

개발환경구축 (Oracle 11g XE)

▶ 개발 환경 구축 순서

1. 오라클 홈페이지(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

The screenshot shows the Oracle website's navigation bar at the top, featuring a search icon, product links, resource links (underlined), support links, event links, and a sign-in button. Below the navigation bar is a dark sidebar with various links like 'Oracle 소개', '블로그', '온라인 구매 및 갱신', etc. The main content area displays several categories: 'Oracle University' (free education, digital/online education, internal education, certification), 'Oracle PartnerNetwork' (login, partner search, partner store), and 'Oracle Cloud Free Tier' (cloud architecture, cloud migration, cloud storage, cloud marketplace, cloud preparation, cloud security, Oracle for Startups, student and educational use). A red box highlights the '소프트웨어 다운로드' link under the 'Oracle University' section.

- Oracle 소개
- 분석 보고서
- 비즈니스 실무
- 기업의 책임
- 회사 보안 실무
- 고객 참조
- IR(Investor Relations)
- Oracle의 코로나 19 대응
- 채용
- 이벤트
- 뉴스
- 블로그
- 온라인 구매 및 갱신
- 커뮤니티 포럼
- 컨설팅
- 설명서
- 파이낸싱
- 소프트웨어 다운로드
- 지원 서비스
- 지원 갱신
- Oracle University
- 무료 교육
- 디지털/온라인 교육
- 안내식 교육
- 자격증
- Oracle PartnerNetwork
- 로그인
- 파트너 찾기
- Partner Store
- 개발자 센터
- Oracle Cloud Free Tier
- 클라우드 아키텍처
- 클라우드 송장 발행
- 클라우드 마켓플레이스
- 클라우드 준비 업데이트
- 클라우드 보안 실무
- Oracle for Startups
- 학생 및 교육자용

▶ 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

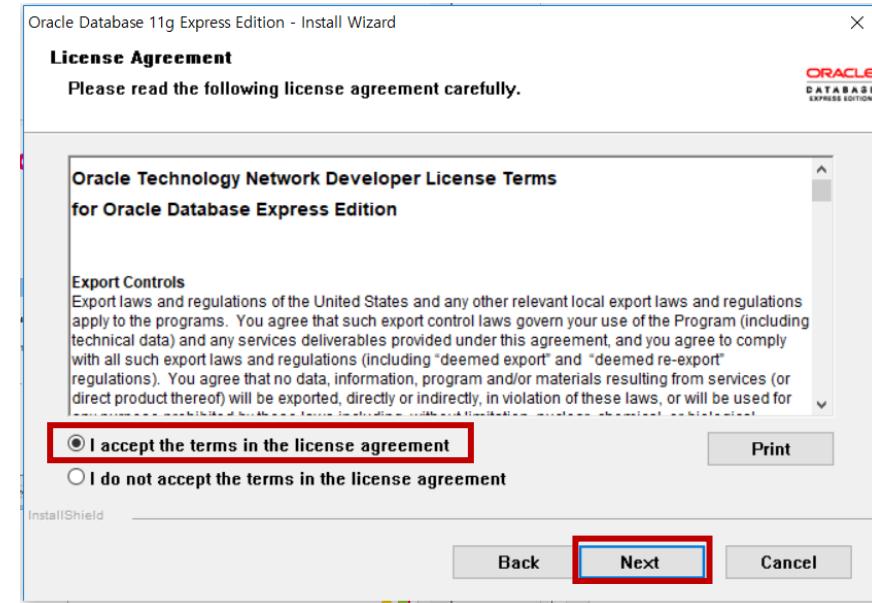
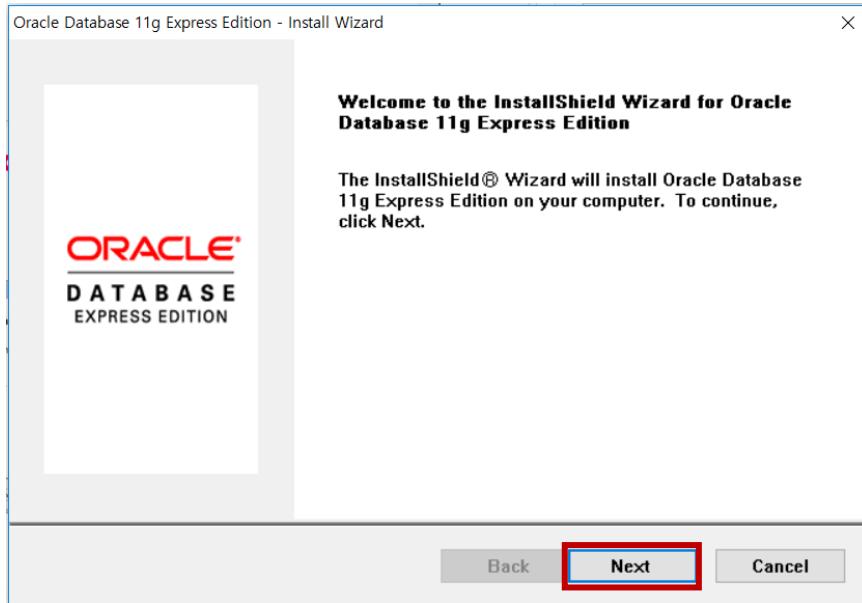
Oracle Database XE Downloads

