Database Implementation and Design2 Final report

[Pet Funeral Home 'fourpaws' Customized Database]

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**Table of Contents**

**1. Members and Roles**

**2. Project Organization and Purpose**

2-1 Idea selection

2-2 Project Description and Expected Effectiveness

2-3 Project and system design Purpose

2-4 System Implementation Plan

**3. User/data requirements and Conceptual Design**

3-1 User/data requirements

3-2 ER-Model

**4. Logical Design**

4-1 Relational Model

**5. Physical Design**

5-1 Data Dictionary

**6. SQL Query**

6-1. DDL

6-2. DML

**7. System manual**

**8. Additional Descriptions**

**9. Reference**

**1. Members and Roles**  
Joint role from planning to implementation

**2. Project Organization and Purpose**

2-1. Idea selection

Various ideas came up in the process of selecting database items, including pet funeral homes, cafes, gyms, theme parks, musical instrument rental companies, museums, and study cafe management systems, but they were selected by anonymous vote to design a pet funeral management system.

The reason for selecting the idea was that there would be no standardized system because it is not a common database. 1) The number of companion animals has been steadily increasing since the COVID-19 pandemic, and 2) the pet-related business has also been steadily increasing. The increase in the number of companion animals is seen as an increase in emotional exchange with companion animals. 3) It is illegal to bury the carcasses of pets in the mountains or homes, and the carcasses of companion animals are classified as household waste, so they must be put in a pay-as-you-go bag and thrown away like general waste. Due to the increase in emotional exchange mentioned above, the funeral business for companion animals is likely to expand more than the present, which is small, so the funeral business for companion animals was selected as an idea for a database project.

**2-2. Project Description and Expected Effectiveness**

This project is aimed at a funeral home that is carrying out a pet funeral business. Since the market is currently small, it was judged that the company conducting this project would find it difficult to establish a business system. Therefore, it was judged that a system that can be seen with the eyes and created systematically would be needed accordingly. Company management can be further enriched by purchasing an integrated system made with custom designs. It can be expected to provide efficient information and security solutions by providing different database views for each customer, system developer, and employee who are stakeholders of this system.

In addition, by designing the system, other companies will purchase the system in the future, lowering entry barriers to running pet funeral businesses, and using a systematically integrated database system will reduce difficulty in expanding other businesses.

2-3. Project and system design Purpose

The project's goal is to establish a database of funeral homes that can be used in an integrated manner by referring to "poppose" and "dog support" that are actually carrying out pet funeral projects.

The services provided by this product are as follows. It provides a database management system for customer management, funeral home staff management, funeral procedures management provided to customers, service provision management provided after funeral procedures (such as remains, accessory production, etc.), and client management in transaction with the funeral home (accessory production company, land rental company for tombstones, etc.). The database designed accordingly stores information on customers using the funeral home, information on the funeral home staff, information on the urn and accessories, information on the accessory production company and the land rental company related to the tomb, and developers who manage the funeral home system can store, inquire, modify, and delete funeral home-related data through this database. Through the above function, a company that conducts pet funeral business can manage customers, employees, and customers registered with the company, and provides pet funeral-related functions to customers.

**2-4. System Implementation Plan**

The project aims to build an integrated database system for the management of pet funeral homes, which can lead to the following major implementation plans.

Database design defines necessary data tables and relationships, designs initial database schemas, system implementations divide modules by major functions, develop each module, and interface design designs user interfaces, receives user input and links with databases, testing and correcting system functions, correcting errors or problems found, and distributing the completed system to pet funeral homes in the case of system distribution, and providing necessary education.

Through this implementation plan, the project will be carried out efficiently, and pet funeral homes will be able to effectively utilize the integrated database system to more effectively utilize it to companies and customers.

**3. User/data requirements and Conceptual Design**

3-1. User/data requirements

This database system is a database system created for pet funeral homes called 'Poppose'. The requirements were made by referring to the website of 'Poppose', and the parts that seem to need to be modified when creating the database were arbitrarily modified, and the parts that were arbitrarily modified will be described in the document.

To create a database at a funeral home, you will first need to be able to store it. A funeral home requires an animal burial registration number, which is the only number, to prove that it is legally permitted to carry out the funeral process. You will also need the name of the branch, the start and finish times of the funeral home, and the address of the branch. Inside the funeral home, there is a memorial space and an enshrinement hall that are only separated when the funeral home is fixed as one. A memorial space has each name and a room number that is the only separate space when the funeral home is fixed as one, one funeral home may contain one or more memorial spaces, and one memorial space may be included in one funeral home. Also, the memorial space must be included in the funeral home, and there may be a funeral home without a memorial space.

The enshrinement hall has the enshrinement compartment number, name, and the enshrinement compartment number, and each enshrinement compartment is the only one separated by the room number when the funeral hall is fixed as one, and more than one enshrinement compartment number may exist in one enshrinement compartment. In addition, one funeral hall includes at least one enshrinement compartment, one enshrinement compartment is included in one funeral hall, and each enshrinement compartment must be included in the funeral hall, and like the memorial space, there may be a funeral hall without an enshrinement compartment.

In addition, the funeral home manages employees, who are separated by employee number and each employee has their department, phone number, date of birth, and name information. One employee can be dispatched to multiple funeral homes, and one funeral home can manage multiple employees. For example, if you are a cleaning staff, you can clean up at the Gwangju branch in Gyeonggi-do in the morning and then at the Hwaseong branch in Gyeonggi-do on a later schedule. Since the staff must stay 24 hours a day, there cannot be a funeral home without staff, and the funeral home must also be without staff.

Customers have their own ID and have information such as nickname, mobile phone number, password, and address. Resident registration information has a resident registration number and name. Each resident registration number is owned by one customer, and each customer has one resident registration information. It doesn't make sense that customers do not exist when resident registration information exists, and when customers also exist, resident registration information must exist.

Customers have a coupon to use when making a reservation, which contains information about the unique coupon number, promotion name, benefits, and availability points. A single customer may have multiple coupons and there may be customers who do not. Additionally, multiple customers may own one type of coupon, and no one may own it. Additionally, when a customer owns a coupon, the coupon's expiration date is stored in the database.

Customers also have information about their pets because they have raised them. A pet has information about its unique pet number, name, species, weight, and gender. One customer may have information about multiple pets, and one pet is raised by one customer. Customers may not have entered information about the animal. However, if you have one pet, there cannot be an ownerless pet.

In addition to customers, pets have a relationship with charnel house and Reservation. Since the charnel house Hall contains pet urns, pets are included in the charnel house. One charnel house has several pet urns, and one pet is placed in one charnel house. There are also pets that are not placed in the charnel house, and at least one animal must be placed in the charnel house.

Reservations manage information about which pets the customer will use and what services they will use, and when inquiring about the reservation, the reservation has information about which pets it is. One reservation contains information about one pet, and one pet exists in one reservation. The reservation must include a pet, but the pet may only be registered and may not have been booked yet. First of all, there is a reservation number that uniquely separates each reservation information, and other attributes include the path of the Pope inflow, cost, branch, progress status, date and time, and the date and time of day. In addition, reservations are made by receiving applications from customers, and only one customer can accept one reservation, and one customer can apply for more than one reservation. In addition, each reservation information must have customer information, and the customer may or may not make a reservation.

