

# 개발환경구축 (Oracle 11g XE)

## ▶ 개발 환경 구축 순서

1. 오라클 홈페이지([www.oracle.com](http://www.oracle.com)) 접속
2. Downloads – Oracle Database 11g Express Edition 다운로드
3. 설치 및 관리자 계정 암호 설정
4. DB 접속 확인 및 SQLPlus 실행
5. 관리자 계정 로그인

# ▶ 개발 환경 구축

## ✓ Oracle 홈페이지 접속 및 다운로드



# ▶ 개발 환경 구축

## ✓ Oracle 홈페이지 접속 및 다운로드

### 데이터베이스

[Database 19c Enterprise/Standard Editions](#)

[Database 18c Enterprise/Standard Editions](#)

[Database 12c Enterprise/Standard Editions](#)

[Database 11g Enterprise/Standard Editions](#)

[Database 18c Express Edition](#)

[Audit Vault and Database Firewall](#)

[Berkeley DB](#)

[Big Data Connectors](#)

[클러스터 검증 유틸리티](#)

[데이터베이스 모바일 서버](#)

[Grid Infrastructure](#)

[Instant Client](#)

[MySQL](#)

[NoSQL Database](#)

[Oracle Blockchain Platform Enterprise Edition](#)

[Rdb 제품](#)

[R Distribution](#)

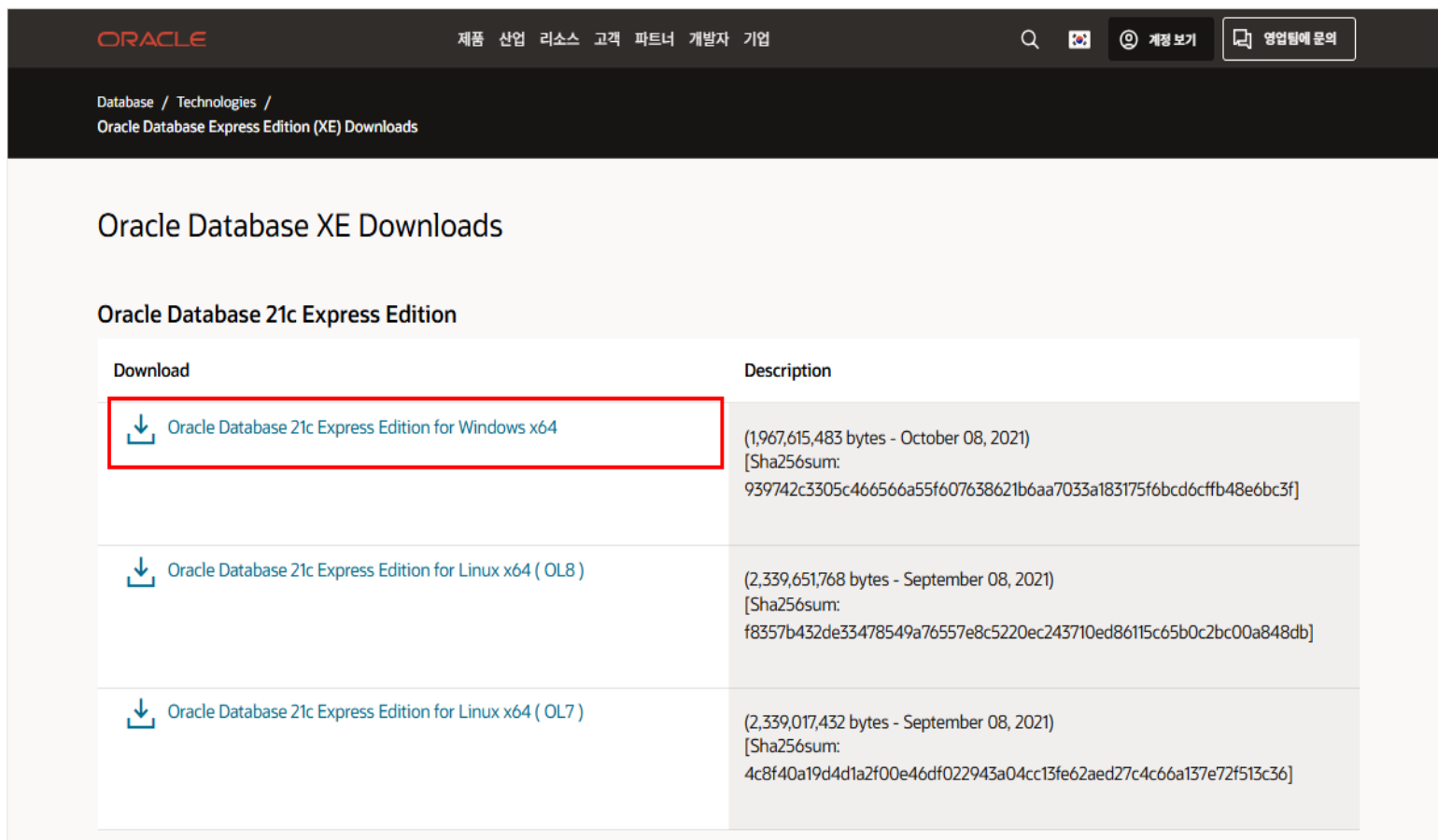
[Secure Backup](#)