Oracle Database 21c Express Edition

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

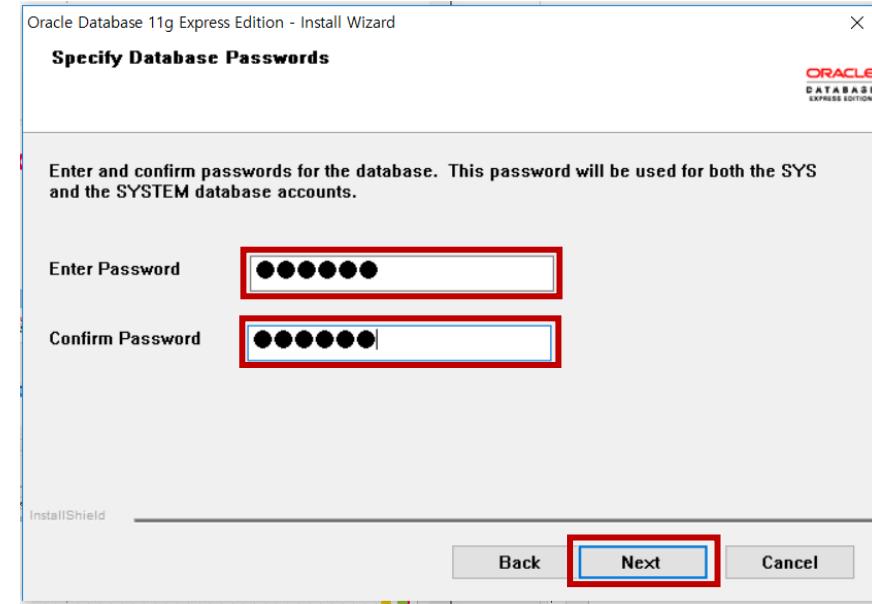
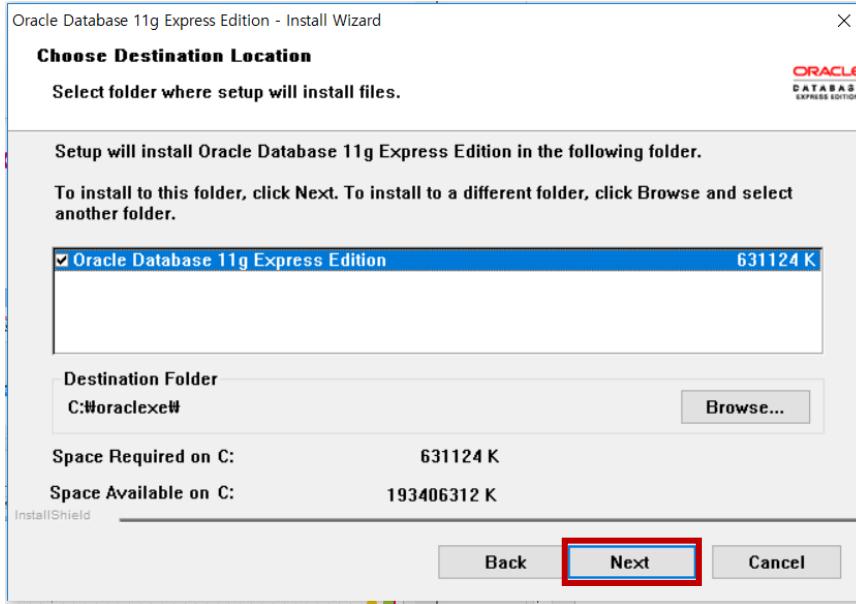
▶ 개발 환경 구축

