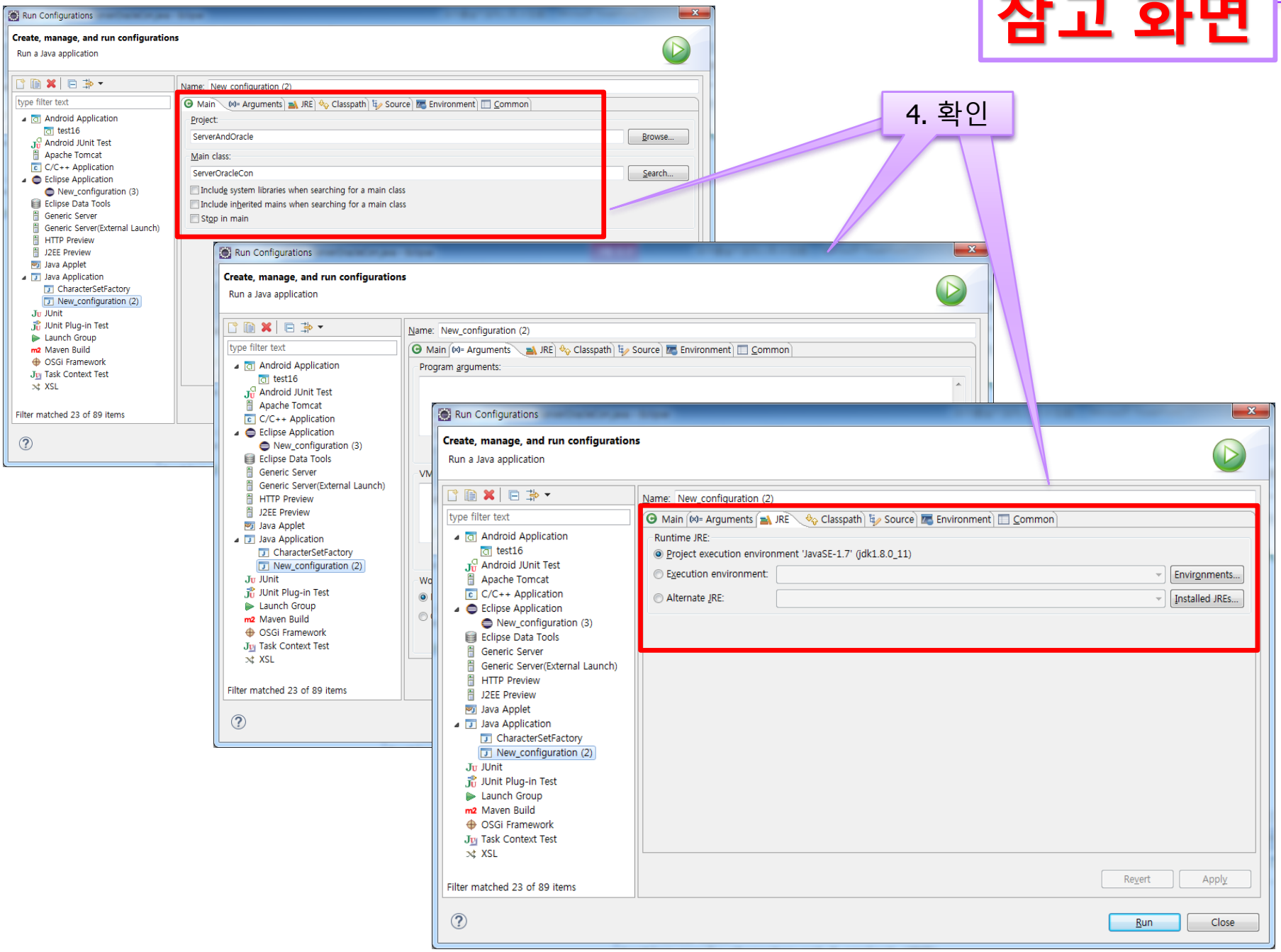

Java - ServerAndOracle/src/ServerOracleCon.java - Eclipse
File
Edit
Refactor
Source
Navigate
Search
Project
Run
Package Explorer
ServerAndOracle
src
(default package)
JRE System Library [JavaSE-1.7]
Referenced Libraries
ojdbc6.jar - C:₩Program Files₩Java₩jdk1.8.0_11

혹? 실행시 다음과 같은 에러가 발생하면?