[Secure Backup Cloud Module for Amazon S3](#)

[TimesTen In-Memory Database](#)

# ▶ 개발 환경 구축

## ✓ Oracle 홈페이지 접속 및 다운로드






ORACLE

제품 산업 리소스 고객 파트너 개발자 기업

Database / Technologies /  
Oracle Database Express Edition (XE) Downloads

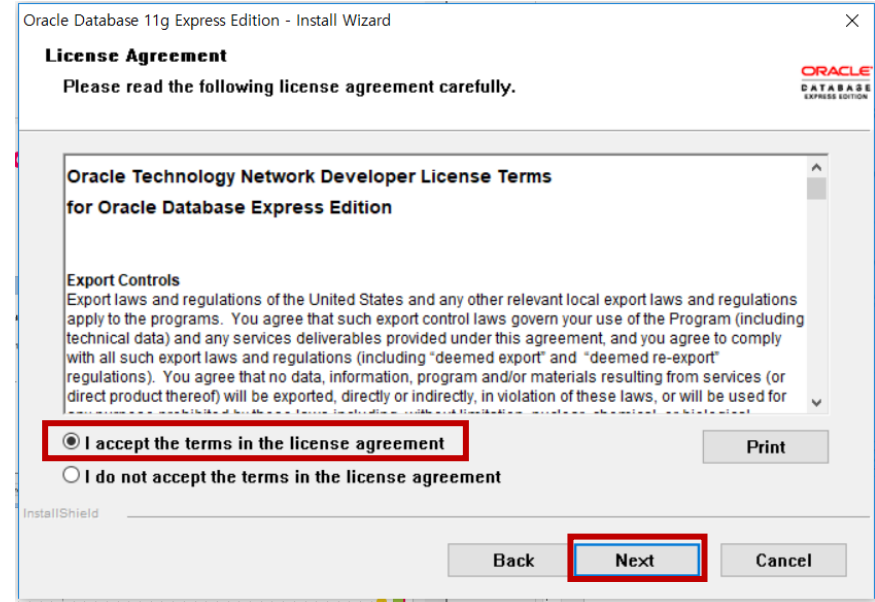
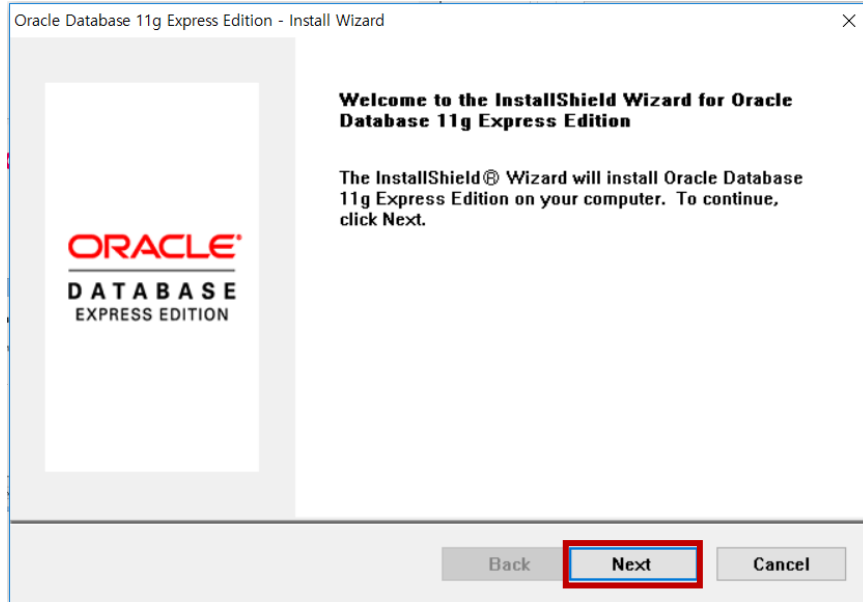
### Oracle Database XE Downloads

#### Oracle Database 21c Express Edition

Download	Description
 <a href="#">Oracle Database 21c Express Edition for Windows x64</a>	(1,967,615,483 bytes - October 08, 2021) [Sha256sum: 939742c3305c466566a55f607638621b6aa7033a183175f6bcd6cffb48e6bc3f]
 <a href="#">Oracle Database 21c Express Edition for Linux x64 ( OL8 )</a>	(2,339,651,768 bytes - September 08, 2021) [Sha256sum: f8357b432de33478549a76557e8c5220ec243710ed86115c65b0c2bc00a848db]
 <a href="#">Oracle Database 21c Express Edition for Linux x64 ( OL7 )</a>	(2,339,017,432 bytes - September 08, 2021) [Sha256sum: 4c8f40a19d4d1a2f00e46df022943a04cc13fe62aed27c4c66a137e72f513c36]

# ▶ 개발 환경 구축

## ✓ 설치 및 암호 설정



# ▶ 개발 환경 구축

## ✓ 설치 및 암호 설정

Oracle Database 11g Express Edition - Install Wizard

**Choose Destination Location**

Select folder where setup will install files.

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 631124 K

Destination Folder  
C:\Oracle\exel# Browse...

Space Required on C: 631124 K  
Space Available on C: 193406312 K

InstallShield

Back **Next** Cancel

Oracle Database 11g Express Edition - Install Wizard

**Specify Database Passwords**

Enter and confirm passwords for the database. This password will be used for both the SYS and the SYSTEM database accounts.