A package service corresponds to a pet funeral service provided to a customer when a customer performs a pet funeral, and one package service must be included in one or more reservations, and one reservation must have one package service. Package services have a unique package service number, package name, and cost. The additional fee type has a type that contains information on whether the package service is applied to general or special animals when an additional fee is applied, and an additional fee to apply an additional amount to the excess weight when the applied animal's weight is exceeded. Package services are related to the additional fee type, each package service has one additional fee type, and each additional fee type has one package service. When a package service exists, the additional fee type cannot but exist, and when an additional fee type exists, the package service cannot exist.

In addition, package services are related to product information to contain a list of products included in the service.

A product represents product information included in a package service, and its attributes are composed of a unique product number and name. In addition, one product may be included in one or more package services, one package service must include one or more products, and there may be products not included in the service.

Additional services correspond to services provided in addition to package services provided as main to customers. The attributes of the additional service include a unique additional service number and price, and one reservation must include one additional service, and one additional service must be included in one or more reservations. There are also mobile services, flower decorations, and memorial stones as subordinate services, and additional services must correspond to mobile services, flower decorations, and memorial stones, and additional services can be two or more sub-services (mobile services, flower decorations, and memorials) at the same time.

The mobile service corresponds to a service that can be applied when a customer moves to the funeral, and its attributes include the place and whether it is accompanied. In addition, flower decorations are a service that can be applied when a customer includes flower decorations at a funeral, and their attributes include one or more types of flowers. The Memorial Service is a service that can be applied to customers when making memorial stones as pets after the funeral, and its attributes include whether they can attend, whether AS is possible, and the colors to be applied to the stones.

A company can supplement the services of packages and additional services by knowing which packages are sold the most, which packages have the lowest sales, and which ones have the low sales through the DB. The management of profitable packages and additional services is very important in order for the funeral home to operate practically. In addition, through the information on companion animals, customers can determine whether only new customers exist or whether it is possible to attract existing customers. Likewise, since customer management is directly related to profits, it can be said that it has a great influence on the direction of the company's future operation. Additionally, personnel management can be smoothly performed through the act of searching for employee tuples.

3-2 ER-model

(Korea ver.)

도표, 원이(가) 표시된 사진

자동 생성된 설명

(English ver.)

도표, 원, 스크린샷, 시각화이(가) 표시된 사진

자동 생성된 설명

**4. Logical Design**

4-1. Relational Model

※ (Logical design부터는 향후 데이터를 넣는 작업을 위해 영문 버전으로 변경)

[Definition]

1NF: There are no properties with more than one value overlapping.

2NF: All columns are determined by one or more PKs - there is no partial function dependency.  
3NF: No columns have functional dependencies by columns other than PK. - no transitive function dependencies.

[1]  
FUNERAL (RCNUM, fname, open\_time, close\_time, address)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, RCNUM-> fname, open\_time, close\_time, address(Full function dependencies)

3NF : 2NF, RCNUM-> fname, open\_time, close\_time, address(No columns dependent by properties other than RCNUM)

[2]  
CHARNEL\_HOUSE (CHNUM, RCNUM, cname)  
Foreign key (RCNUM) references FUNERAL (RCNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, CHNUM, RCNUM -> cname (Full function dependencies)

3NF : 2NF, CHNUM, RCNUM -> cname (No columns dependent by properties other than CHNUM, RCNUM)

[3]  
CHARNEL\_ HOUSE\_Square\_Num (CHNUM, RCNum, Square\_Num)  
Foreign key (CHNUM, RCNum) references CHARNEL HOUSE(CHNUM, RCNum)

=>  
1NF : Does not contain values for overlapping properties

2NF : 1NF, CHNUM, RCNum -> Square\_Num (Full function dependencies)

3NF : 2NF, CHNUM, RCNum -> Square\_Num (No columns dependent by properties other than CHNUM)

[4]  
MEMORIAL\_SPACE (MNUM, RCNUM, mname)  
Foreign key (RCNUM) references FUNERAL (RCNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, MNUM, RCNUM -> mname (Full function dependencies)

3NF : 2NF, MNUM, RCNUM -> mname (No columns dependent by properties other than MNUM)

[5]  
EMPLOYEE (EID, name, birth\_date, phone\_num, department)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, EID -> name, birth\_date, phone\_num, department (Full function dependencies)

3NF : 2NF, EID -> name, birth\_date, phone\_num, department (No columns dependent by properties other than EID)

[6]  
MANAGEMENT (EID, RCNUM)  
Foreign key (EID) references EMPLOYEE(EID)  
Foreign key (RCNUM) references FUNERAL(RCNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, EID, RCNUM (Full function dependencies)

3NF : 2NF, EID, RCNUM (No columns dependent by properties other than EID, RCNUM)

[7]  
CUSTOMER\_INFO\_OF\_PUBLIC (RGNUM, cname)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, RGNUM -> cname(Full function dependencies)

3NF : 2NF, RGNUM -> cname (No columns dependent by properties other than RGNUM)

[8]  
CUSTOMER (CID, password, phone\_num, nickname, address, RGNUM)

Foreign key (RGNUM) references CUSTOMER\_INFO\_OF\_PUBLIC(RGNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, CID-> password, phone\_num, nickname, address, RGNum(Full function dependencies)

3NF : 2NF, CID-> password, phone\_num, nickname, address, RGNum(No columns dependent by properties other than CID)

[9]  
COUPON (CPNUM, promotion\_name, benefit, available\_location)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , CPNUM-> promotion\_name, benefit, available\_location (Full function dependencies)

3NF : 2NF, CPNUM-> promotion\_name, benefit, available\_location(No columns dependent by properties other than CPNUM )

[10]  
Customer\_Coupon (CPNUM, CID, coupon\_expirationperiod)  
Foreign key (CID) references CUSTOMER(CID)  
Foreign key (CPNUM) references COUPON(CPNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , CPNUM, CID -> coupon\_expirationperiod (Full function dependencies)

3NF : 2NF, CPNUM, CID -> coupon\_expirationperiod (No columns dependent by properties other than CPNUM, CID)

[11]  
PET (PID, pname, weight, sex, breeds, CID, CHNUM, RCNUM)  
Foreign key (CID) references CUSTOMER (CID)  
Foreign key (CHNUM, RCNUM) references CHARNEL HOUSE (CHNUM, RCNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, PID-> pname, weight, sex, breeds, CID, CHNUM, RCNUM (Full function dependencies)

3NF : 2NF, PID-> pname, weight, sex, breeds, CID, CHNUM, RCNUM (No columns dependent by properties other than PID)

[12]  
EXTRA\_CHARGE\_CATEGORY (charge\_type, extra\_charge)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF, charge\_type -> extra\_charge(Full function dependencies)  
3NF : 2NF, charge\_type -> extra\_charge(No columns dependent by properties other than charge\_type)