✓ 설치 및 암호 설정



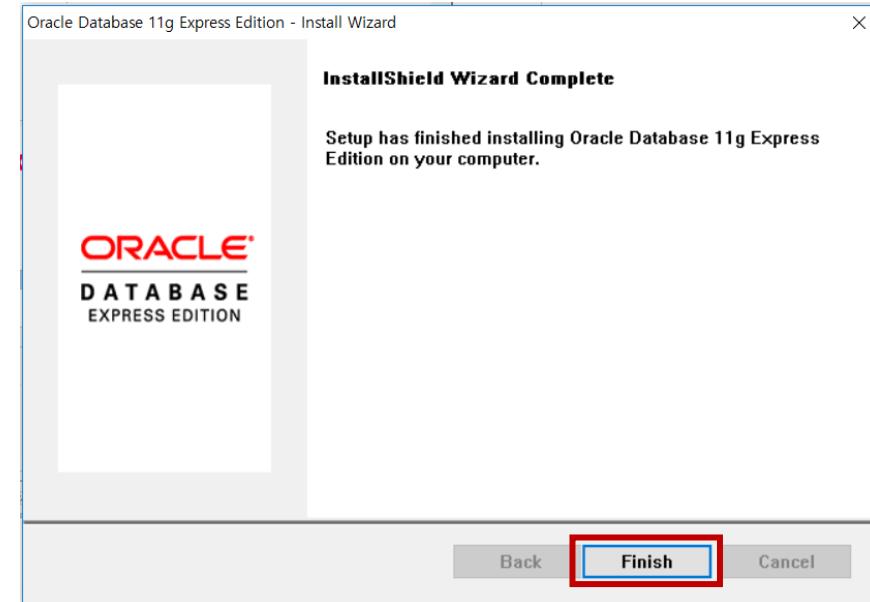
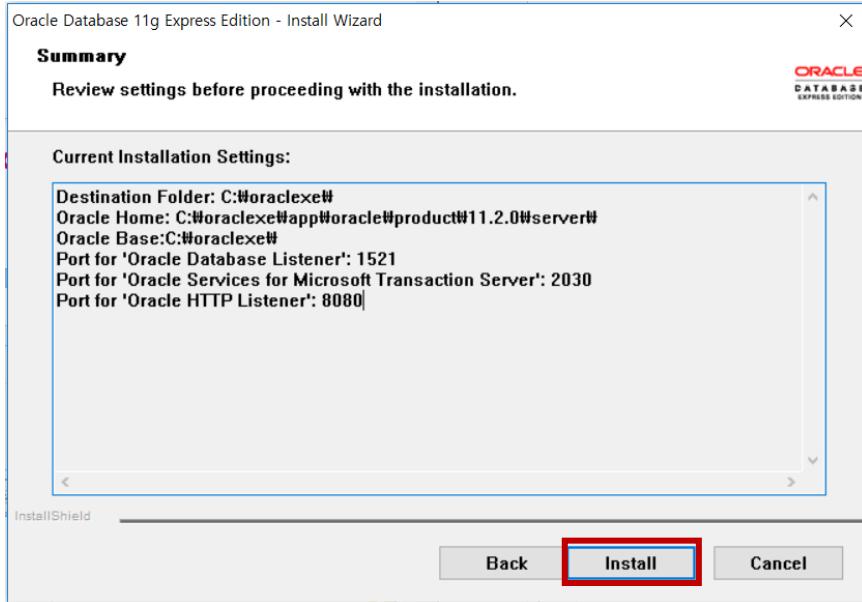
▶ 개발 환경 구축

✓ 설치 및 암호 설정



▶ 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) 접속
2. Software Download – SQL Developer 다운로드
3. 압축 해제 후 바로 실행