Enter Password

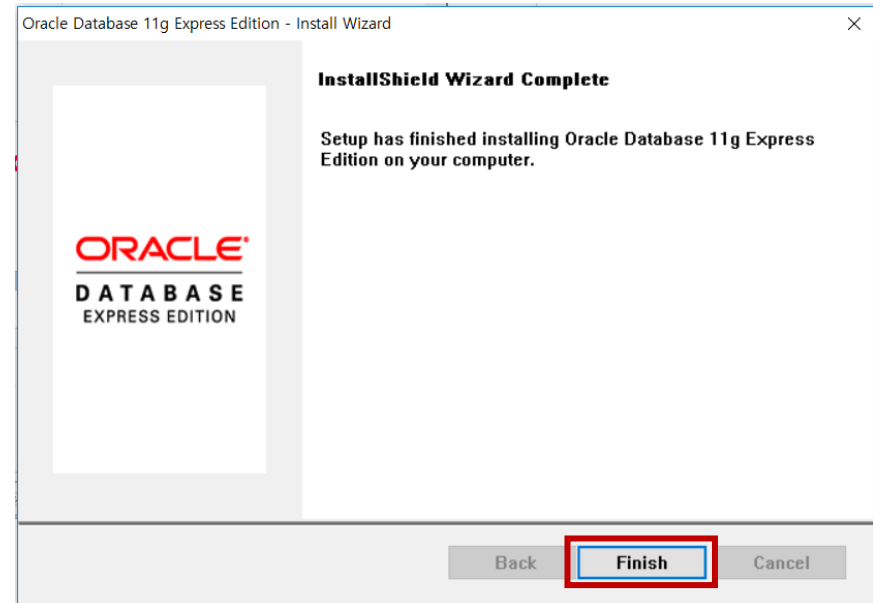
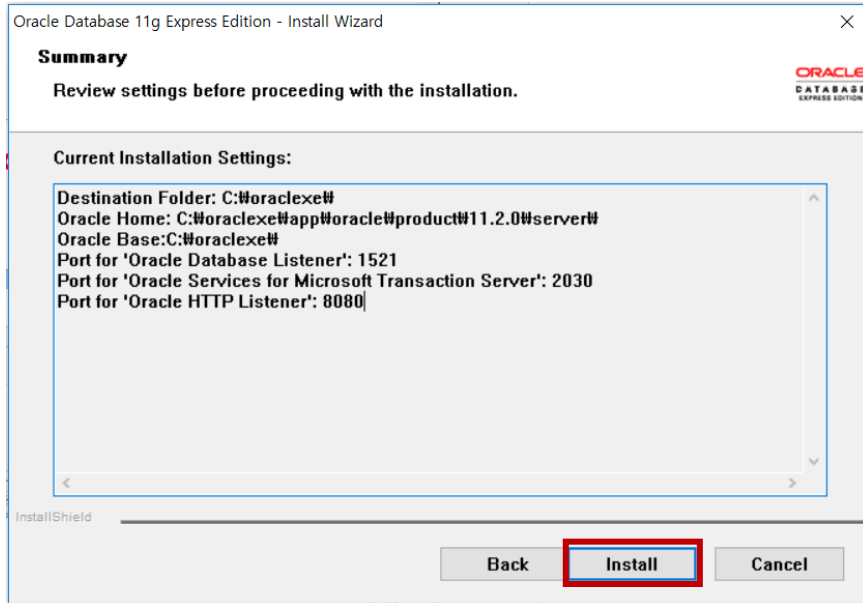
Confirm Password