[13]  
PACKAGE\_SERVICE (PSNUM, package\_name, price, charge\_type)  
Foreign key (CATEGORY) references EXTRA\_CHARGE\_CATEGORY (charge\_type)

1NF : Does not contain values for overlapping properties

2NF : 1NF, PSNUM-> package\_name, price, CATEGORY(Full function dependencies)  
3NF : 2NF, PSNUM-> package\_name, price, CATEGORY(No columns dependent by properties other than PSNUM)

[14]  
PRODUCT (PNUM, pname)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , PNUM-> pname (Full function dependencies)

3NF : 2NF, PNUM-> pname (No columns dependent by properties other than PNUM)

[15]  
PACKAGE\_PRODUCT (PSNUM, PNUM)  
Foreign key (PSNUM) references PACKAGE\_SERVICE (PSNUM)  
Foreign key (PNUM) references PRODUCT (PNUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , PSNUM, PNUM (Full function dependencies)

3NF : 2NF, PSNUM, PNUM (No columns dependent by properties other than PSNUM, PNUM)

[16]  
EXTRA\_SERVICE (ENUM, price)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , ENUM-> price (Full function dependencies)

3NF : 2NF, ENUM-> price (No columns dependent by properties other than ENUM)

[17]  
MOBILE\_SERVICE (ENUM, place, accompany)  
Foreign key (ENUM) references EXTRA\_SERVICE (ENUM)  
=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , ENUM-> place, accompany (Full function dependencies)

3NF : 2NF, ENUM-> place, accompany (No columns dependent by properties other than ENUM)

[18]  
FLOWER\_DECORATION (ENUM)  
Foreign key (ENUM) references EXTRA\_SERVICE (ENUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , ENUM (Full function dependencies)

3NF : 2NF, ENUM (No columns dependent by properties other than ENUM)

[19]  
FLOWER\_DECORATION\_FLOWER (ENUM, FLOWER)  
Foreign key (ENUM) references FLOWER\_DECORATION (ENUM)

1NF : Does not contain values for overlapping properties

2NF : 1NF , ENUM, FLOWER (Full function dependencies)

3NF : 2NF, ENUM, FLOWER (No columns dependent by properties other than ENUM, FLOWER)

[20]  
MEMORIAL\_STONE (ENUM, attendance, as\_service, color)  
Foreign key (ENUM) references EXTRA\_SERVICE (ENUM)

1NF : Does not contain values for overlapping properties

2NF : 1NF , ENUM-> attendance, as\_service, color (Full function dependencies)

3NF : 2NF, ENUM-> attendance, as\_service, color (No columns dependent by properties other than ENUM)

[21]   
RESERVATION (RNUM, RDate, RTime, place, price, inflow\_route, progress, CID, PSNUM, PID, ENUM)  
Foreign key (CID) references CUSTOMER (CID)  
Foreign key (PSNUM) references PACKAGE\_SERVICE (PSNUM)  
Foreign key (PID) references PET (PID)

Foreign key (ENUM) references EXTRA\_SERVICE (ENUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , RNUM-> RDate, RTime, place, price, inflow\_route, progress, CID, PSNUM, PID, ENUM (Full function dependencies)

3NF : 2NF, RNUM-> RDate, RTime, place, price, inflow\_route, progress, CID, PSNUM, PID, ENUM (No columns dependent by properties other than RNUM)

**5. Physical Design**

5-1 Data Dictionary

|  |  |  |  |
| --- | --- | --- | --- |
| **Funeral** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| RCNum | Funeral ID | VARCHAR2(30) | NOT NULL |
| FName | Funeral FName | VARCHAR2(20) | NOT NULL |
| Open\_Time | Funeral Open\_Time | DATE | NOT NULL |
| Close\_Time | Funeral Close\_Time | DATE | NOT NULL |
| Address | Funeral Address | VARCHAR2(100) | NOT NULL |
|  |  |  |  |
| **Employee** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| EID | Employee id | VARCHAR2(10) | NOT NULL |
| name | Employee name | VARCHAR2(50) | NOT NULL |
| birth\_date | Employee birth\_date | DATE | NOT NULL |
| phone\_num | Employee phone\_num | VARCHAR2(15) | NOT NULL |
| department | Employee department | VARCHAR2(50) | NOT NULL |
|  |  |  |  |
| **Management** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| EID | employee ID | VARCHAR2(10) | NOT NULL |
| RCNum | registration certification number | VARCHAR2(30) | NOT NULL |
|  |  |  |  |
| **Memorial Space** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| MNum | memorial space number | NUMBER(3) | NOT NULL |
| RCNum | registration certification number | VARCHAR2(25) | NOT NULL |
| MName | memorial space name | VARCHAR2(50) | NOT NULL |
|  |  |  |  |
| **Charnel house** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| CHNum | Charnel House ID | VARCHAR2(10) | NOT NULL |
| RCNum | Funeral ID | VARCHAR2(30) | NOT NULL |
| CName | Charnel House name | VARCHAR2(20) | NOT NULL |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **CHARNEL\_HOUSE\_Square\_Num** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| CHNum | CHARNEL\_HOUSE ID | VARCHAR2(10) | NOT NULL |
| RCNum | FUNERAL ID | VARCHAR2(30) | NOT NULL |
| Square\_Num | CHARNEL\_HOUSE Square\_Num | VARCHAR2(10) | NOT NULL |
|  |  |  |  |
| **Coupon** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| CPNum | Coupon number | VARCHAR2(10) | NOT NULL |
| Promotion\_Name | Promotion name | VARCHAR2(100) | NOT NULL |
| Available\_Location | Available location | VARCHAR2(25) | NOT NULL |
| Benefit | Explain benefit | VARCHAR2(500) | NOT NULL |
|  |  |  |  |
| **Customer\_Info\_Of\_Public** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| RGNum | registration number | CHAR(14) | not null |
| CName |  | VARCHAR2(50) | not null |
|  |  |  |  |
| **Customer** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| CID | customer id | VARCHAR2(10) | NOT NULL |
| address | customer address | VARCHAR2(100) | NOT NULL |
| nickname | customer nickname | VARCHAR2(10) | NOT NULL |
| phone\_num | customer phonenumber | VARCHAR2(15) | NOT NULL |
| password | customer password | VARCHAR2(20) | NOT NULL |
| RGNum | registration number | CHAR(14) | NOT NULL |
|  |  |  |  |
| **Coupon\_ExpirationPeriod** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| CPNum | Coupon Number | VARCHAR2(10) | NOT NULL |
| CID | Customer ID | VARCHAR2(10) | NOT NULL |
| Coupon\_ExpirationPeriod | ExpirationPeriod date | DATE | NOT NULL |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **PET** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| PID | pet ID | VARCHAR2(10) | NOT NULL |
| PName | pet name | VARCHAR2(20) | NOT NULL |
| Weight | pet weight | NUMBER(4,1) | NOT NULL |
| Sex | pet sex | CHAR(1) | NOT NULL |
| Breeds | pet breeds | VARCHAR2(100) | NOT NULL |
| CID | customer ID | VARCHAR2(10) | NOT NULL |
| CHNum | Charnel House ID | VARCHAR2(10) | NOT NULL |
| RCNum | Funeral ID | VARCHAR2(30) | NOT NULL |
|  |  |  |  |
| **Extra\_service** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |
| Price | extra service charge | NUMBER(22) | NOT NULL |
|  |  |  |  |
| **Mobile\_service** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |
| Place | location | VARCHAR2(10) | NOT NULL |
| Accompany | Accompanied or not | CHAR(1) | NOT NULL |
|  |  |  |  |
| **Flower\_decoration** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |
|  |  |  |  |
| **Flower\_decoration\_flower** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |
| Flower | flower type | VARCHAR2(10) | NOT NULL |
|  |  |  |  |
| **Memorial\_stone** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |
| Attendance | Participation or not | CHAR(1) | NOT NULL |
| AS\_Service | AS or not | CHAR(1) | NOT NULL |
| Color | Color | VARCHAR2(10) | NOT NULL |
|  |  |  |  |
| **Product** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| PNum | product number | VARCHAR2(10) | NOT NULL |
| PName | product name | VARCHAR2(25) | NOT NULL |
|  |  |  |  |
| **Extra\_charge\_category** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| Charge\_Type | charge type | CHAR(4) | NOT NULL |
| Extra\_Charge | extra fee | number(22) | NOT NULL |
|  |  |  |  |
| **Pacakge\_service** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| Price | package service charge | NUMBER(22) | NOT NULL |
| Pacakge\_Name | package service name | VARCHAR2(20) | NOT NULL |
| PSNum | package service number | VARCHAR2(10) | NOT NULL |
| Charge\_Type | charge type | CHAR(4) | NOT NULL |
|  |  |  |  |
| **Package\_product** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| PSNum | package service number | VARCHAR2(10) | NOT NULL |
| PNum | product number | VARCHAR2(10) | NOT NULL |
|  |  |  |  |
| **Reservation** |  |  |  |
| ColumnName | Definition | Data Type | Constraint |
| Price | reservation fee | NUMBER(22) | NOT NULL |
| Place | branch name | VARCHAR2(10) | NOT NULL |
| Inflow\_route | inflow route | VARCHAR2(20) | NOT NULL |
| RTime | reservation time | DATE | NOT NULL |
| RDate | reservation date | DATE | NOT NULL |
| Progress | progress status | VARCHAR2(20) | NOT NULL |
| RNum | reservation number | VARCHAR2(10) | NOT NULL |
| CID | customer id | VARCHAR2(10) | NOT NULL |
| PSNum | package\_service number | VARCHAR2(10) | NOT NULL |
| PID | pet id | VARCHAR2(10) | NOT NULL |
| ENum | extra service number | VARCHAR2(10) | NOT NULL |

