데이터베이스 & SQL
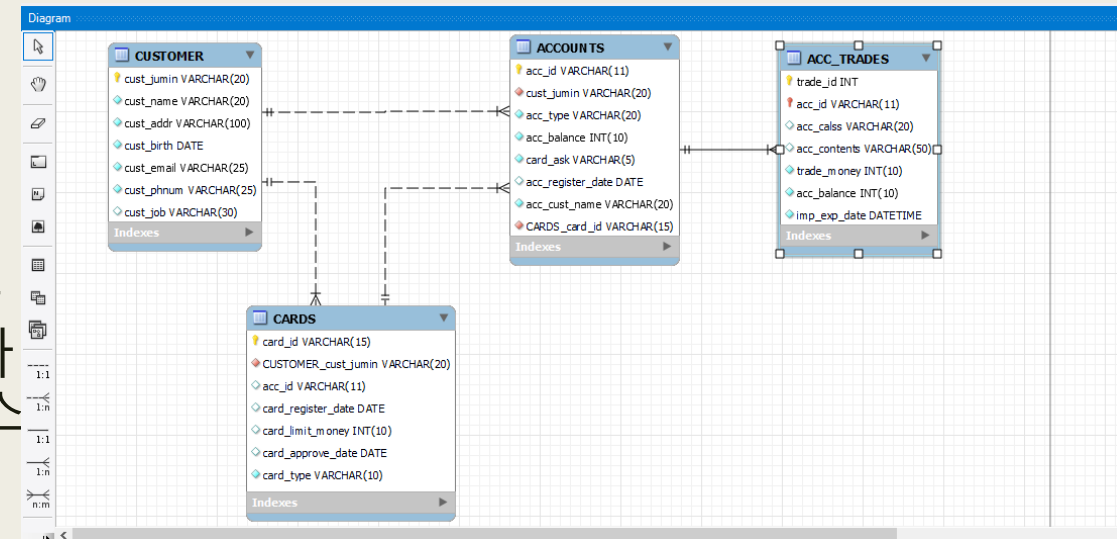
2022.10.06
라성준

문제1. 다음요구사항을 읽고 개체, 속성, 관계를 식별한 후 <은행 업무 관리> ERD를 작성하시오.
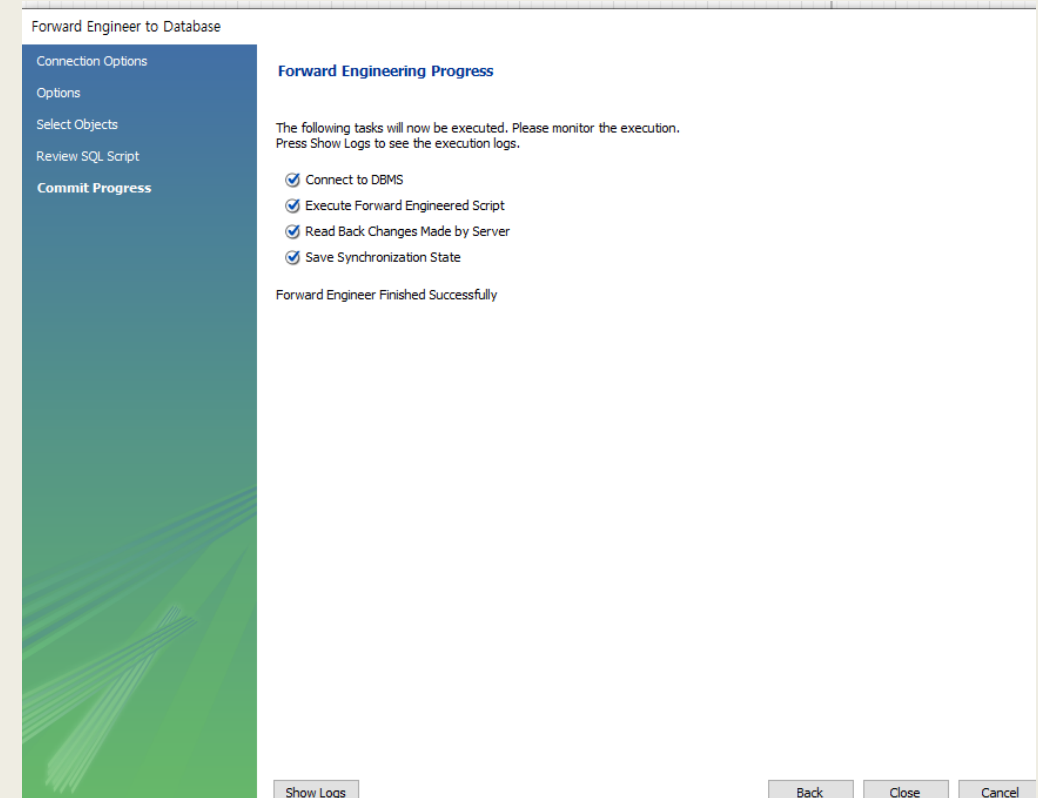
■ -프로젝트 소개