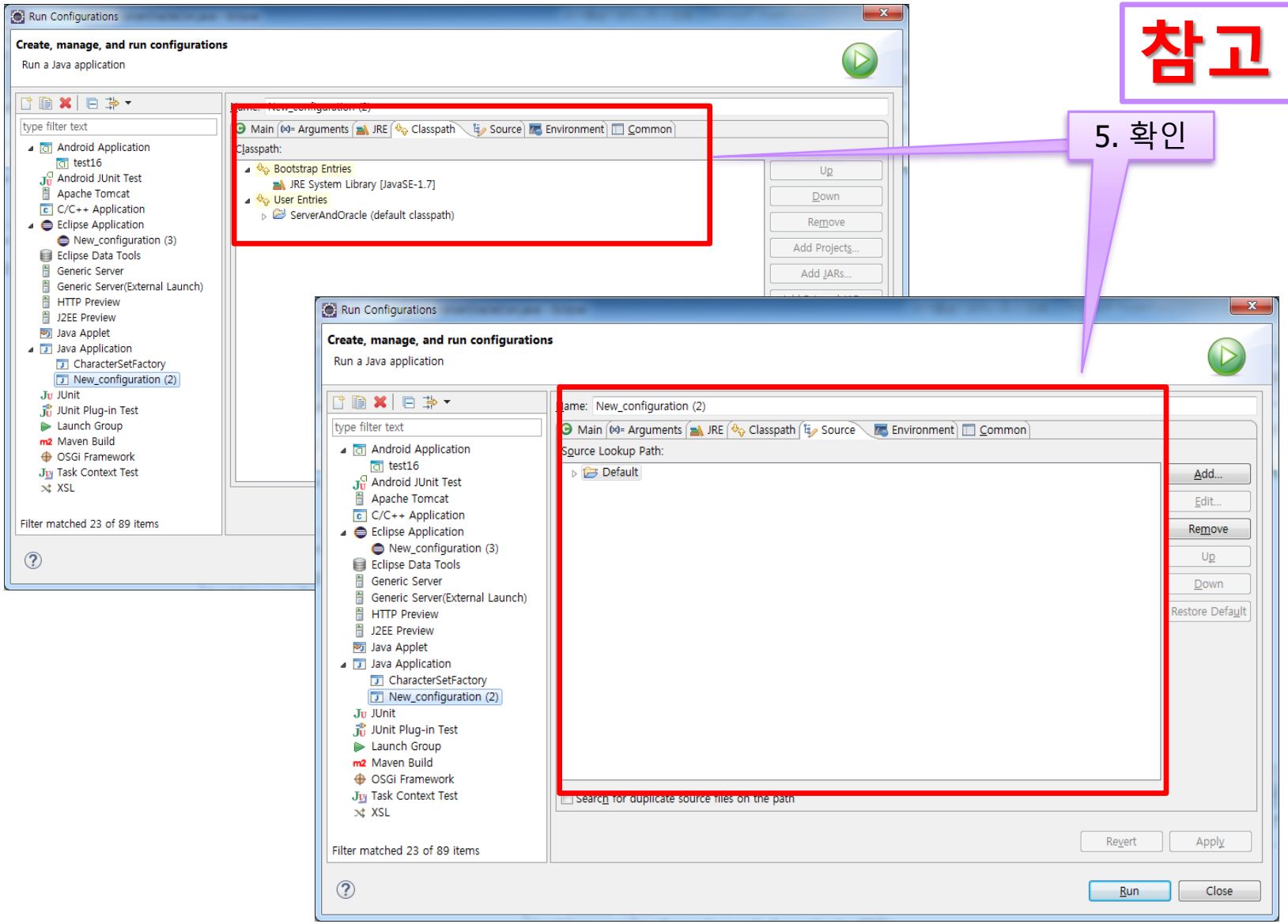



Run
Window
Help
Run Ctrl+F11
Debug F11
Run History
Run As
Run Configurations...
Debug History
Debug As
1. 클릭
Run Configurations
Create, manage, and run configurations
Run a Java application
type filter text
Android Application
Android JUnit Test
C/C++ Application
Java Applet
Java Application
CharacterSetFactory
ServerOracleCon
JUnit
Launch Group
Filter matched 9 of 14 items
Name: ServerOracleCon
Main
Arguments
JRE
Classpath
Source
Environment
Common
Classpath:
Bootstrap Entries
ojdbc6.jar - C:₩Program Files₩Java₩jre8₩
JRE System Library [JavaSE-1.7]
User Entries
ServerAnd acle (default classpath)
Up
Down
Remove
Add Projects...
Add JARs...
Add External JARs...
Advanced...
Edit...
Restore Default Entries
2. 클릭하여
"ojdbc6.jar"추가
3. 클릭
Apply
Revert
Run
Close