**6. SQL Query**

6-1. DDL

[CREATE]

CREATE TABLE FUNERAL (

RCNum VARCHAR2(30) NOT NULL,

FName VARCHAR2(20) NOT NULL,

Open\_Time DATE NOT NULL,

Close\_Time DATE NOT NULL,

Address VARCHAR2(100) NOT NULL,

CONSTRAINT FUNERAL\_pk PRIMARY KEY (RCNum));

CREATE TABLE EMPLOYEE (

EID VARCHAR2(10) NOT NULL,

name VARCHAR2(50) NOT NULL,

birth\_date DATE NOT NULL,

phone\_num VARCHAR2(15) NOT NULL,

department VARCHAR2(50) NOT NULL,

CONSTRAINT EMP\_pk PRIMARY KEY (EID)

);

CREATE TABLE Management (

EID VARCHAR2(10) NOT NULL,

RCNum VARCHAR2(30) NOT NULL,

CONSTRAINT Managed\_EMP\_FU\_pk PRIMARY KEY (EID, RCNum),

CONSTRAINT Managed\_EMP\_FU\_fk FOREIGN KEY (RCNum) REFERENCES FUNERAL(RCNum),

CONSTRAINT Managed\_EMP\_FU\_fk2 FOREIGN KEY (EID) REFERENCES Employee(EID)

);

CREATE TABLE Memorial\_Space (

MNum NUMBER(3) NOT NULL,

RCNum VARCHAR2(25) NOT NULL,

MName VARCHAR2(50) NOT NULL,

CONSTRAINT Memorial\_Space\_pk PRIMARY KEY (MNum, RCNum),

CONSTRAINT Memorial\_Space\_fk FOREIGN KEY (RCNum) REFERENCES FUNERAL(RCNum)

);

CREATE TABLE CHARNEL\_HOUSE (

CHNum VARCHAR2(10) NOT NULL,

RCNum VARCHAR2(30) NOT NULL,

CName VARCHAR2(20) NOT NULL,

CONSTRAINT CHARNEL\_HOUSE\_pk PRIMARY KEY (CHNum, RCNum),

CONSTRAINT CHARNEL\_HOUSE\_fk1 FOREIGN KEY (RCNum) REFERENCES Funeral(RCNum)

);

CREATE TABLE CHARNEL\_HOUSE\_Square\_Num (

CHNUM VARCHAR2(10) NOT NULL,

RCNUM VARCHAR2(30) NOT NULL,

Square\_Num VARCHAR2(10) NOT NULL,

CONSTRAINT CHARNEL\_HOUSE\_Square\_Num\_pk PRIMARY KEY (CHNUM, RCNUM, Square\_Num),

CONSTRAINT CHARNEL\_HOUSE\_Square\_Num\_fk1 FOREIGN KEY (CHNUM, RCNum) REFERENCES CHARNEL\_HOUSE(CHNUM, RCNum));

CREATE TABLE Coupon (

CPNum VARCHAR2 (10) NOT NULL,

Promotion\_Name VARCHAR2(100) NOT NULL,

Available\_Location VARCHAR2(25) NOT NULL,

Benefit VARCHAR2(500) NOT NULL,

CONSTRAINT Coupon\_pk PRIMARY KEY (CPNum));

CREATE TABLE CUSTOMER\_INFO\_OF\_PUBLIC (

RGNUM CHAR(14) NOT NULL,

cname VARCHAR2(50) NOT NULL,

CONSTRAINT CIOP\_pk PRIMARY KEY (RGNUM)

);

CREATE TABLE CUSTOMER (

CID VARCHAR2(10) NOT NULL,

address VARCHAR2(100) NOT NULL,

nickname VARCHAR2(10) NOT NULL,

phone\_num VARCHAR2(15) NOT NULL,

password VARCHAR2(20) NOT NULL,

RGNUM CHAR(14) NOT NULL,

CONSTRAINT CUST\_pk PRIMARY KEY (CID),

CONSTRAINT CUST\_RG\_fk FOREIGN KEY (RGNUM) REFERENCES CUSTOMER\_INFO\_OF\_PUBLIC(RGNUM)

);