▶ SQL Developer 설치

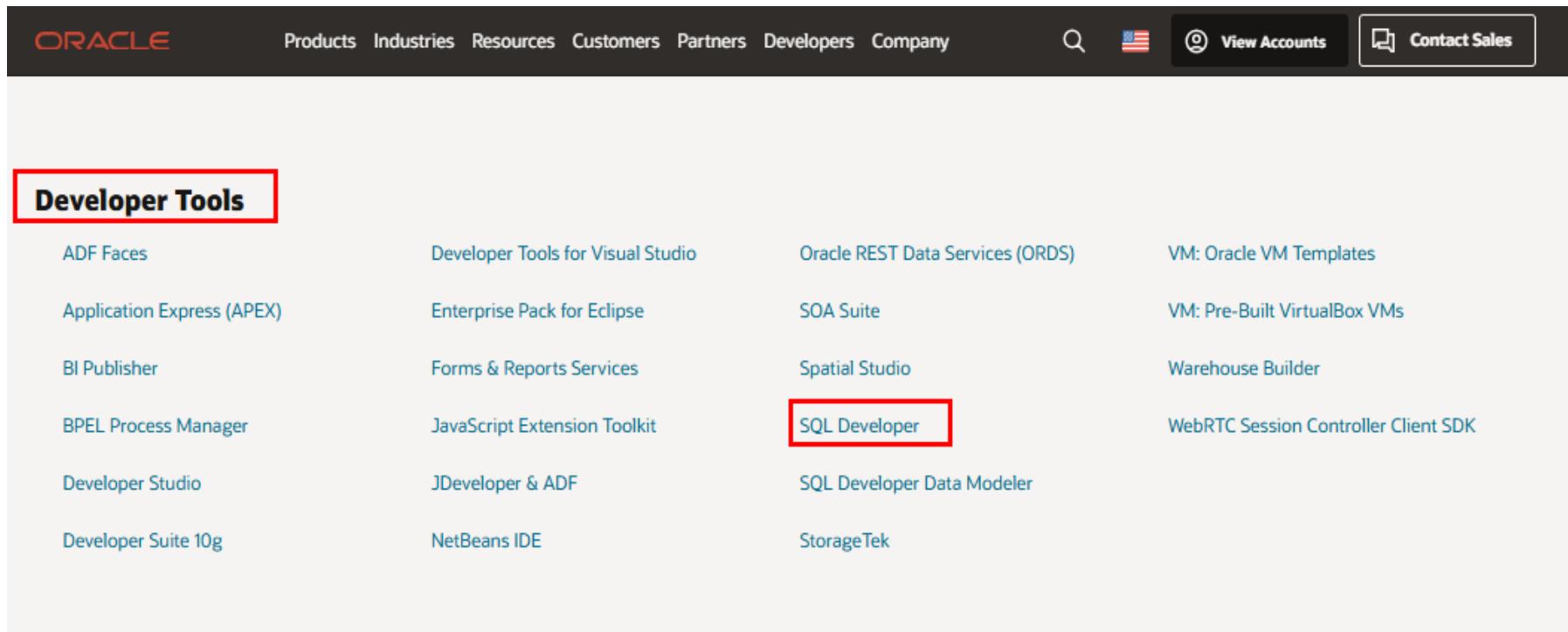
✓ Oracle 홈페이지 접속 및 다운로드

The screenshot shows the Oracle website's main navigation bar at the top, featuring links for 제품 (Products), 리소스 (Resources), 지원 (Support), 이벤트 (Events), and 계정 보기 (Account View). Below the navigation, there are several sections of links:

- Oracle 소개 (Oracle Introduction):** 分석 보고서 (Analytics Report), 비즈니스 실무 (Business Practice), 기업의 책임 (Corporate Responsibility), 회사 보안 실무 (Company Security Practice), 고객 참조 (Customer Reference), IR(Investor Relations), Oracle의 코로나 19 대응 (Oracle's Response to COVID-19).
- 블로그 (Blog):** 온라인 구매 및 갱신 (Online Purchase and Update), 커뮤니티 포럼 (Community Forum), 컨설팅 (Consulting), 설명서 (Documentation), 파이낸싱 (Financing).
- Oracle University (Oracle University):** 무료 교육 (Free Education), 디지털/온라인 교육 (Digital/Online Education), 안내식 교육 (Guided Education), 자격증 (Certifications).
- Oracle Cloud Free Tier (Oracle Cloud Free Tier):** 클라우드 아키텍처 (Cloud Architecture), 클라우드 송장 발행 (Cloud Shipping Label), 클라우드 마켓플레이스 (Cloud Marketplace), 클라우드 준비 업데이트 (Cloud Preparation Update), 클라우드 보안 실무 (Cloud Security Practice), Oracle for Startups (Oracle for Startups), 학생 및 교육자용 (Student and Educator Use).
- 소프트웨어 다운로드 (Software Download):** This link is highlighted with a red border.
- 지원 서비스 (Support Services):** 지원 갱신 (Support Update).
- 개발자 센터 (Developer Center):** 지원 갱신 (Support Update).

