

04. 데이터베이스 구현 수행평가

SQL 테이블 생성부터 조회까지

날짜 : 2022/10/6

이름 : 조주영



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테이블 생성

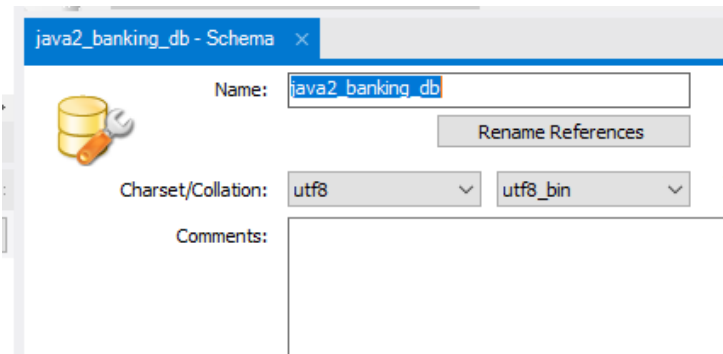
3

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SQL 데이터 조회

1. 은행업무 ERD 작성










데이터베이스명



	Table Name:	Customer	Schema:	java2_banking.					
Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
 cust_jumin	VARCHAR(20)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_name	VARCHAR(20)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_addr	VARCHAR(100)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_birth	DATE	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_email	VARCHAR(50)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_phnum	VARCHAR(25)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 cust_job	VARCHAR(45)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

고객

	Table Name:	Accounts	Schema: java2_banking						
Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
 acc_id	VARCHAR(11)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_type	VARCHAR(20)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_balance	INT(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 card_ask	VARCHAR(5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_register_date	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_cust_name	VARCHAR(20)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

예금계좌

Table Name:	Cards	Schema:	java2_banking_						
Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
card_id	VARCHAR(15)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
card_register_date	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
card_limit_money	INT(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
card_approve_date	DATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
card_type	VARCHAR(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

카드










Table Name:

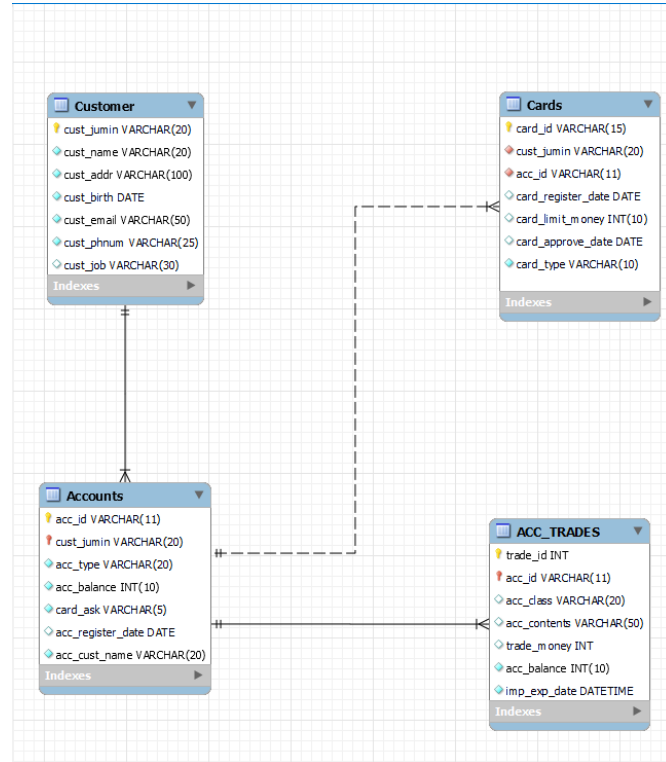
ACC_TRADES

Schema: **java2_banking**

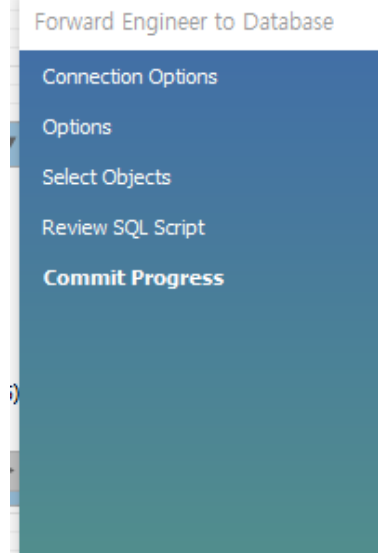
Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
 trade_id	INT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
 acc_class	VARCHAR(20)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_contents	VARCHAR(50)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 trade_money	INT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 acc_balance	INT(10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 imp_exp_date	DATETIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

거래내역

2. 테이블 생성



ERD 관계설정



Forward Engineering Progress

The following tasks will now be executed. Please monitor the execution. Press Show Logs to see the execution logs.