InstallShield

Back **Next** Cancel

# ▶ 개발 환경 구축

## ✓ 설치 및 암호 설정





# ▶ 개발 환경 구축

## ✓ 설치 및 암호 설정

```
명령 프롬프트 - sqlplus
Microsoft Windows [Version 10.0.17134.706]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\ParkSinwoo>sqlplus

SQL*Plus: Release 11.2.0.2.0 Production on 목 5월 2 15:08:48 2019
Copyright (c) 1982, 2014, Oracle. All rights reserved.

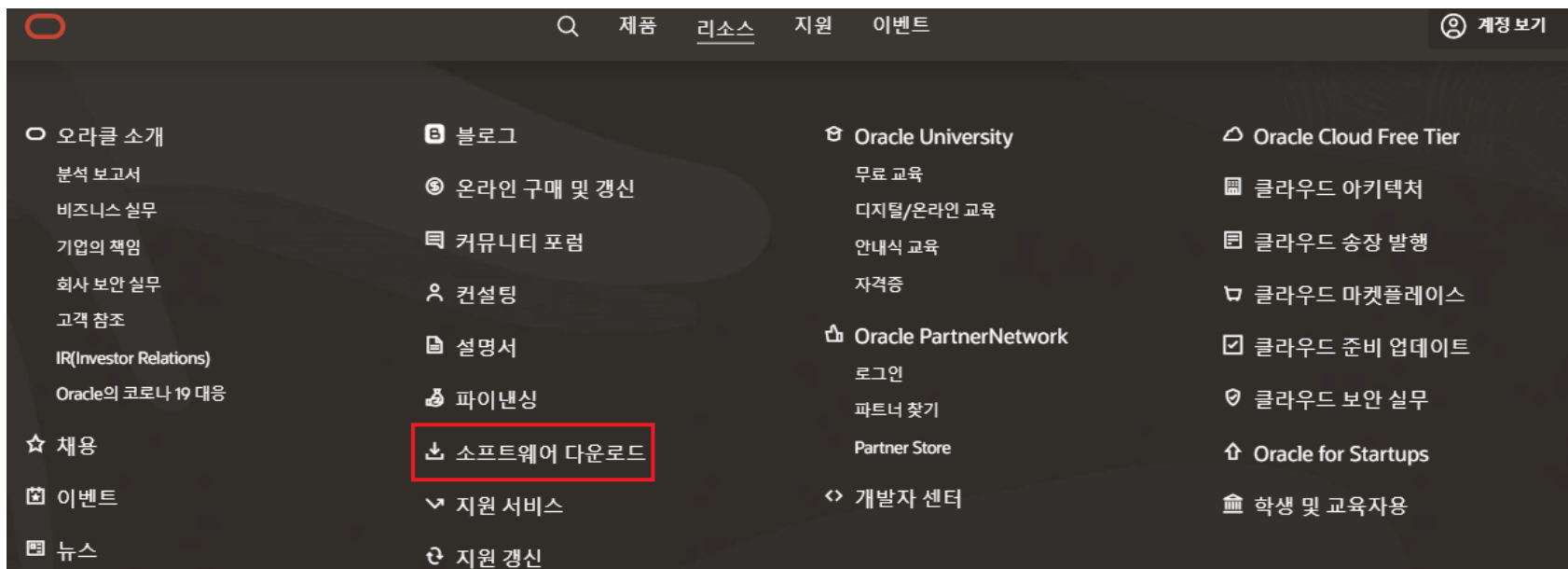
Enter user-name:
```

# ▶ SQL Developer 설치 순서

1. 오라클 홈페이지([www.oracle.com](http://www.oracle.com)) 접속
2. Software Download – SQL Developer 다운로드
3. 압축 해제 후 바로 실행

# ▶ SQL Developer 설치

## ✓ Oracle 홈페이지 접속 및 다운로드



# ▶ SQL Developer 설치

✓ Oracle 홈페이지 접속 및 다운로드  
<https://otn.oracle.com/>

The screenshot shows the Oracle Developer Tools page. The 'Developer Tools' section is highlighted with a red box. Within this section, the 'SQL Developer' link is also highlighted with a red box. The page layout includes a top navigation bar with the Oracle logo and various menu items, and a main content area with a grid of developer tools.

Developer Tools			
ADF Faces	Developer Tools for Visual Studio	Oracle REST Data Services (ORDS)	VM: Oracle VM Templates
Application Express (APEX)	Enterprise Pack for Eclipse	SOA Suite	VM: Pre-Built VirtualBox VMs
BI Publisher	Forms & Reports Services	Spatial Studio	Warehouse Builder
BPEL Process Manager	JavaScript Extension Toolkit	<b>SQL Developer</b>	WebRTC Session Controller Client SDK
Developer Studio	JDeveloper & ADF	SQL Developer Data Modeler	
Developer Suite 10g	NetBeans IDE	StorageTek	

# ▶ SQL Developer 설치

## ✓ Oracle 홈페이지 접속 및 다운로드

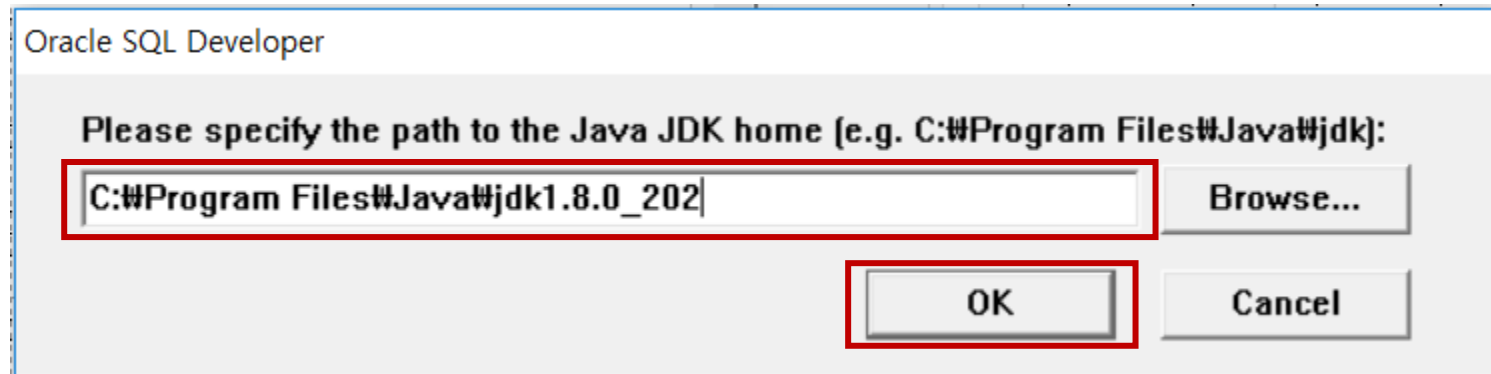
ORACLE Products Industries Resources Customers Partners Developers Company