▶ SQL Developer 설치

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

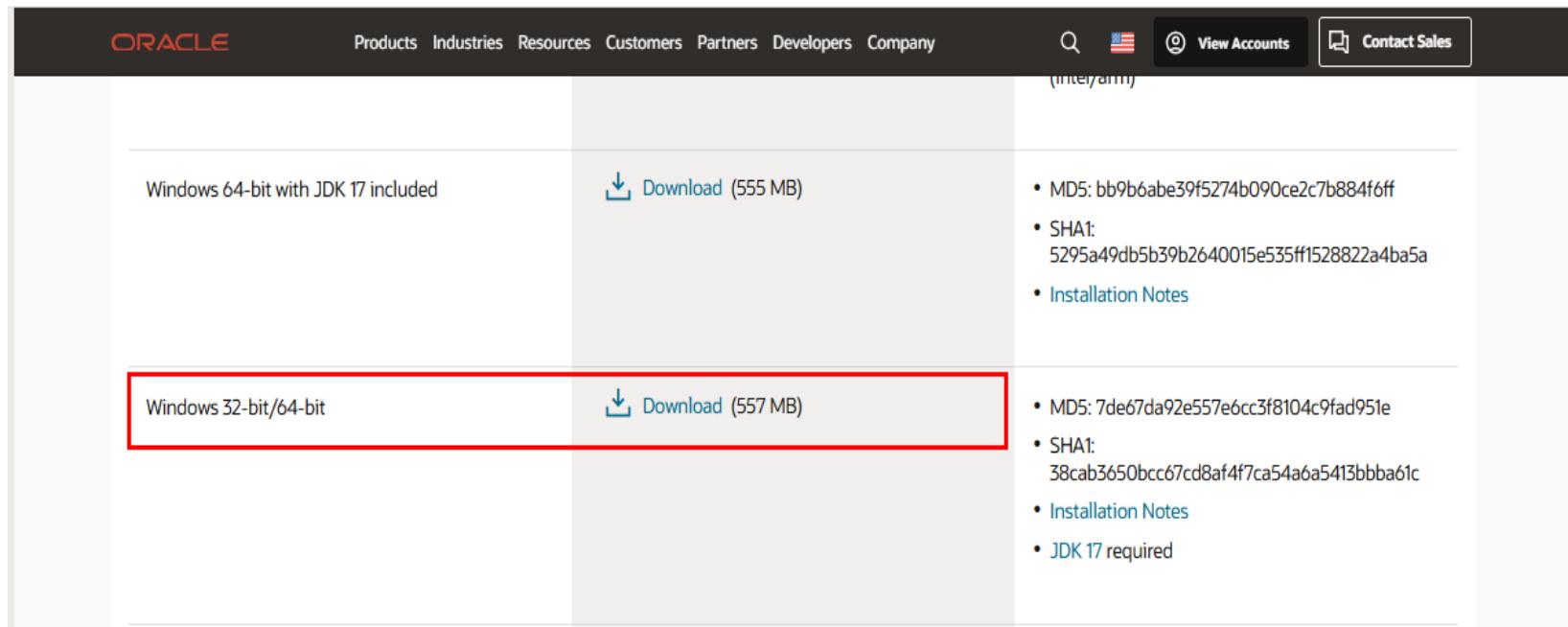


The screenshot shows the Oracle Developer Tools page. A red box highlights the "Developer Tools" section header. Another red box highlights the "SQL Developer" link in the fourth column of the grid.

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	SQL Developer	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

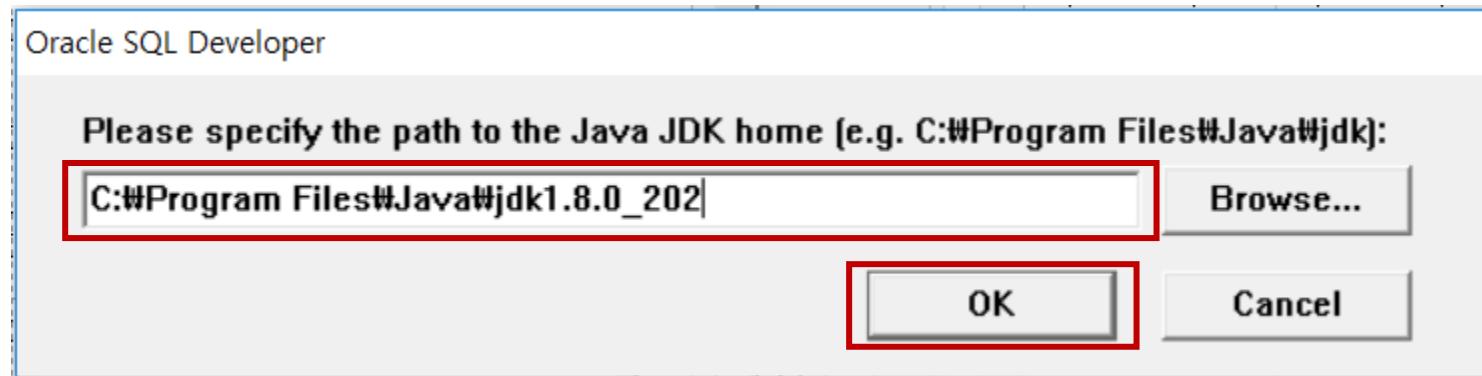


The screenshot shows the Oracle website's product page for SQL Developer. The top navigation bar includes links for Products, Industries, Resources, Customers, Partners, Developers, Company, a search bar, and account management options. Below the navigation, there are two main download options:

- Windows 64-bit with JDK 17 included**: Includes a download link for 555 MB and a redacted MD5/SHA1 hash. It also links to Installation Notes.
- Windows 32-bit/64-bit**: This link is highlighted with a red box. It includes a download link for 557 MB and a redacted MD5/SHA1 hash. It also links to Installation Notes and a note that JDK 17 is required.