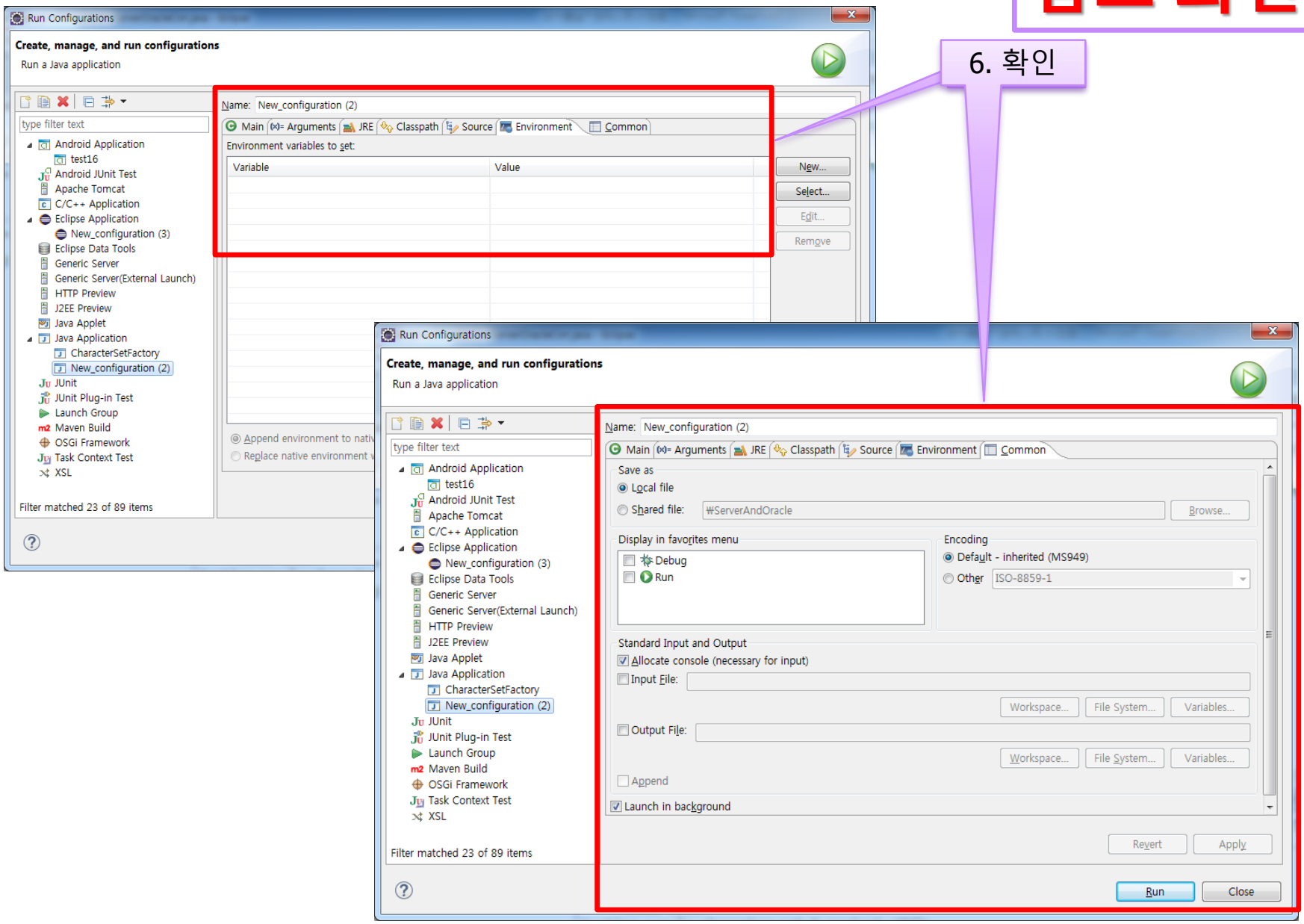
# 참고 화면


4. 확인
Run Configurations
Create, manage, and run configurations
Run a Java application
Name: New_configuration (2)
Main
Arguments
JRE
Classpath
Source
Environment
Common
Project:
ServerAndOracle
Browse...
Main class:
ServerOracleCon
Search...
Include system libraries when searching for a main class
Include inherited mains when searching for a main class
Stop in main
Program arguments:
Runtime JRE:
Project execution environment 'JavaSE-1.7' (jdk1.8.0_11)
Execution environment:
Environments...
Alternate JRE:
Installed JREs...
type filter text
Android Application
test16
Android JUnit Test
Apache Tomcat
C/C++ Application
Eclipse Application
New_configuration (3)
Eclipse Data Tools
Generic Server
Generic Server(External Launch)
HTTP Preview
J2EE Preview
Java Applet
Java Application
CharacterSetFactory
New_configuration (2)
JUnit
JUnit Plug-in Test
Launch Group
Maven Build
OSGi Framework
Task Context Test
XSL
Filter matched 23 of 89 items
Revert
Apply
Run
Close