- ☒ Connect to DBMS
- ☒ Execute Forward Engineered Script
- ☒ Read Back Changes Made by Server
- ☒ Save Synchronization State

Forward Engineer Finished Successfully

Forward Engineer...
이용하여 데이터베이스 생성

3. 테이블 데이터 입력

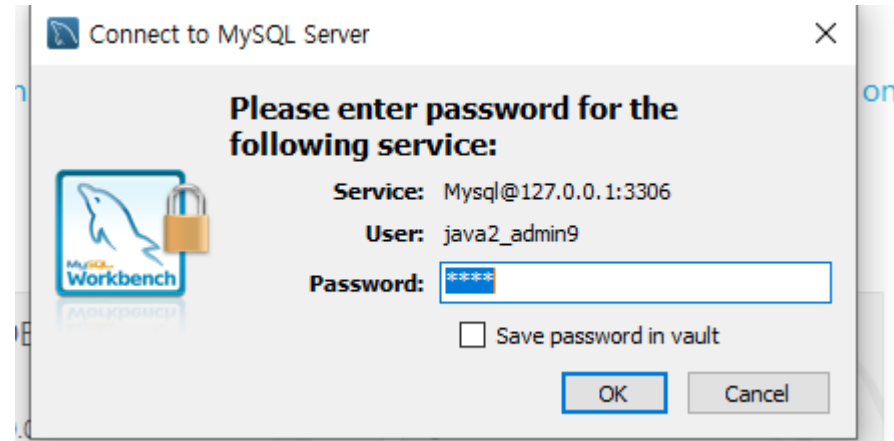
```
Query 1 x bank_account user3
Limit to 2000 rows
1 • create user 'java2_admin9'@'%' identified by '1234';
2 • grant all privileges on `java2_banking_db`.* to 'java2_admin9'@'%';
3 • flush privileges;
```

User 생성

java2_banking_db_Connecti...

java2_admin9
127.0.0.1:3306

커넥션 생성



커넥션 입장

3. 테이블 데이터 입력

Customer

	cust_jumin	cust_name	cust_addr	cust_birth	cust_email	cust_phnum	cust_job
▶	750611-1234567	이정재	서울	1975-06-11	leejj@gmail.com	010-1102-7506	배우
	760121-1234567	정우성	서울	1976-01-21	wsj@gmail.com	010-1101-7601	배우
	721128-1234567	유재석	부산	1972-11-28	you@gmail.com	010-6101-7211	개그맨
	920907-1234567	강호동	부산	1992-09-07	kang@gmail.com	010-7103-9209	개그맨
	660912-1234567	원빈	대전	1966-09-12	one@daum.net	010-2104-6609	배우
	790413-1234567	이나영	대전	1979-04-13	lee@naver.com	010-2101-7904	회사원
	890530-1234567	전지현	대전	1989-05-30	jjh@naver.com	010-1103-8905	자영업
	651021-1234567	김연아	대구	1965-10-21	yuna@daum.net	010-5101-6510	운동선수
	790728-1234567	장동건	대구	1979-07-28	jang@naver.com	010-3101-7907	배우
	840615-1234567	고소영	대구	1976-01-21	goso@daum.net	010-1101-7601	배우
	770314-1234567	강동원	광주	1977-03-14	dong@naver.com	010-8101-7703	배우
	891209-1234567	조인성	광주	1989-12-09	join@gmail.com	010-7104-8912	배우
	NULL	NULL	NULL	NULL	NULL	NULL	NULL