Search (intl/army) View Accounts Contact Sales

Windows 64-bit with JDK 17 included	<a href="#">Download</a> (555 MB)	<ul style="list-style-type: none"><li>MD5: bb9b6abe39f5274b090ce2c7b884f6ff</li><li>SHA1: 5295a49db5b39b2640015e535ff1528822a4ba5a</li><li><a href="#">Installation Notes</a></li></ul>
Windows 32-bit/64-bit	<a href="#">Download</a> (557 MB)	<ul style="list-style-type: none"><li>MD5: 7de67da92e557e6cc3f8104c9fad951e</li><li>SHA1: 38cab3650bcc67cd8af4f7ca54a6a5413bbba61c</li><li><a href="#">Installation Notes</a></li><li>JDK 17 required</li></ul>

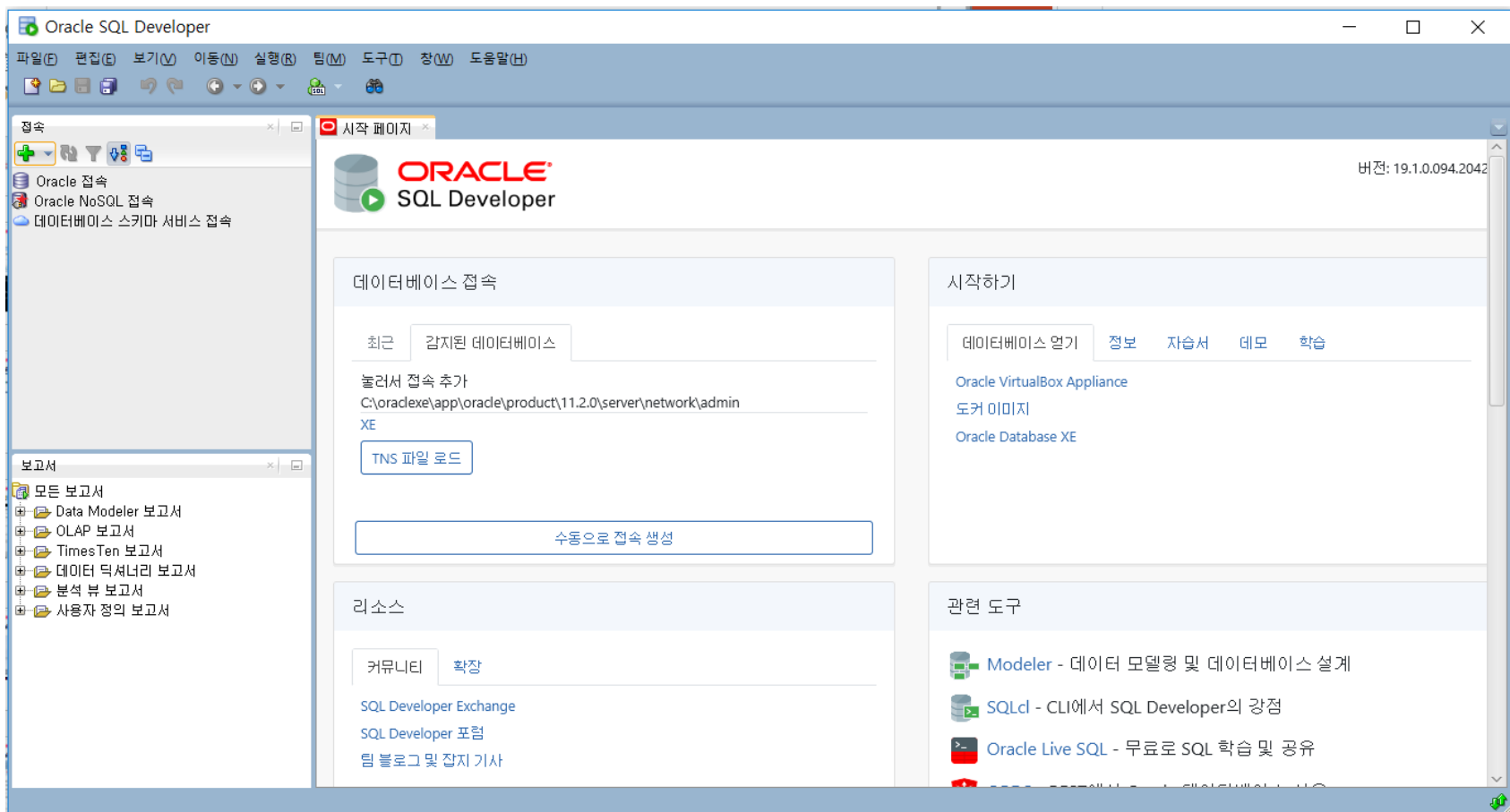
# ▶ SQL Developer 실행

## ✓ JDK 경로 설정



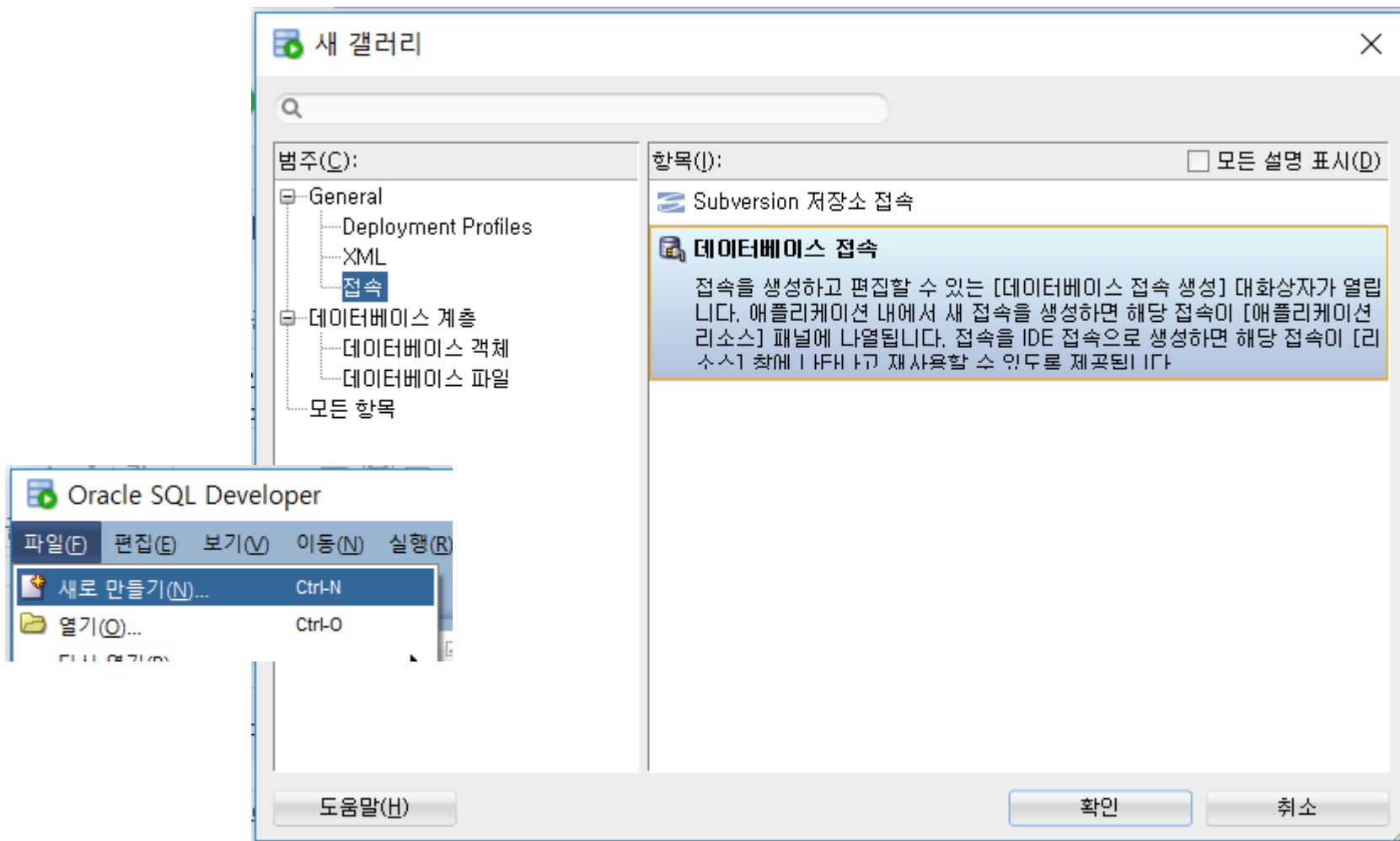
# ▶ SQL Developer 실행

✓ 메인