CREATE TABLE Coupon\_ExpirationPeriod (

CPNum VARCHAR2 (10) NOT NULL,

CID VARCHAR2 (10) NOT NULL,

Coupon\_ExpirationPeriod DATE NOT NULL,

CONSTRAINT Coupon\_ExpirationPeriod\_pk PRIMARY KEY (CPNum, CID),

CONSTRAINT Coupon\_ExpirationPeriod\_fk1 FOREIGN KEY (CPNum) REFERENCES Coupon(CPNum),

CONSTRAINT Coupon\_ExpirationPeriod\_fk2 FOREIGN KEY (CID) REFERENCES Customer(CID));

CREATE TABLE Pet (

PID VARCHAR2 (10) NOT NULL,

PName VARCHAR2(20) NOT NULL,

Weight NUMBER(4,1) NOT NULL,

Sex CHAR(1),

Breeds VARCHAR2(100) NOT NULL,

CID VARCHAR2 (10) NOT NULL,

CHNum VARCHAR2 (10) NOT NULL,

RCNum VARCHAR2(30) NOT NULL,

CONSTRAINT Pet\_pk PRIMARY KEY (PID),

CONSTRAINT Pet\_fk1 FOREIGN KEY (CID) REFERENCES Customer(CID),

CONSTRAINT Pet\_fk2 FOREIGN KEY (CHNum, RCNum) REFERENCES CHARNEL\_HOUSE(CHNum,RCNum)

);

CREATE TABLE EXTRA\_SERVICE (

ENUM VARCHAR2(10) NOT NULL,

price NUMBER(22) NOT NULL,

CONSTRAINT EXTRA\_pk PRIMARY KEY (ENUM)

);

CREATE TABLE mobile\_service(

enum varchar2(10) not null,

place varchar2(10) not null,

accompany char(1) not null,

constraint mobile\_service\_pk primary key (enum),

constraint mobile\_service\_fk foreign key (enum) references extra\_service (enum)

);

CREATE TABLE flower\_decoration(

enum varchar2(10) not null,

constraint flower\_decoration\_pk primary key (enum),

constraint flower\_decoration\_fk foreign key (enum) references extra\_service (enum)

);

CREATE TABLE FLOWER\_DECORATION\_FLOWER(

enum varchar2(10) not null,

flower varchar2(10) not null,

constraint flower\_pk primary key (enum, flower),

constraint flower\_fk foreign key (enum) references flower\_decoration(enum)

);

CREATE TABLE memorial\_stone(

enum varchar2(10) not null,

attendance char(1) not null,

AS\_Service char(1) not null,

Color varchar2(10) not null,

constraint memorial\_stone\_pk primary key (enum),

constraint memorial\_stone\_fk foreign key (enum) references extra\_service (enum)

);

CREATE TABLE product(

pnum varchar2(10) not null,

pname varchar2(25) not null,

constraint product\_pk primary key (pnum)

);

CREATE TABLE extra\_charge\_category (

charge\_type char(4) not null,

extra\_charge number(22),

constraint extra\_ primary key (charge\_type)

);

CREATE TABLE package\_service(

psnum varchar2(10) not null,

package\_name varchar2(20) not null,

price number(22) not null,

charge\_type char(4) not null,

constraint package\_service\_pk primary key (psnum),

constraint package\_Service\_fk foreign key (charge\_type) references extra\_charge\_category(charge\_type)

);

CREATE TABLE package\_product(

psnum varchar2(10) not null,

pnum varchar2(10) not null,

constraint package\_product\_pk primary key (psnum, pnum)

);

CREATE TABLE RESERVATION (

RNUM VARCHAR2(10) NOT NULL,

price NUMBER(22) NOT NULL,

place VARCHAR2(10) NOT NULL,

inflow\_route VARCHAR2(20) NOT NULL,

RTime DATE NOT NULL,

Rdate DATE NOT NULL,

progress VARCHAR2(20) NOT NULL,

CID VARCHAR2(10) NOT NULL,

PSNUM VARCHAR2(10) NOT NULL,

PID VARCHAR2(10) NOT NULL,

ENUM VARCHAR2(10) NOT NULL,

CONSTRAINT RESER\_pk PRIMARY KEY (RNUM),

CONSTRAINT CUST\_RESER\_fk FOREIGN KEY (CID) REFERENCES CUSTOMER(CID),

CONSTRAINT PS\_RESER\_fk FOREIGN KEY (PSNUM) REFERENCES PACKAGE\_SERVICE(PSNUM),

CONSTRAINT PET\_RESER\_fk FOREIGN KEY (PID) REFERENCES PET(PID),

CONSTRAINT SERVICE\_RESER\_fk FOREIGN KEY (ENUM) REFERENCES extra\_service(ENUM)

);

6-2. DML

[INSERT]

INSERT INTO FUNERAL VALUES ('5540000-038-2015-0001', '경기 광주점', TO\_DATE('00:00', 'HH24:MI'), TO\_DATE('23:59', 'HH24:MI'), '경기도 광주시 산수로 409-11');

Insert into FUNERAL values('4090000-038-2017-0001', '경기 김포점',TO\_DATE('00:00', 'HH24:mi'),TO\_DATE('23:59', 'HH24:mi'), '경기도 김포시 월곶면 애기봉로 262');

Insert into FUNERAL values('5530000-038-2019-0001', '경기 화성점' ,TO\_DATE('00:00', 'HH24:mi'),TO\_DATE('23:59', 'HH24:mi'), '경기도 화성시 팔탄면 독곡길 24-42');

Insert into FUNERAL values('5590000-038-2017-0001', '경기 양주점' ,TO\_DATE('07:00', 'HH24:mi'),TO\_DATE('23:59', 'HH24:mi'), '경기도 양주시 광적면 부흥로 145');

Insert into FUNERAL values('5690000-038-2017-0001', '세종점',TO\_DATE('07:00', 'HH24:mi'),TO\_DATE('23:59', 'HH24:mi'), '세종특별자치시 부강면 시목부강로 620');

Insert into FUNERAL values('5350000-038-2018-0002', '부산점',TO\_DATE('07:00', 'HH24:mi'),TO\_DATE('23:59', 'HH24:mi'), '경상남도 김해시 한림면 안하로 102');

INSERT INTO EMPLOYEE VALUES ('E0001', '김태호', '1975-06-22', '010-2776-7004', '홈페이지 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0002', '김종남', '1973-05-20', '010-1122-3344', '봉안당 시설관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0003', '김정호', '1970-08-01', '010-5387-8986', '상주 교육 부서');

INSERT INTO EMPLOYEE VALUES ('E0004', '김일주', '1977-04-04', '010-5566-7788', '홈페이지 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0005', '이상범', '1966-11-07', '010-0123-4567', '메모리얼 스톤 제작 부서');

INSERT INTO EMPLOYEE VALUES ('E0006', '김헝욱', '1973-10-18', '010-5496-4342', '꽃장식 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0007', '김형일', '1965-07-14', '010-5259-3712', '상품 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0008', '김재관', '1968-06-09', '010-2468-1357', '꽃장식 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0009', '최성운', '1961-01-30', '010-3718-6440', '메모리얼 스톤 제작 부서');