입력한 쿼리문

```
1 • insert into `Customer` values ('760121-1234567', '정우성', '서울', '1976-01-21', 'wsj@gmail.com', '010-1101-7601', '배우');
2 • insert into `Customer` values ('750611-1234567', '이정재', '서울', '1975-06-11', 'leejj@gmail.com', '010-1102-7506', '배우');
3 • insert into `Customer` values ('890530-1234567', '전지현', '대전', '1989-05-30', 'jjh@naver.com', '010-1103-8905', '자영업');
4 • insert into `Customer` values ('790413-1234567', '이나영', '대전', '1979-04-13', 'lee@naver.com', '010-2101-7904', '회사원');
5 • insert into `Customer` values ('660912-1234567', '원빈', '대전', '1966-09-12', 'one@daum.net', '010-2104-6609', '배우');
6 • insert into `Customer` values ('790728-1234567', '장동건', '대구', '1979-07-28', 'jang@naver.com', '010-3101-7907', '배우');
7 • insert into `Customer` values ('840615-1234567', '고소영', '대구', '1976-01-21', 'goso@daum.net', '010-1101-7601', '배우');
8 • insert into `Customer` values ('651021-1234567', '김연아', '대구', '1965-10-21', 'yuna@daum.net', '010-5101-6510', '운동선수');
9 • insert into `Customer` values ('721128-1234567', '유재석', '부산', '1972-11-28', 'you@gmail.com', '010-6101-7211', '개그맨');
10 • insert into `Customer` values ('920907-1234567', '강호동', '부산', '1992-09-07', 'kang@gmail.com', '010-7103-9209', '개그맨');
11 • insert into `Customer` values ('891209-1234567', '조인성', '광주', '1989-12-09', 'join@gmail.com', '010-7104-8912', '배우');
12 • insert into `Customer` values ('770314-1234567', '강동원', '광주', '1977-03-14', 'dong@naver.com', '010-8101-7703', '배우');
```

3. 테이블 데이터 입력

Cards

card_id	cust_jumin	acc_id	card_register_date	card_limit_money	card_approve_date	card_type
1011-1001-1001	760121-1234567	101-11-1001	2020-01-21	1000000	2020-02-10	check
1011-1001-1002	890530-1234567	101-11-1002	2020-06-11	3000000	2020-06-15	check
1011-1001-1003	790413-1234567	101-11-1003	2020-05-30	5000000	2020-06-25	credit
1011-1001-1004	660912-1234567	101-11-1004	2020-04-13	1000000	2020-05-10	credit
1011-1001-1005	840615-1234567	101-11-1005	2020-09-12	1500000	2020-10-10	check
1011-1001-1006	651021-1234567	101-11-1006	2020-07-28	10000000	2020-08-15	check
1011-1001-1007	721128-1234567	101-11-1007	2020-06-15	2000000	2020-07-25	credit
1011-1001-1008	920907-1234567	101-11-1008	2020-10-21	5000000	2020-11-15	credit
1011-1001-1009	891209-1234567	101-11-1009	2020-11-28	1000000	2020-12-10	check
1011-1001-1010	770314-1234567	101-11-1010	2020-09-07	1000000	2020-10-10	credit