# ▶ SQL Developer 실행

## ✓ 접속 설정





# ▶ SQL Developer 실행

## ✓ 접속 설정

새로 만들기/데이터베이스 접속 선택

접속 이름    접속 세부정보

Name SYSTEM

데이터베이스 유형 Oracle

사용자 정보    프록시 사용자

인증 유형 기본값

사용자 이름(U) sys as sysdba    롬(L) 기본값

비밀번호(P) .....

☐ 비밀번호 저장(V)

접속 유형(Y) 기본

세부정보    고급

호스트 이름(A) localhost

포트(B) 1521

☒ SID(I) xe

☐ 서비스 이름(E)

상태: 성공

도움말(H)    저장(S)    지우기(C)    테스트(T)    접속(O)    취소

# ▶ SQL Developer 실행

✓ 접속 성공

Oracle SQL Developer : WEB\_SCOTT

파일(F) 편집(E) 보기(V) 이동(N) 실행(R) 소스 팀(M) 도구(T) Window 도움말(H)

접속 WEB\_SCOTT

테이블(필터링됨)

BONUS

DEPT

EMP

EMPNO

ENAME

JOB

MGR

HIREDATE

SAL

COMM

DEPTNO

GRANT

부

부 편집

이력서

DB 정보

질의 작성기

SELECT \* FROM EMP;

질의 결과

SOL | 인출된 모든 행: 12(0.007초)

	EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
1	7369	SMITH	CLERK	7902	80/12/17	800	(null)	20
2	7499	ALLEN	SALESMAN	7698	81/02/20	1600	300	30
3	7521	WARD	SALESMAN	7698	81/02/22	1250	500	30
4	7566	JONES	MANAGER	7839	81/04/02	2975	(null)	20
5	7654	MARTIN	SALESMAN	7698	81/09/28	1250	1400	30
6	7698	BLAKE	MANAGER	7839	81/05/01	2850	(null)	30
7	7782	CLARK	MANAGER	7839	81/06/09	2450	(null)	10
8	7839	KING	PRESIDENT	(null)	81/11/17	5000	(null)	10
9	7844	TURNER	SALESMAN	7698	81/09/08	1500	0	30
10	7900	JAMES	CLERK	7698	81/12/03	950	(null)	30
11	7902	FORD	ANALYST	7566	81/12/03	3000	(null)	20
12	7934	MILLER	CLERK	7782	82/01/23	1300	(null)	10

질의 결과

11월 19일 | 삽입 | 수정됨 | Windows: CR

## ▶ 계정 생성 및 접속

### ✓ 새로운 계정 만들기

```
CREATE USER KH IDENTIFIED BY KH;  
GRANT RESOURCE, CONNECT TO KH;
```

### ✓ 생성한 계정 접속

시스템 계정, 로그인과 동일한 방식으로 생성한 계정에 로그인

### ✓ 실습 스크립트 실행

실습 스크립트 내용을 복사해 질의 작성 워크시트에 붙여 넣고 실행

# ▶ 테스트

```
CREATE TABLE SAL_GRADE (  
    SAL_LEVEL    VARCHAR2(5) PRIMARY KEY,  
    MIN_SAL      NUMBER,  
    MAX_SAL      NUMBER  
);
```

# ▶ 테스트

```
CREATE TABLE EMPLOYEE (  
    EMP_ID      NUMBER PRIMARY KEY,  
    EMP_NAME    VARCHAR2(50),  
    EMP_NO      VARCHAR2(20),  
    EMAIL       VARCHAR2(100),  
    PHONE       VARCHAR2(20),  
    DEPT_CODE   VARCHAR2(5),  
    JOB_CODE    VARCHAR2(5),  
    SAL_LEVEL   VARCHAR2(5),  
    SALARY      NUMBER,  
    BONUS       NUMBER(3,2),  
    MANAGER_ID  NUMBER,  
    HIRE_DATE   DATE,  
    ENT_DATE    DATE,  
    ENT_YN      CHAR(1),  
  
    CONSTRAINT FK_EMP_SAL_LEVEL  
        FOREIGN KEY (SAL_LEVEL)  
        REFERENCES SAL_GRADE(SAL_LEVEL)  
);
```

# ▶ 테스트

```
INSERT INTO SAL_GRADE VALUES ('S1', 6000000, 10000000);
INSERT INTO SAL_GRADE VALUES ('S2', 5000000, 5999999);
INSERT INTO SAL_GRADE VALUES ('S3', 4000000, 4999999);
INSERT INTO SAL_GRADE VALUES ('S4', 3000000, 3999999);
INSERT INTO SAL_GRADE VALUES ('S5', 2000000, 2999999);
INSERT INTO SAL_GRADE VALUES ('S6', 1000000, 1999999);
```

```
INSERT INTO EMPLOYEE VALUES (200, '석동일', '621235-1985634', 'sun_di@kh.or.kr', '01099546325', 'D9', 'J1', 'S1', 8000000, 0.3, NULL, TO_DATE('1990-02-06', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (201, '송중기', '631165-1364654', 'song_jk@kh.or.kr', '0104566656', 'D9', 'J2', 'S1', 6000000, NULL, NULL, TO_DATE('2001-09-01', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (202, '노홍철', '651015-1046544', 'no_hc@kh.or.kr', '01066566263', 'D9', 'J2', 'S3', 3700000, NULL, 201, TO_DATE('2001-01-01', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (203, '승윤호', '660106-2653546', 'sy_ho@kh.or.kr', '0176707879', 'D6', 'J4', 'S5', 2800000, 0.2, 204, TO_DATE('1996-05-03', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (204, '유재석', '700120-1364547', 'yoo_js@kh.or.kr', '0109999192', 'D6', 'J3', 'S4', 3400000, NULL, 201, TO_DATE('2000-12-29', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (205, '정종하', '770108-1357951', 'ung_jh@kh.or.kr', '0103654875', 'D6', 'J3', 'S4', 3000000, NULL, 204, TO_DATE('1999-09-04', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (206, '박나라', '630709-2054321', 'pack_nr@kh.or.kr', '0109639522', 'D6', 'J6', 'S6', 1800000, NULL, 207, TO_DATE('2001-08-05', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (207, '하이유', '690402-2046134', 'ha_iy@kh.or.kr', '0103644874', 'D5', 'J5', 'S6', 1200000, 0.12, 210, TO_DATE('1997-04-07', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (208, '김해솔', '790105-2233445', 'kim_hs@kh.or.kr', '0108888444', 'D5', 'J5', 'S5', 2500000, NULL, 207, TO_DATE('2003-04-30', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (209, '심봉선', '750206-1325546', 'sim_bs@kh.or.kr', '0113654485', 'D5', 'J4', 'S4', 3500000, 0.15, 207, TO_DATE('2011-11-11', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (210, '윤은혜', '650505-2356985', 'youn_eh@kh.or.kr', '0179964233', 'D5', 'J7', 'S5', 2000000, NULL, 207, TO_DATE('2001-02-03', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (211, '정현도', '830807-1121341', 'jun_hd@kh.or.kr', '0104438222', 'D8', 'J6', 'S5', 2000000, NULL, 210, TO_DATE('2000-12-12', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (212, '장쭈위', '700923-2234152', 'jang_zw@kh.or.kr', '0106682222', 'D8', 'J5', 'S5', 2550000, 0.25, 211, TO_DATE('2016-05-17', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (213, '하동운', '621113-1543214', 'ha_dh@kh.or.kr', '0118546632', NULL, 'J5', 'S5', 2300000, NULL, NULL, TO_DATE('1992-01-31', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (214, '방명수', '650715-1363543', 'bang_ms@kh.or.kr', '0107417545', 'D1', 'J3', 'S3', 1380000, NULL, 200, TO_DATE('2004-10-03', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (215, '대복현', '811030-1536543', 'dae_bh@kh.or.kr', '0103669877', 'D1', 'J6', 'S4', 3700000, NULL, 214, TO_DATE('2006-07-19', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (216, '차태연', '700416-1233214', 'cha_ty@kh.or.kr', '0103356487', 'D1', 'J6', 'S3', 3900000, NULL, 214, TO_DATE('2000-12-01', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (217, '이오리', '720407-1233333', 'loo_or@kh.or.kr', '0102230465', NULL, NULL, 'S2', 4999999, NULL, NULL, TO_DATE('2016-11-28', 'YYYY-MM-DD'), NULL, 'N');
INSERT INTO EMPLOYEE VALUES (218, '임서환', '620712-1102342', 'im_sw@kh.or.kr', NULL, 'D2', 'J4', 'S6', 1550000, NULL, NULL, TO_DATE('1999-09-09', 'YYYY-MM-DD'), NULL, 'N');
```