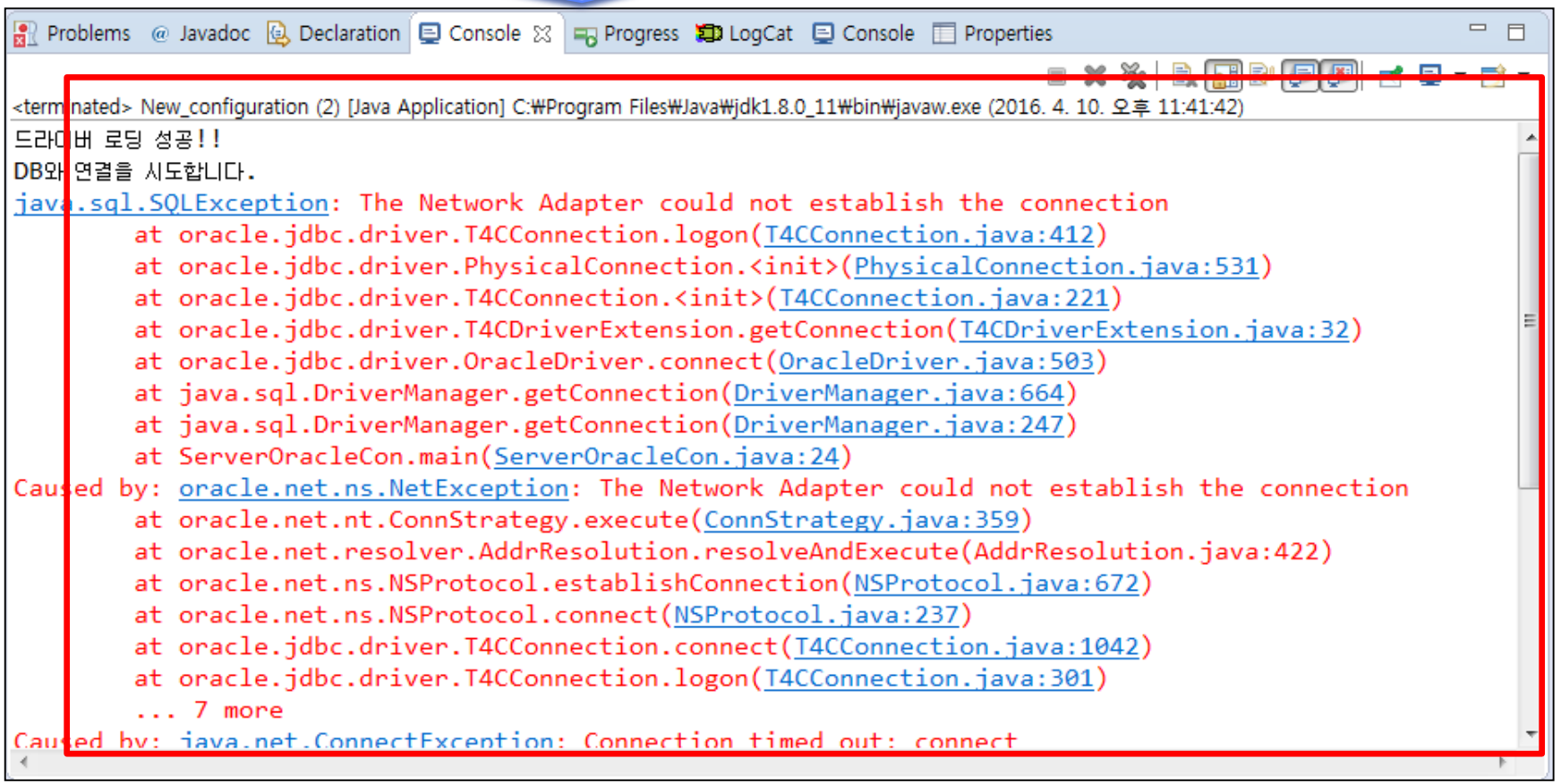
# 참고 화면

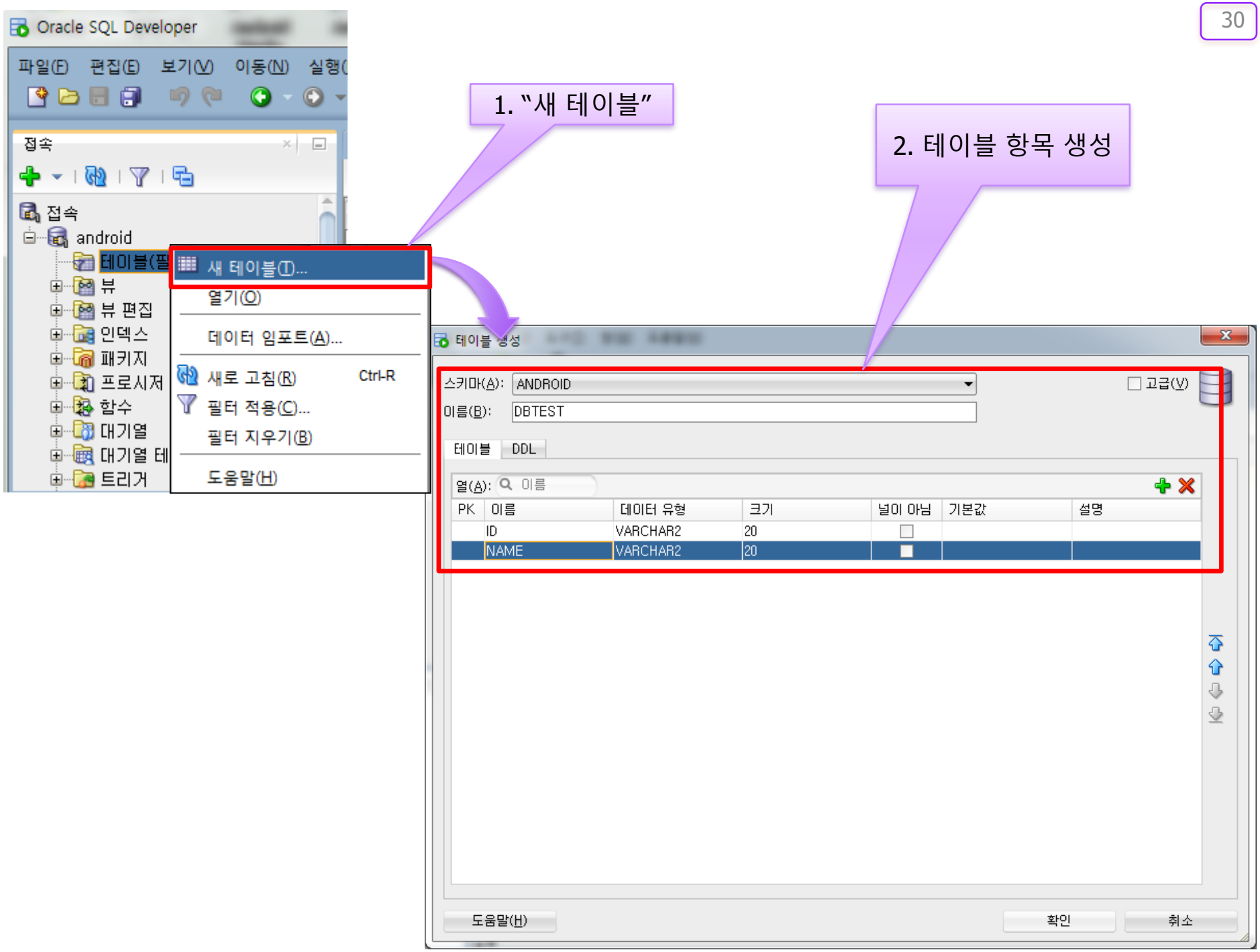

Run Configurations
Create, manage, and run configurations
Run a Java application
type filter text
Android Application
test16
Android JUnit Test
Apache Tomcat
C/C++ Application
Eclipse Application
New_configuration (3)
Eclipse Data Tools
Generic Server
Generic Server(External Launch)
HTTP Preview
J2EE Preview
Java Applet
Java Application
CharacterSetFactory
New_configuration (2)
JUnit
JUnit Plug-in Test
Launch Group
Maven Build
OSGi Framework
Task Context Test
XSL
Filter matched 23 of 89 items
Main
Arguments
JRE
Classpath
Source
Environment
Common
Classpath:
Bootstrap Entries
JRE System Library [JavaSE-1.7]
User Entries
ServerAndOracle (default classpath)
Up
Down
Remove
Add Projects...
Add JARs...
5. 확인
Run Configurations
Create, manage, and run configurations
Run a Java application
Name: New_configuration (2)
Main
Arguments
JRE
Classpath
Source
Environment
Common
Source Lookup Path:
Default
Add...
Edit...
Remove
Up
Down
Restore Default