입력한 쿼리문

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```
25 • insert into `Cards` values ('1011-1001-1001', '760121-1234567', '101-11-1001', '2020-01-21', 1000000, '2020-02-10', 'check');
26 • insert into `Cards` values ('1011-1001-1002', '890530-1234567', '101-11-1002', '2020-06-11', 3000000, '2020-06-15', 'check');
27 • insert into `Cards` values ('1011-1001-1003', '790413-1234567', '101-11-1003', '2020-05-30', 5000000, '2020-06-25', 'credit');
28 • insert into `Cards` values ('1011-1001-1004', '660912-1234567', '101-11-1004', '2020-04-13', 1000000, '2020-05-10', 'credit');
29 • insert into `Cards` values ('1011-1001-1005', '840615-1234567', '101-11-1005', '2020-09-12', 1500000, '2020-10-10', 'check');
30 • insert into `Cards` values ('1011-1001-1006', '651021-1234567', '101-11-1006', '2020-07-28', 10000000, '2020-08-15', 'check');
31 • insert into `Cards` values ('1011-1001-1007', '721128-1234567', '101-11-1007', '2020-06-15', 2000000, '2020-07-25', 'credit');
32 • insert into `Cards` values ('1011-1001-1008', '920907-1234567', '101-11-1008', '2020-10-21', 5000000, '2020-11-15', 'credit');
33 • insert into `Cards` values ('1011-1001-1009', '891209-1234567', '101-11-1009', '2020-11-28', 1000000, '2020-12-10', 'check');
34 • insert into `Cards` values ('1011-1001-1010', '770314-1234567', '101-11-1010', '2020-09-07', 1000000, '2020-10-10', 'credit');
```

3. 테이블 데이터 입력








Accounts

Result Grid		Filter Rows:		Edit:		Export/Import:		Wrap Cell Cc	
	acc_id	cust_jumin	acc_type	acc_balance	card_ask	acc_register_date	acc_cust_name		
▶	101-11-1001	760121-1234567	자유입출금	4160000	Y	2020-01-21	정우성		
	101-11-1002	890530-1234567	자유입출금	376000	Y	2020-06-11	전지현		
	101-11-1003	790413-1234567	자유입출금	1200000	Y	2020-05-30	이나영		
	101-11-1004	660912-1234567	자유입출금	1000000	Y	2020-04-13	원빈		
	101-11-1005	840615-1234567	자유입출금	820000	Y	2020-09-12	고소영		
	101-11-1006	651021-1234567	자유입출금	3520000	Y	2020-07-28	김연아		
	101-11-1007	721128-1234567	자유입출금	7620500	Y	2020-06-15	유재석		
	101-11-1008	920907-1234567	자유입출금	3400000	Y	2020-10-21	강호동		
	101-11-1009	891209-1234567	자유입출금	1763000	Y	2020-11-28	조인성		
	101-11-1010	770314-1234567	자유입출금	1080000	Y	2020-09-07	강동원		

입력한 쿼리문

```
14 • insert into `Accounts` values ('101-11-1001', '760121-1234567', '자유입출금', 4160000, 'Y', '2020-01-21', '정우성');
15 • insert into `Accounts` values ('101-11-1002', '890530-1234567', '자유입출금', 376000, 'Y', '2020-06-11', '전지현');
16 • insert into `Accounts` values ('101-11-1003', '790413-1234567', '자유입출금', 1200000, 'Y', '2020-05-30', '이나영');
17 • insert into `Accounts` values ('101-11-1004', '660912-1234567', '자유입출금', 1000000, 'Y', '2020-04-13', '원빈');
18 • insert into `Accounts` values ('101-11-1005', '840615-1234567', '자유입출금', 820000, 'Y', '2020-09-12', '고소영');
19 • insert into `Accounts` values ('101-11-1006', '651021-1234567', '자유입출금', 3520000, 'Y', '2020-07-28', '김연아');
20 • insert into `Accounts` values ('101-11-1007', '721128-1234567', '자유입출금', 7620500, 'Y', '2020-06-15', '유재석');
21 • insert into `Accounts` values ('101-11-1008', '920907-1234567', '자유입출금', 3400000, 'Y', '2020-10-21', '강호동');
22 • insert into `Accounts` values ('101-11-1009', '891209-1234567', '자유입출금', 1763000, 'Y', '2020-11-28', '조인성');
23 • insert into `Accounts` values ('101-11-1010', '770314-1234567', '자유입출금', 1080000, 'Y', '2020-09-07', '강동원');
```


3. 테이블 데이터 입력

Result Grid							
Filter Rows: <input type="text"/>							
Edit:     							
Export/Import:  							
Wrap Cells							
	trade_id	acc_id	acc_class	acc_contents	trade_money	acc_balance	imp_exp_date
▶	1	101-11-1001	입금	2월 정기급여	3500000	4160000	2020-02-10 12:36:12
	2	101-11-1003	출금	ATM 출금	300000	1200000	2020-02-10 12:37:21
	3	101-11-1008	입금	2월 급여	2800000	3200000	2020-02-10 12:38:21
	4	101-11-1006	출금	2월 공과금	116200	3120000	2020-02-10 12:39:21
	5	101-11-1005	출금	ATM 출금	50000	820000	2020-02-10 12:40:21
	6	101-11-1006	입금	홍길동 이체	400000	3520000	2020-02-10 12:41:21
	7	101-11-1007	출금	2월 관리비	145000	7620500	2020-02-10 12:42:21
	8	101-11-1008	입금	홍길동 입금	200000	3400000	2020-02-10 12:43:21
	9	101-11-1009	입금	연말정산 환급	112000	1763000	2020-02-10 12:44:21
	10	101-11-1010	출금	ATM 출금	30000	1080000	2020-02-10 12:45:21

입력한 쿼리문

Acc_Trades