INSERT INTO EMPLOYEE VALUES ('E0010', '우현재', '1982-02-28', '010-1999-0713', '봉안당 시설 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0011', '진성조', '1973-10-18', '010-1234-1234', '상품 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0012', '여인욱', '1965-07-10', '010-3453-1231', '메모리얼 스톤 제작 부서');

INSERT INTO EMPLOYEE VALUES ('E0013', '이강선', '1968-06-01', '010-2463-1351', '봉안당 시설 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0014', '김대원', '1961-01-15', '010-1123-4456', '홈페이지 관리 부서');

INSERT INTO EMPLOYEE VALUES ('E0015', '김병수', '1980-02-28', '010-1970-0128', '상주 교육 부서');

Insert into Management values('E0001','5540000-038-2015-0001');

Insert into Management values('E0002','5540000-038-2015-0001');

Insert into Management values('E0003','5540000-038-2015-0001');

Insert into Management values('E0004','5540000-038-2015-0001');

Insert into Management values('E0005','5540000-038-2015-0001');

Insert into Management values('E0006','4090000-038-2017-0001');

Insert into Management values('E0007','4090000-038-2017-0001');

Insert into Management values('E0008','4090000-038-2017-0001');

Insert into Management values('E0009','4090000-038-2017-0001');

Insert into Management values('E0010','4090000-038-2017-0001');

Insert into Management values('E0011','5530000-038-2019-0001');

Insert into Management values('E0012','5530000-038-2019-0001');

Insert into Management values('E0013','5530000-038-2019-0001');

Insert into Management values('E0014','5530000-038-2019-0001');

Insert into Management values('E0015','5530000-038-2019-0001');

Insert into Memorial\_Space values('301','5540000-038-2015-0001', '산미구엘');

Insert into Memorial\_Space values('302','5540000-038-2015-0001', '산미구엘');

Insert into Memorial\_Space values('303','5540000-038-2015-0001', '산미구엘');

Insert into Memorial\_Space values('304','5540000-038-2015-0001', '산미구엘');

Insert into Memorial\_Space values('305','5540000-038-2015-0001', '산미구엘');

Insert into Memorial\_Space values('301','4090000-038-2017-0001', '경김살사');

Insert into Memorial\_Space values('302','4090000-038-2017-0001', '경김살사');

Insert into Memorial\_Space values('303','4090000-038-2017-0001', '경김살사');

Insert into Memorial\_Space values('304','4090000-038-2017-0001', '경김살사');

Insert into Memorial\_Space values('305','4090000-038-2017-0001', '경김살사');

Insert into Memorial\_Space values('301','5530000-038-2019-0001', '경화중반');

Insert into Memorial\_Space values('302','5530000-038-2019-0001', '경화중반');

Insert into Memorial\_Space values('303','5530000-038-2019-0001', '경화중반');

Insert into Memorial\_Space values('304','5530000-038-2019-0001', '경화중반');

Insert into Memorial\_Space values('305','5530000-038-2019-0001', '경화중반');

Insert into Memorial\_Space values('301','5590000-038-2017-0001', '화영경');

Insert into Memorial\_Space values('302','5590000-038-2017-0001', '화영경');

Insert into Memorial\_Space values('303','5590000-038-2017-0001', '화영경');

Insert into Memorial\_Space values('304','5590000-038-2017-0001', '화영경');

Insert into Memorial\_Space values('305','5590000-038-2017-0001', '화영경');

Insert into Memorial\_Space values('301','5690000-038-2017-0001', '실록경');

Insert into Memorial\_Space values('302','5690000-038-2017-0001', '실록경');

Insert into Memorial\_Space values('303','5690000-038-2017-0001', '실록경');

Insert into Memorial\_Space values('304','5690000-038-2017-0001', '실록경');

Insert into Memorial\_Space values('305','5690000-038-2017-0001', '실록경');

Insert into Memorial\_Space values('301','5350000-038-2018-0002', '청리마');

Insert into Memorial\_Space values('302','5350000-038-2018-0002', '청리마');

Insert into Memorial\_Space values('303','5350000-038-2018-0002', '청리마');

Insert into Memorial\_Space values('304','5350000-038-2018-0002', '청리마');

Insert into Memorial\_Space values('305','5350000-038-2018-0002', '청리마');

Insert into CHARNEL\_HOUSE values('CH00001', '5540000-038-2015-0001', '경기 광주점');

Insert into CHARNEL\_HOUSE values('CH00002', '4090000-038-2017-0001', '경기 김포점');

Insert into CHARNEL\_HOUSE values('CH00003', '5590000-038-2017-0001', '경기 양주점');

Insert into CHARNEL\_HOUSE values('CH00004', '5690000-038-2017-0001', '세종점');

Insert into CHARNEL\_HOUSE values('CH00005', '5350000-038-2018-0002', '부산점');

Insert into CHARNEL\_HOUSE values('CH00006', '5530000-038-2019-0001', '경기 화성점');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00001', '5540000-038-2015-0001', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00001', '5540000-038-2015-0001', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00001', '5540000-038-2015-0001', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00001', '5540000-038-2015-0001', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00001', '5540000-038-2015-0001', 'A005');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00002', '4090000-038-2017-0001', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00002', '4090000-038-2017-0001', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00002', '4090000-038-2017-0001', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00002', '4090000-038-2017-0001', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00002', '4090000-038-2017-0001', 'A005');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00003', '5590000-038-2017-0001', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00003', '5590000-038-2017-0001', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00003', '5590000-038-2017-0001', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00003', '5590000-038-2017-0001', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00003', '5590000-038-2017-0001', 'A005');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00004', '5690000-038-2017-0001', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00004', '5690000-038-2017-0001', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00004', '5690000-038-2017-0001', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00004', '5690000-038-2017-0001', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00004', '5690000-038-2017-0001', 'A005');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00005', '5350000-038-2018-0002', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00005', '5350000-038-2018-0002', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00005', '5350000-038-2018-0002', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00005', '5350000-038-2018-0002', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00005', '5350000-038-2018-0002', 'A005');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00006', '5530000-038-2019-0001', 'A001');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00006', '5530000-038-2019-0001', 'A002');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00006', '5530000-038-2019-0001', 'A003');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00006', '5530000-038-2019-0001', 'A004');

Insert into CHARNEL\_HOUSE\_Square\_Num values('CH00006', '5530000-038-2019-0001', 'A005');

Insert into Coupon values('CP00001', '포포즈x우리카드', '전 지점', '우리카드 결제 시 30%(최대 10만원 할인)');

Insert into Coupon values('CP00002', '대형 동물 할인 패키지', '경기 광주점', '20kg 이상 동물 장례 결제 시 30%(최대 10만원 할인)');

Insert into Coupon values('CP00003', '신규가입쿠폰', '전 지점', '신규 가입 시 꽃 장식(5만원 상당)무료');

Insert into Coupon values('CP00004', '웰컴쿠폰1', '전 지점', '장례비 10만원 할인 + 꽃장식 무료');

Insert into Coupon values('CP00005', '웰컴쿠폰2', '부산점', '메모리얼 스톤 30% 할인');