■ OO은행은 지점별로 기본적인 은행 업무를 수행한다. 고객은 통장을 가지고 입출금이나 카드 서비스 등을 이용하고, 직원은 고객 업무를 도와 은행 업무를 수행한다. OO은행은 고객과 내부 직원의 원활한 업무를 위해 데이터베이스를 구축한다.

Diagram

CUSTOMER
- cust_jumin VARCHAR(20)
- cust_name VARCHAR(20)
- cust_addr VARCHAR(100)
- cust_birth DATE
- cust_email VARCHAR(25)
- cust_phnum VARCHAR(25)
- cust_job VARCHAR(30)
- Indexes ▶

ACCOUNTS
- acc_id VARCHAR(11)
- cust_jumin VARCHAR(20)
- acc_type VARCHAR(20)
- acc_balance INT(10)
- card_ask VARCHAR(5)
- acc_register_date DATE
- acc_cust_name VARCHAR(20)
- CARDS_card_id VARCHAR(15)
- Indexes ▶

ACC_TRADES
- trade_id INT
- acc_id VARCHAR(11)
- acc_calss VARCHAR(20)
- acc_contents VARCHAR(50)
- trade_money INT(10)
- acc_balance INT(10)
- imp_exp_date DATETIME
- Indexes ▶

CARDS
- card_id VARCHAR(15)
- CUSTOMER_cust_jumin VARCHAR(20)
- acc_id VARCHAR(11)
- card_register_date DATE
- card_limit_money INT(10)
- card_approve_date DATE
- card_type VARCHAR(10)
- Indexes ▶