# ▶ 테스트

```
SELECT * FROM EMPLOYEE;
```

	EMP_ID	EMP_NAME	EMP_NO	EMAIL	PHONE	DEPT_CODE	JOB_CODE	SAL_LEVEL	SALARY	BONUS	MANAGER_ID	HIRE_DATE	ENT_DATE	ENT_YN
1	200	선동욱	621235-1985634	sun di@kh.or.kr	01099546325	D9	J1	S1	8000000	0.3	(null)	90/02/06	(null)	N
2	201	송기철	631165-1364654	song ik@kh.or.kr	0104566656	D9	J2	S1	6000000	(null)	(null)	01/09/01	(null)	N
3	202	노정호	651015-1046544	no hc@kh.or.kr	01066566263	D9	J2	S3	3700000	(null)	20101/01/01	(null)	(null)	N
4	203	노승호	660106-2653546	sv ho@kh.or.kr	0176707879	D6	J4	S5	2800000	0.2	20496/05/03	(null)	(null)	N
5	204	조재석	700120-1364547	voo js@kh.or.kr	0109999192	D6	J3	S4	3400000	(null)	20100/12/29	(null)	(null)	N
6	205	조성하	770108-1357951	und ih@kh.or.kr	0103654875	D6	J3	S4	3000000	(null)	20499/09/04	(null)	(null)	N
7	206	박나유	630709-2054321	pack nr@kh.or.kr	0109639522	D6	J6	S6	1800000	(null)	20701/08/05	(null)	(null)	N
8	207	하이영	690402-2046134	ha iv@kh.or.kr	0103644874	D5	J5	S6	1200000	0.12	21097/04/07	(null)	(null)	N
9	208	김해솔	790105-2233445	kim hs@kh.or.kr	0108888444	D5	J5	S5	2500000	(null)	20703/04/30	(null)	(null)	N
10	209	김보성	750206-1325546	sim bs@kh.or.kr	0113654485	D5	J4	S4	3500000	0.15	20711/11/11	(null)	(null)	N
11	210	유혜도	650505-2356985	youn eh@kh.or.kr	0179964233	D5	J7	S5	2000000	(null)	20701/02/03	(null)	(null)	N
12	211	정현준	830807-1121341	jun hd@kh.or.kr	0104438222	D8	J6	S5	2000000	(null)	21000/12/12	(null)	(null)	N
13	212	장조원	700923-2234152	iang zw@kh.or.kr	0106682222	D8	J5	S5	2550000	0.25	21116/05/17	(null)	(null)	N
14	213	하동민	621113-1543214	ha dh@kh.or.kr	0118546632	(null)	J5	S5	2300000	(null)	(null)	92/01/31	(null)	N
15	214	방명수	650715-1363543	bang ms@kh.or.kr	0107417545	D1	J3	S3	1380000	(null)	20004/10/03	(null)	(null)	N
16	215	대복한	811030-1536543	dae bh@kh.or.kr	0103669877	D1	J6	S4	3700000	(null)	21406/07/19	(null)	(null)	N
17	216	차태여	700416-1233214	cha tv@kh.or.kr	0103356487	D1	J6	S3	3900000	(null)	21400/12/01	(null)	(null)	N
18	217	이오리	720407-1233333	loo or@kh.or.kr	0102230465	(null)	(null)	S2	4999999	(null)	(null)	16/11/28	(null)	N
19	218	임서환	620712-1102342	im sw@kh.or.kr	(null)	D2	J4	S6	1550000	(null)	(null)	99/09/09	(null)	N