Insert into Coupon values('CP00006', '추억 기념 액자', '부산점', '액자 제작 무료');

Insert into Coupon values('CP00007', '소형 동물 할인 패키지', '경기 광주점', '3kg 이하 동물 장례 결제 시 30%(최대 10만원 할인)');

Insert into Coupon values('CP00008', '써라써라쿠폰', '전 지점', '100만원 이상 결제시 5만원 할인');

Insert into Coupon values('CP00009', '이동서비스 지원 쿠폰', '전 지점', '픽업서비스 무료');

Insert into Coupon values('CP00010', '포포즈x신한카드', '전 지점', '신한카드 결제 시 25%(최대 10만원 할인)');

Insert into Coupon values('CP00011', '포포즈x하나카드', '전 지점', '하나카드 결제 시 30%(최대 10만원 할인)');

Insert into Coupon values('CP00012', '포포즈x국민카드', '경기 광주점', '국민카드 결제 시 30%(최대 10만원 할인)');

Insert into Coupon values('CP00013', '3주년가입기념', '전 지점', '장례 패키지 결제시 20만원 할인(요람장 패키지 이상 선택시)');

Insert into Coupon values('CP00014', '수의 업그레이드 쿠폰', '전 지점', '해당 패키지에서 수의 한 단계 업그레이드');

Insert into Coupon values('CP00015', '유골함 업그레이드 쿠폰', '경기 화성점', '해당 패키지에서 유골함 한 단계 업그레이드');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('990713-2058827', '유민재');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('980815-1112233', '김대현');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('000123-3778899', '장준수');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('971203-1445566', '모지환');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('010224-3123456', '정승연');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('001122-4147895', '허리나');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('010325-3135795', '추연우');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('030528-4584627', '김소연');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('020115-3246585', '나범수');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('060205-4246811', '이예서');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('001225-4332211', '배정연');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('010325-4735795', '이서윤');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('020316-4123423', '장민우');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('020109-4098757', '하다니엘');

INSERT INTO CUSTOMER\_INFO\_OF\_PUBLIC VALUES ('030201-4456456', '하사무엘');

INSERT INTO CUSTOMER VALUES ('C0001', '고양시 덕양구 행신동', 'dbalsend', '010-3737-2855', 'Godyell', '990713-2058827');

INSERT INTO CUSTOMER VALUES ('C0002', '경기도 안산시 중앙동', 'eogus98', '010-1111-2222', 'pwDH98', '980815-1112233');

INSERT INTO CUSTOMER VALUES ('C0003', '서울시 양천구 목동', 'wnstn00', '010-3333-4444', 'pwJS00', '000123-3778899');

INSERT INTO CUSTOMER VALUES ('C0004', '서울시 송파구 잠실동', 'wlghks97', '010-5555-6666', 'pwJH97', '971203-1445566');

INSERT INTO CUSTOMER VALUES ('C0005', '서울시 서대문구 홍은동', 'tmddus01', '010-7777-8888', 'pwSY01', '010224-3123456');

INSERT INTO CUSTOMER VALUES ('C0006', '서울시 서대문구 북가좌동', 'gjflsk00', '010-9999-1234', 'pwLNH00', '001122-4147895');

INSERT INTO CUSTOMER VALUES ('C0007', '서울시 중랑구 면목동', 'cndusdn01', '010-5678-9012', 'pwYWC01', '010325-3135795');

INSERT INTO CUSTOMER VALUES ('C0008', '서울시 은평구 구산동', 'soyeon02', '010-3468-5819', 'pwSYK03', '030528-4584627');

INSERT INTO CUSTOMER VALUES ('C0009', '양주시 장흥면', 'beomsoo02', '010-9851-6581', 'pwBSNa02', '020115-3246585');

INSERT INTO CUSTOMER VALUES ('C0010', '서울시 금천구 독산동', 'yeseoLee06', '010-5782-6815', 'pwYSL06', '060205-4246811');

INSERT INTO CUSTOMER VALUES ('C0011', '서울시 마포구 동교동', 'duboo0812', '010-2900-3775', 'pwDB06', '001225-4332211');

INSERT INTO CUSTOMER VALUES ('C0012', '서울시 영등포구 문래동', 'popoz005', '010-1627-6117', 'pwppp12', '010325-4735795');

INSERT INTO CUSTOMER VALUES ('C0013', '서울시 영등포구 문래동', 'mijin1102', '010-9299-5811', 'pwmijine', '020316-4123423');

INSERT INTO CUSTOMER VALUES ('C0014', '경기도 의정부시 의정부동', 'yogcream15', '010-4733-3004', 'maimai00', '020109-4098757');

INSERT INTO CUSTOMER VALUES ('C0015', '서울시 동작구 상도동', 'gorila116', '010-0112-1223', 'pwgorilak', '030201-4456456');

Insert into Coupon\_ExpirationPeriod values('CP00001', 'C0001', TO\_DATE('2024-02-12', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00002', 'C0002', TO\_DATE('2024-04-15', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00003', 'C0003', TO\_DATE('2024-06-17', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00004', 'C0004', TO\_DATE('2024-08-19', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00005', 'C0005', TO\_DATE('2024-10-21', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00006', 'C0006', TO\_DATE('2024-12-23', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00007', 'C0005', TO\_DATE('2025-01-04', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00008', 'C0003', TO\_DATE('2025-03-06', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00009', 'C0004', TO\_DATE('2025-05-08', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00010', 'C0005', TO\_DATE('2025-07-10', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00011', 'C0001', TO\_DATE('2025-09-12', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00012', 'C0002', TO\_DATE('2025-11-14', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00013', 'C0003', TO\_DATE('2025-04-25', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00014', 'C0004', TO\_DATE('2025-08-25', 'YYYY-MM-DD'));

Insert into Coupon\_ExpirationPeriod values('CP00015', 'C0005', TO\_DATE('2025-12-25', 'YYYY-MM-DD'));

Insert into Pet values('P001', '초코 오 레오 살라', 12.5, 'M', '푸들', 'C0001', 'CH00001', '5540000-038-2015-0001');

Insert into Pet values('P002', '두리', 7.3, 'F', '시바견', 'C0002', 'CH00001', '5540000-038-2015-0001');

Insert into Pet values('P003', '깔깔이', 15.0, 'M', '골든 리트리버', 'C0003', 'CH00002', '4090000-038-2017-0001');

Insert into Pet values('P004', '두부', 37.2, 'F', '알래스칸 말라뮤트', 'C0004', 'CH00002', '4090000-038-2017-0001');

Insert into Pet values('P005', '까미', 9.8, 'M', '아프간 하운드', 'C0005', 'CH00003', '5590000-038-2017-0001');

Insert into Pet values('P006', '초코', 9.2, 'M', '대니시 스웨디시 팜독', 'C0006', 'CH00003', '5590000-038-2017-0001');

Insert into Pet values('P007', '민트', 3.4, 'F', '포메라니안', 'C0007', 'CH00004', '5690000-038-2017-0001');