1:1
1:n
1:1
1:n
n:m

문제2 ERD를 이용하여 테이블을 생성하시오

■ Database > Forward Engineer 클릭한다

문제3 테이블 명세서를 참고하여 데이터를 입력하시오

```
7       #ACCOUNTS 테이블 삽입
8  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1001','760121-1234567','자유입출금','4160000','Y','2020-01-21','정우성');
9  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1002','890530-1234567','자유입출금','376000','Y','2020-06-11','전지현');
0  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1003','790413-1234567','자유입출금','1200000','Y','2020-05-30','이나영');
1  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1004','660912-1234567','자유입출금','1000000','Y','2020-04-13','원빈');
2  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1005','840615-1234567','자유입출금','820000','Y','2020-09-12','고소영');
3  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1006','651021-1234567','자유입출금','3520000','Y','2020-07-28','김연아');
4  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1007','721128-1234567','자유입출금','7620500','Y','2020-06-15','유재석');
5  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1008','920907-1234567','자유입출금','3400000','Y','2020-10-21','강호동');
6  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1009','891209-1234567','자유입출금','1763000','Y','2020-11-28','조인성');
7  •    INSERT INTO `ACCOUNTS` VALUES('1011-1001-1010','770314-1234567','자유입출금','1080000','Y','2020-09-07','강동원');

15      #CARDS 테이블 삽입
16 •    INSERT INTO `CARDS` VALUES('1011-1001-1001','760121-1234567','101-11-1001','2020-01-21','1000000','2020-02-10','check');
17 •    INSERT INTO `CARDS` VALUES('1011-1001-1002','890530-1234567','101-11-1002','2020-06-11','3000000','2020-06-15','check');
18 •    INSERT INTO `CARDS` VALUES('1011-1001-1003','790413-1234567','101-11-1003','2020-05-30','5000000','2020-06-25','credit');
19 •    INSERT INTO `CARDS` VALUES('1011-1001-1004','660912-1234567','101-11-1004','2020-04-13','1000000','2020-05-10','credit');
20 •    INSERT INTO `CARDS` VALUES('1011-1001-1005','840615-1234567','101-11-1005','2020-09-12','1500000','2020-10-10','check');
21 •    INSERT INTO `CARDS` VALUES('1011-1001-1006','651021-1234567','101-11-1006','2020-07-28','10000000','2020-08-15','check');
22 •    INSERT INTO `CARDS` VALUES('1011-1001-1007','721128-1234567','101-11-1007','2020-06-15','2000000','2020-07-25','credit');
23 •    INSERT INTO `CARDS` VALUES('1011-1001-1008','920907-1234567','101-11-1008','2020-10-21','5000000','2020-11-15','credit');
24 •    INSERT INTO `CARDS` VALUES('1011-1001-1009','891209-1234567','101-11-1009','2020-11-28','1000000','2020-12-10','check');
25 •    INSERT INTO `CARDS` VALUES('1011-1001-1010','770314-1234567','101-11-1010','2020-09-07','1000000','2020-10-10','credit');
```

```sql
1    #CUSTOMER 테이블 삽입
2 •  INSERT INTO `CUSTOMER` VALUES ('760121-1234567','정우성','서울','1976-01-21','ABC','010-1101-7601','배우');
3 •  INSERT INTO `CUSTOMER` VALUES ('750611-1234567','이정재','서울','1975-06-11','ACD','010-1102-7506','배우');
4 •  INSERT INTO `CUSTOMER` VALUES ('890530-1234567','전지현','대전','1989-05-30','jjh@naver.com','010-1103-8905','자영업');
5 •  INSERT INTO `CUSTOMER` VALUES ('790413-1234567','이나영','대전','1979-04-13','lee@naver.com','010-2101-7904','회사원');
6 •  INSERT INTO `CUSTOMER` VALUES ('660912-1234567','원빈','대전','1966-09-12','one@daum.net','010-2104-6609','배우');
7 •  INSERT INTO `CUSTOMER` VALUES ('790728-1234567','장동건','대구','1979-07-28','jang@naver.com','010-3101-7907','배우');
8 •  INSERT INTO `CUSTOMER` VALUES ('840615-1234567','고소영','대구','1984-06-15','goso@daum.net','010-4101-8406','회사원');
9 •  INSERT INTO `CUSTOMER` VALUES ('651021-1234567','김연아','대구','1965-10-21','yuna@daum.net','010-5101-6510','운동선수');
10 • INSERT INTO `CUSTOMER` VALUES ('721128-1234567','유재석','부산','1972-11-28','AAA','010-6101-7211','개그맨');
11 • INSERT INTO `CUSTOMER` VALUES ('920907-1234567','강호동','부산','1992-09-07','BBB','010-7103-9209','개그맨');
12 • INSERT INTO `CUSTOMER` VALUES ('891209-1234567','조인성','광주','1989-12-09','join@gmail.com','010-7104-8912','배우');
13 • INSERT INTO `CUSTOMER` VALUES ('770314-1234567','강동원','광주','1977-03-14','dong@naver.com','010-8101-7703','배우');


39   #ACC-TRADES 테이블 삽입
40 • INSERT INTO `ACC_TRADES` VALUES ('1','1011-1001-1001','입금','2월 정기급여','3500000','4160000',NOW());
41 • INSERT INTO `ACC_TRADES` VALUES ('2','1011-1001-1003','출금','ARM 출금','300000','1200000',NOW());
42 • INSERT INTO `ACC_TRADES` VALUES ('3','1011-1001-1008','입금','2월 급여','2800000','3200000',NOW());
43 • INSERT INTO `ACC_TRADES` VALUES ('4','1011-1001-1006','출금','2월 공과금','116200','3120000',NOW());
44 • INSERT INTO `ACC_TRADES` VALUES ('5','1011-1001-1005','출금','ATM 출금','50000','820000',NOW());
45 • INSERT INTO `ACC_TRADES` VALUES ('6','1011-1001-1006','입금','홍길동 이체','400000','3520000',NOW());
46 • INSERT INTO `ACC_TRADES` VALUES ('7','1011-1001-1007','출금','2월 관리비','145000','7620500',NOW());
47 • INSERT INTO `ACC_TRADES` VALUES ('8','1011-1001-1008','입금','홍길동 입금','200000','3400000',NOW());
48 • INSERT INTO `ACC_TRADES` VALUES ('9','1011-1001-1009','입금','연말정산 환급','112000','1763000',NOW());
49 • INSERT INTO `ACC_TRADES` VALUES ('10','1011-1001-1010','출금','ATM출금','30000','1080000',NOW());
```