Search for duplicate source files on the path
Revert
Apply
Run
Close

# 참고 화면


6. 확인
Run Configurations
Create, manage, and run configurations
Run a Java application
Name: New_configuration (2)
Main
Arguments
JRE
Classpath
Source
Environment
Common
Environment variables to set:
Variable
Value
New...
Select...
Edit...
Remove
type filter text
Android Application
test16
Android JUnit Test
Apache Tomcat
C/C++ Application
Eclipse Application
New_configuration (3)
Eclipse Data Tools
Generic Server
Generic Server(External Launch)
HTTP Preview
J2EE Preview
Java Applet
Java Application
CharacterSetFactory
New_configuration (2)
JUnit
JUnit Plug-in Test
Launch Group
Maven Build
OSGi Framework
Task Context Test
XSL
Filter matched 23 of 89 items
Append environment to nati
Replace native environment
Save as
Local file
Shared file:
₩ServerAndOracle
Browse...
Display in favorites menu
Debug
Run
Encoding
Default - inherited (MS949)
Other
ISO-8859-1
Standard Input and Output
Allocate console (necessary for input)
Input File:
Workspace...
File System...
Variables...
Output File:
Append
Launch in background
Revert
Apply
Run
Close

# 다음과 같은 에러가 발생하면? 서버의 방화벽이 설정되었는지 점검




Oracle SQL Developer
파일(F) 편집(E) 보기(V) 이동(N) 실행(
접속
접속
android
테이블(필
뷰
뷰 편집
인덱스
패키지
프로시저
함수
대기열
대기열 테
트리거
새 테이블(T)...
열기(O)
데이터 임포트(A)...
새로 고침(R) Ctrl-R
필터 적용(C)...
필터 지우기(B)
도움말(H)
1. "새 테이블"
2. 테이블 항목 생성
테이블 생성
스키마(A): ANDROID
고급(V)
이름(B): DBTEST
테이블
DDL
열(A): 이름
PK
이름
데이터 유형
크기
널이 아님
기본값
설명
ID
VARCHAR2
20
NAME
VARCHAR2
20
도움말(H)
확인
취소


시작 페이지
android
DBTEST
열
데이터
제약 조건
권한 부여
통계
트리거
플래시백
종속성
세부 정보
분할 영역
인덱스
SQL
정렬...
필터:
ID
NAME
1 A001 홍길동
2 A002 성춘향
3 A003 조장혁
메시지 - 로그
INSERT INTO "ANDROID"."DBTEST" (ID, NAME) VALUES ('A001', '홍길동')
INSERT INTO "ANDROID"."DBTEST" (ID, NAME) VALUES ('A002', '성춘향')
INSERT INTO "ANDROID"."DBTEST" (ID, NAME) VALUES ('A003', '조장혁')

# 오라클 데이터베이스 테이블 (android)

| | COLUMN_NAME | DATA_TYPE |
|---|---|---|
| 1 | ID | VARCHAR2(20 BYTE) |
| 2 | NAME | VARCHAR2(20 BYTE) |

| | ID | NAME |
|---|---|---|
| 1 | A001 | 홍길동 |
| 2 | A002 | 성춘향 |
| 3 | A003 | 조장혁 |