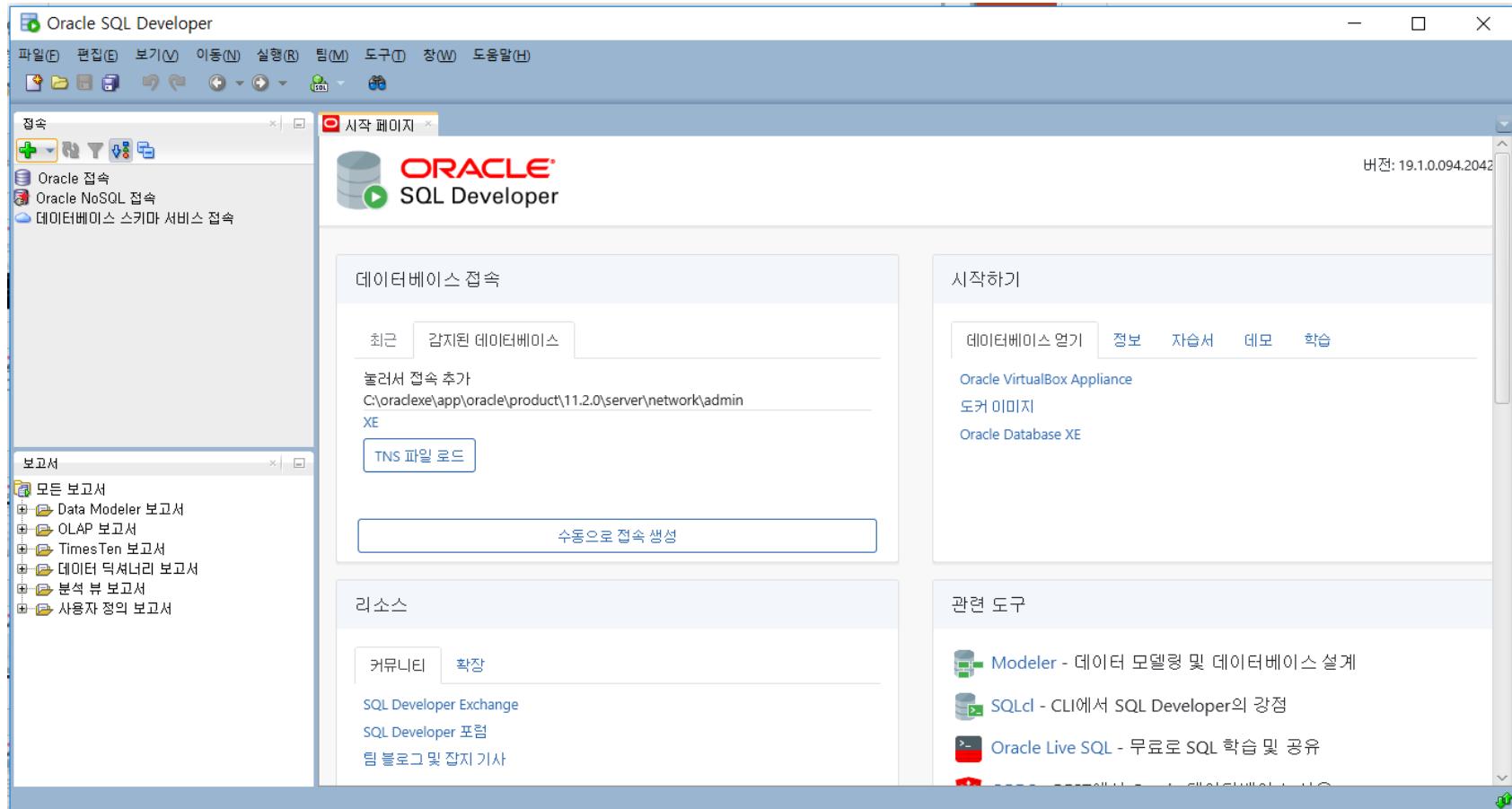
▶ SQL Developer 실행

✓ JDK 경로 설정



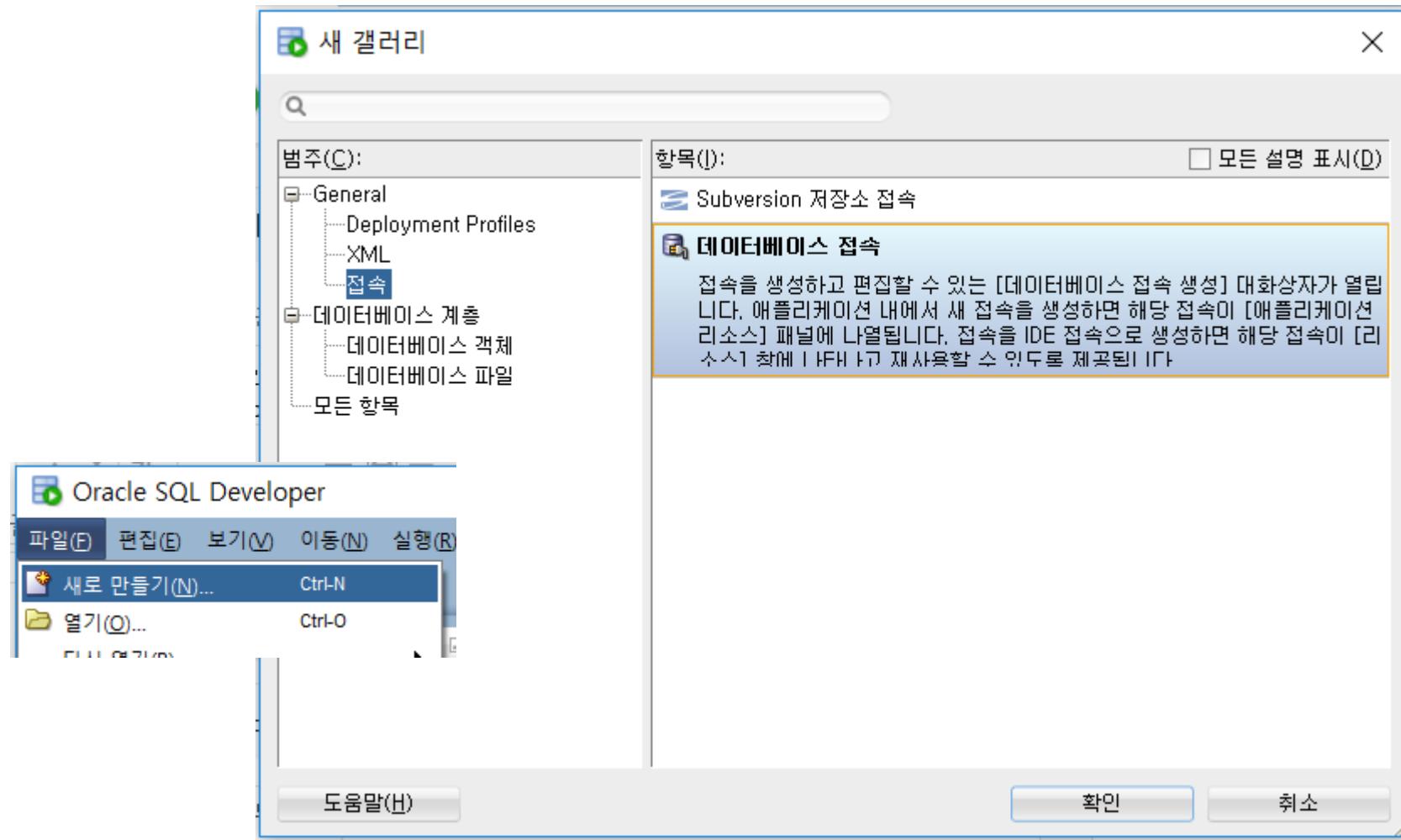
▶ SQL Developer 실행

✓ 메인



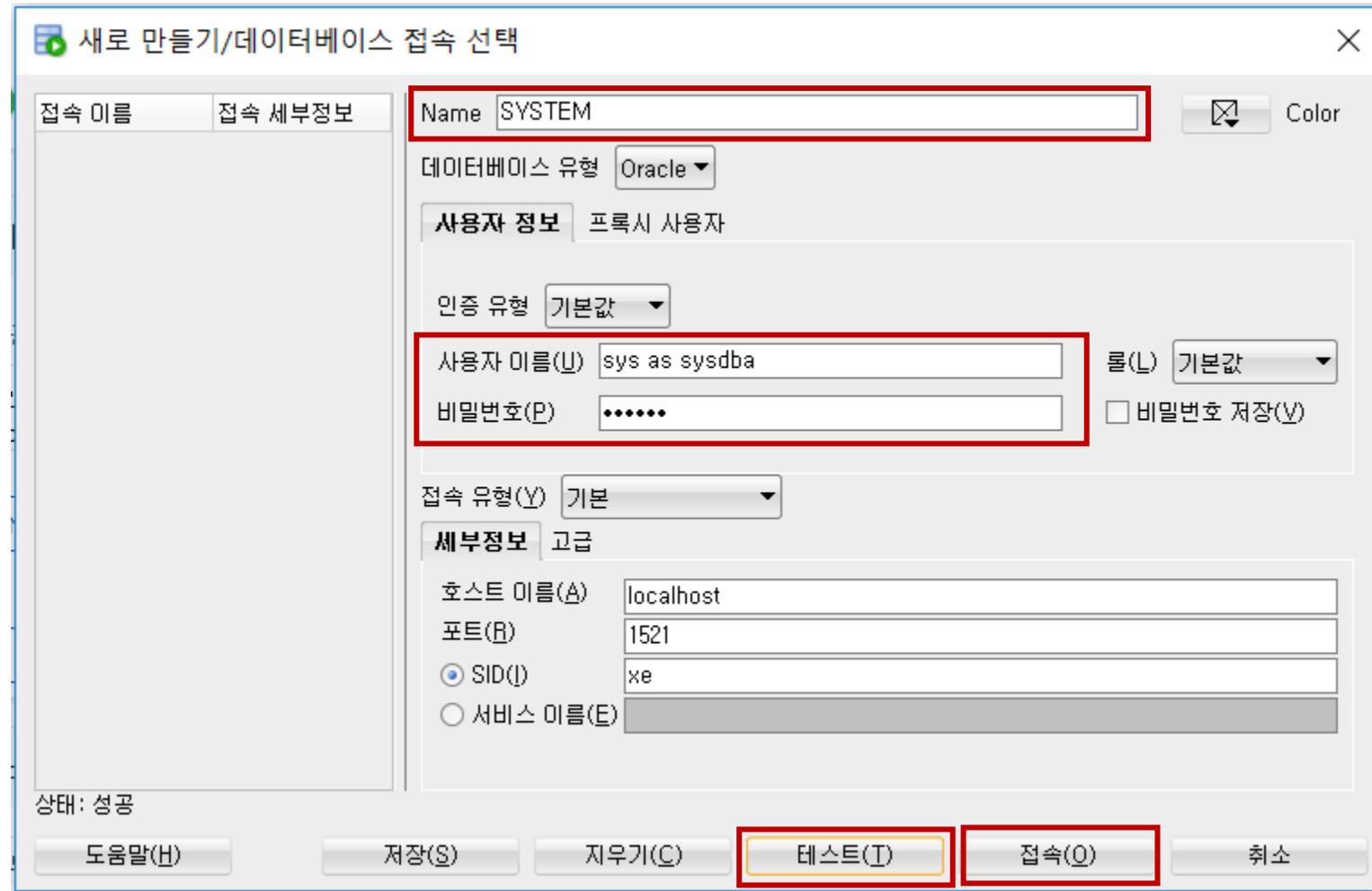
▶ SQL Developer 실행

✓ 접속 설정



▶ SQL Developer 실행

✓ 접속 설정



▶ SQL Developer 실행

✓ 접속 성공

Oracle SQL Developer : WEB_SCOTT

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

접속 워크시트 질의 작성기

WEB_SCOTT

WEB_SCOTT

질의 작성 워크시트

DB 정보

보고서

질의 결과

SQL | 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

1 행 19 열 | 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, '대복한', '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	선농일	621235-1985634	sun di@kh.or.kr	01099546325	D9	J1	S1	8000000	0.3	(null)	90/02/06	(null)	N