```
>>
36 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
37   values ('101-11-1001', '입금', '2월 정기급여', 3500000, 4160000, "2020-02-10 12:36:12");
38 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
39   values ('101-11-1003', '출금', 'ATM 출금', 300000, 1200000, "2020-02-10 12:37:21");
40 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
41   values ('101-11-1008', '입금', '2월 급여', 2800000, 3200000, "2020-02-10 12:38:21");
42 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
43   values ('101-11-1006', '출금', '2월 공과금', 116200, 3120000, "2020-02-10 12:39:21");
44 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
45   values ('101-11-1005', '출금', 'ATM 출금', 50000, 820000, "2020-02-10 12:40:21");
46 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
47   values ('101-11-1006', '입금', '홍길동 이체', 400000, 3520000, "2020-02-10 12:41:21");
48 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
49   values ('101-11-1007', '출금', '2월 관리비', 145000, 7620500, "2020-02-10 12:42:21");
50 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
51   values ('101-11-1008', '입금', '홍길동 입금', 200000, 3400000, "2020-02-10 12:43:21");
52 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
53   values ('101-11-1009', '입금', '연말정산 환급', 112000, 1763000, "2020-02-10 12:44:21");
54 • insert into `acc_trades` (`acc_id`, `acc_class`, `acc_contents`, `trade_money`, `acc_balance`, `imp_exp_date`)
55   values ('101-11-1010', '출금', 'ATM 출금', 30000, 1080000, "2020-02-10 12:45:21");
<<
```

1 고객 테이블을 조회하시오.

[illegible]

2 카드 테이블을 조회하시오.

[illegible]

3 예금계좌 테이블을 조회하시오.

[illegible]

4 예금계좌거래내역 테이블을 조회하시오.

[illegible]

4. SQL 데이터 조회

5 카드 종류가 신용카드인 고객에 대한 모든 정보를 조회하시오.

*모든 정보: 고객 명, 고객 주소, 고객 생년월일, 고객 이메일, 고객 전화번호, 고객 직업

```
53 • select
54   `cust_name`, `cust_addr`, `cust_birth`,
55   `cust_email`, `cust_phnum`, `cust_job`
56 from `Customer` as a
57 join `Cards` as b
58 on a.cust_jumin = b.cust_jumin
59 where `card_type`='credit';
```

	cust_name	cust_addr	cust_birth	cust_email	cust_phnum	cust_job
▶	이나영	대전	1979-04-13	lee@naver.com	010-2101-7904	회사원
	원빈	대전	1966-09-12	one@daum.net	010-2104-6609	배우
	유재석	부산	1972-11-28	you@gmail.com	010-6101-7211	개그맨
	강호동	부산	1992-09-07	kang@gmail.com	010-7103-9209	개그맨
	강동원	광주	1977-03-14	dong@naver.com	010-8101-7703	배우

4. SQL 데이터 조회

6 예금 잔고가 4,000,000원 이상 고객에 대한 고객 명, 주민번호, 전화번호, 주소를 조회하시오.

```
61 • select
62     `cust_name`, a.`cust_jumin`, `cust_phnum`, `cust_addr`
63 from `Customer` as a
64 join `Accounts` as b
65 on a.cust_jumin = b.cust_jumin
66 where `acc_balance` >= 4000000;
67
```

<				
Result Grid Filter Rows: Export: Wrap Cell Content:				
	cust_name	cust_jumin	cust_phnum	cust_addr
▶	정우성	760121-1234567	010-1101-7601	서울
	유재석	721128-1234567	010-6101-7211	부산