문제4 다음 SQL을 실행하시오

- 1.고객 테이블을 조회하시오

cust_jumin	cust_name	cust_addr	cust_birth	cust_email	cust_phnum	cust_job
651021-1234567	김연아	대구	1965-10-21	yuna@daum.net	010-5101-6510	운동선수
660912-1234567	원빈	대전	1966-09-12	one@daum.net	010-2104-6609	배우
721128-1234567	유재석	부산	1972-11-28	AAA	010-6101-7211	개그맨
750611-1234567	이정재	서울	1975-06-11	ACD	010-1102-7506	배우
760121-1234567	정우성	서울	1976-01-21	ABC	010-1101-7601	배우
770314-1234567	강동원	광주	1977-03-14	dong@naver.com	010-8101-7703	배우
790413-1234567	이나영	대전	1979-04-13	lee@naver.com	010-2101-7904	회사원
790728-1234567	장동건	대구	1979-07-28	jang@naver.com	010-3101-7907	배우
840615-1234567	고소영	대구	1984-06-15	goso@daum.net	010-4101-8406	회사원
890530-1234567	전지현	대전	1989-05-30	jjh@naver.com	010-1103-8905	자영업
891209-1234567	조인성	광주	1989-12-09	join@gmail.com	010-7104-8912	배우
920907-1234567	강호동	부산	1992-09-07	BBB	010-7103-9209	개그맨
NULL	NULL	NULL	NULL	NULL	NULL	NULL

■ 카드 테이블을 조회하시오

card_id	CUSTOMER_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
NULL	NULL	NULL	NULL	NULL	NULL	NULL

■ 예금 계좌 테이블을 조회하시오

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
NULL	NULL	NULL	NULL	NULL	NULL	NULL

■ 예금계좌거래내역 테이블을 조회하시오

trade_id	acc_id	acc_class	acc_contents	trade_money	acc_balance	imp_exp_date
1	101-11-1001	입금	2월 정기급여	3500000	4160000	2022-10-06 16:22:08
2	101-11-1003	출금	ATM 출금	300000	1200000	2022-10-06 16:22:48
3	101-11-1008	입금	2월 급여	2800000	3200000	2022-10-06 16:22:48
4	101-11-1006	출금	2월 공과금	116200	312000	2022-10-06 16:22:48
5	101-11-1005	출금	ATM 출금	50000	820000	2022-10-06 16:22:48
6	101-11-1006	입금	홍길동 이체	400000	3520000	2022-10-06 16:22:48
7	101-11-1007	출금	2월 관리비	145000	7620500	2022-10-06 16:22:48
8	101-11-1008	입금	홍길동 입금	200000	3400000	2022-10-06 16:22:48
9	101-11-1009	입금	연말정산 환급	112000	1763000	2022-10-06 16:22:48
10	101-11-1010	출금	ATM 출금	30000	1080000	2022-10-06 16:22:48
NULL	NULL	NULL	NULL	NULL	NULL	NULL

카드종류가 신용카드인 고객에 대한 모든 정보(고객명, 고객주소, 생년월일, 이메일, 전화번호, 직업)조회하시오

감사합니다.