## 실행 결과

```
드라이버 로딩 성공!!)
DB와의 연결을 시도합니다!
DB와의 연결이 성공하였습니다.
ID: A001 NAME : 홍길동

ID: A002 NAME : 성춘향

ID: A003 NAME : 조장혁
```

# insert 예

```java
package jdbc;

import java.sql.Connection;

public class InsertTest {

    public static void main(String[] args) {

        String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";
        String user = "scott";
        String password = "tiger";
        StringBuffer sql = new StringBuffer();
        sql.append("insert into member");
        sql.append("values('robin','1123','이낙원',sysdate,'안양',1000)");

        try{
            //1. 드라이버 로딩
            Class.forName("oracle.jdbc.driver.OracleDriver");
            //2. 커넥션설정
            Connection con = DriverManager.getConnection(url, user, password);
            //3. Statement 객체 생성
            Statement stmt = con.createStatement();
            //4. SQL 문 실행
            int result = stmt.executeUpdate(sql.toString());
            //5. 결과처리

            System.out.println(result+"개의 행 삽입 완료");



        }catch(ClassNotFoundException e){
            e.printStackTrace();
        }catch(SQLException e){
            e.printStackTrace();
        }
    }

}
```

# Update 예

```java
package jdbc;

import java.sql.Connection;

public class UpdateTest {

    public static void main(String[] args) {

        String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";
        String user = "scott";
        String password = "tiger";
        StringBuffer sql = new StringBuffer();
        sql.append("update member ");
        sql.append("set addr = '인천시' ");
        sql.append("where id = 'kim'");

        try {
            Class.forName("oracle.jdbc.driver.OracleDriver");
            System.out.println("1");
            Connection con = DriverManager.getConnection(url, user, password);
            System.out.println("2");
            Statement stmt = con.createStatement();
            System.out.println("3");
            int result = stmt.executeUpdate(sql.toString());
            System.out.println(result + "개의 행 수정 완료");

        } catch (ClassNotFoundException e) {
            e.printStackTrace();
        } catch (SQLException e) {
            e.printStackTrace();
        }

    }

}
```

# Delete 예



```java
package jdbc;

import java.sql.Connection;

public class DeleteTest {

    public static void main(String[] args) {

        String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";
        String user = "scott";
        String password = "tiger";
        StringBuffer sql = new StringBuffer();
        sql.append("delete from member ");
        sql.append("where  id = 'jang'");

        try{
            //1. 드라이버 로딩
            Class.forName("oracle.jdbc.driver.OracleDriver");
            //2. 커넥션설정
            Connection con = DriverManager.getConnection(url, user, password);
            //3. Statement 객체 생성
            Statement stmt = con.createStatement();
            //4. SQL 문 실행
            int result = stmt.executeUpdate(sql.toString());
            //5. 결과처리

            System.out.println(result+"개의 행 삭제 완료");



        }catch(ClassNotFoundException e){
            e.printStackTrace();
        }catch(SQLException e){
            e.printStackTrace();
        }
    }

}
```

# Select 예



```java
package jdbc;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;

public class SelectTest {

    public static void main(String[] args) {

        String url = "jdbc:oracle:thin:@127.0.0.1:1521:xe";
        String user = "scott";
        String password = "tiger";
        String sql = "select * from emp";

        try{

            Class.forName("oracle.jdbc.driver.OracleDriver");
            Connection con = DriverManager.getConnection(url, user, password);
            Statement stmt = con.createStatement();
            ResultSet rs = stmt.executeQuery(sql);

            while(rs.next()){
                System.out.print(rs.getString("empno")+"\t");
                System.out.print(rs.getString("ename")+"\t");
                System.out.print(rs.getString(3)+"\t");
                System.out.print(rs.getDate("hiredate")+"\t");
                System.out.print(rs.getInt("sal")+"\t");
                System.out.print(rs.getInt("deptno")+"\t");
                System.out.println();
            }


        }catch (ClassNotFoundException e){

        }catch (SQLException e){

        }
    }

}
```

# 실습 문제

문제 1

추가

ID : A004
NANE : 본인이름

ID : A005
NANE : 본인별명

문제 1

삭제

ID : A005
NANE : 본인별명

문제 1

수정

ID : A003
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