2	201	송승기	631165-1364654	song ik@kh.or.kr	0104566656	D9	J2	S1	6000000	(null)	(null)	01/09/01	(null)	N
3	202	노홍정	651015-1046544	no hc@kh.or.kr	01066566263	D9	J2	S3	3700000	(null)	2010/01/01	(null)	(null)	N
4	203	홍규호	660106-2653546	sv ho@kh.or.kr	0176707879	D6	J4	S5	2800000	0.2	20496/05/03	(null)	(null)	N
5	204	유재석	700120-1364547	voo js@kh.or.kr	0109999192	D6	J3	S4	3400000	(null)	2010/00/12/29	(null)	(null)	N
6	205	전송아	770108-1357951	ung jh@kh.or.kr	0103654875	D6	J3	S4	3000000	(null)	20499/09/04	(null)	(null)	N
7	206	바나라	630709-2054321	pack nr@kh.or.kr	0109639522	D6	J6	S6	1800000	(null)	20701/08/05	(null)	(null)	N
8	207	하이유	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	신보서	750206-1325546	sim bs@kh.or.kr	0113654485	D5	J4	S4	3500000	0.15	20711/11/11	(null)	(null)	N
11	210	김은혜	650505-2356985	youn eh@kh.or.kr	0179964233	D5	J7	S5	2000000	(null)	20701/02/03	(null)	(null)	N
12	211	전현도	830807-1121341	jun hd@kh.or.kr	0104438222	D8	J6	S5	2000000	(null)	21000/12/12	(null)	(null)	N
13	212	장쭈영	700923-2234152	jang zw@kh.or.kr	0106682222	D8	J5	S5	2550000	0.25	21116/05/17	(null)	(null)	N
14	213	하농구	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	대윤하	811030-1536543	dae bh@kh.or.kr	0103669877	D1	J6	S4	3700000	(null)	21406/07/19	(null)	(null)	N
17	216	차태연	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	임서화	620712-1102342	im sw@kh.or.kr	(null)	D2	J4	S6	1550000	(null)	(null)	99/09/09	(null)	N