Insert into Pet values('P008', '나나', 7.1, 'M', '콘티넨탈 토이 스패니얼', 'C0008', 'CH00004', '5690000-038-2017-0001');

Insert into Pet values('P009', '루루', 22.4, 'M', '사모예드', 'C0009', 'CH00005', '5350000-038-2018-0002');

Insert into Pet values('P010', '츄츄', 23.0, 'F', '시베리안 허스키', 'C0010', 'CH00005', '5350000-038-2018-0002');

Insert into Pet values('P011', '티티', 30.1, 'M', '그린란드견', 'C0011', 'CH00006', '5530000-038-2019-0001');

Insert into Pet values('P012', '더브라위너', 35.2, 'M', '치누크', 'C0012', 'CH00006', '5530000-038-2019-0001');

Insert into Pet values('P013', '레오', 5.7, 'F', '오스트레일리언 실키테리어', 'C0013', 'CH00001', '5540000-038-2015-0001');

Insert into Pet values('P014', '즐라탄', 6.7, 'M', '잉글리시 토이 테리어 블랙 앤드 탠', 'C0014', 'CH00002', '4090000-038-2017-0001');

Insert into Pet values('P015', '알렉스 레오', 11.2, 'F', '맨체스터 테리어', 'C0015', 'CH00003', '5590000-038-2017-0001');

insert into extra\_service values ('EX0001', 100000);

insert into extra\_service values ('EX0002', 80000);

insert into extra\_service values ('EX0003', 110000);

insert into extra\_service values ('EX0004', 90000);

insert into extra\_service values ('EX0005', 20000);

insert into extra\_service values ('EX0006', 100000);

insert into extra\_service values ('EX0007', 90000);

insert into extra\_service values ('EX0008', 30000);

insert into extra\_service values ('EX0009', 30000);

insert into extra\_service values ('EX0010', 80000);

insert into extra\_service values ('EX0011', 60000);

insert into extra\_service values ('EX0012', 40000);

insert into extra\_service values ('EX0013', 30000);

insert into extra\_service values ('EX0014', 60000);

insert into extra\_service values ('EX0015', 60000);

insert into extra\_service values ('EX0016', 50000);

insert into extra\_service values ('EX0017', 70000);

insert into extra\_service values ('EX0018', 70000);

insert into extra\_service values ('EX0019', 70000);

insert into extra\_service values ('EX0020', 70000);

insert into mobile\_service values ('EX0001', '연신내역', 'T');

insert into mobile\_service values ('EX0002', '새절역', 'T');

insert into mobile\_service values ('EX0003', '강남역', 'T');

insert into mobile\_service values ('EX0004', '서울역', 'T');

insert into mobile\_service values ('EX0006', '다대포항역', 'F');

insert into mobile\_service values ('EX0007', '서면역', 'T');

insert into mobile\_service values ('EX0008', '증산역', 'T');

insert into mobile\_service values ('EX0009', '연신내역', 'T');

insert into mobile\_service values ('EX0010', '홍대입구역', 'F');

insert into mobile\_service values ('EX0012', '신사역', 'T');

insert into mobile\_service values ('EX0013', '강남역', 'T');

insert into mobile\_service values ('EX0017', '새절역', 'T');

insert into mobile\_service values ('EX0018', '대화역', 'T');

insert into mobile\_service values ('EX0019', '경복궁역', 'T');

insert into mobile\_service values ('EX0020', '불광역', 'T');

insert into flower\_decoration values ('EX0001');

insert into flower\_decoration values ('EX0002');

insert into flower\_decoration values ('EX0003');

insert into flower\_decoration values ('EX0004');

insert into flower\_decoration values ('EX0005');

insert into flower\_decoration values ('EX0006');

insert into flower\_decoration values ('EX0007');

insert into flower\_decoration values ('EX0008');

insert into flower\_decoration values ('EX0009');

insert into flower\_decoration values ('EX0010');

insert into flower\_decoration values ('EX0011');

insert into flower\_decoration values ('EX0012');

insert into flower\_decoration values ('EX0013');

insert into flower\_decoration values ('EX0014');

insert into flower\_decoration values ('EX0015');

insert into flower\_decoration\_flower values ('EX0001', '백합');

insert into flower\_decoration\_flower values ('EX0001', '장미');

insert into flower\_decoration\_flower values ('EX0001', '안개꽃');

insert into flower\_decoration\_flower values ('EX0002', '안개꽃');

insert into flower\_decoration\_flower values ('EX0003', '백합');

insert into flower\_decoration\_flower values ('EX0003', '민들레');

insert into flower\_decoration\_flower values ('EX0003', '튤립');

insert into flower\_decoration\_flower values ('EX0003', '제비꽃');

insert into flower\_decoration\_flower values ('EX0004', '백합');

insert into flower\_decoration\_flower values ('EX0004', '안개꽃');

insert into flower\_decoration\_flower values ('EX0005', '백합');

insert into flower\_decoration\_flower values ('EX0005', '안개꽃');

insert into flower\_decoration\_flower values ('EX0006', '백합');

insert into flower\_decoration\_flower values ('EX0006', '해바라기');

insert into flower\_decoration\_flower values ('EX0006', '민들레');

insert into flower\_decoration\_flower values ('EX0007', '안개꽃');

insert into flower\_decoration\_flower values ('EX0007', '장미');

insert into flower\_decoration\_flower values ('EX0008', '백합');

insert into flower\_decoration\_flower values ('EX0009', '백합');

insert into flower\_decoration\_flower values ('EX0010', '백합');

insert into flower\_decoration\_flower values ('EX0011', '백합');

insert into flower\_decoration\_flower values ('EX0012', '백합');

insert into flower\_decoration\_flower values ('EX0012', '민들레');

insert into flower\_decoration\_flower values ('EX0013', '백합');

insert into flower\_decoration\_flower values ('EX0014', '백합');

insert into flower\_decoration\_flower values ('EX0015', '백합');

insert into memorial\_stone values ('EX0001', 'T', 'T', '빨강');

insert into memorial\_stone values ('EX0002', 'F', 'F', '파랑');

insert into memorial\_stone values ('EX0003', 'F', 'F', '초록');

insert into memorial\_stone values ('EX0004', 'F', 'F', '노랑');

insert into memorial\_stone values ('EX0006', 'T', 'F', '분홍');

insert into memorial\_stone values ('EX0007', 'T', 'T', '황금');

insert into memorial\_stone values ('EX0010', 'F', 'F', '회색');

insert into memorial\_stone values ('EX0011', 'F', 'F', '보라');

insert into memorial\_stone values ('EX0014', 'F', 'T', '주황');

insert into memorial\_stone values ('EX0015', 'F', 'F', '남색');

insert into memorial\_stone values ('EX0016', 'T', 'F', '연분홍');

insert into memorial\_stone values ('EX0017', 'F', 'F', '갈색');

insert into memorial\_stone values ('EX0018', 'F', 'F', '진갈색');

insert into memorial\_stone values ('EX0019', 'F', 'F', '연초록');

insert into memorial\_stone values ('EX0020', 'F', 'F', '진파랑');

INSERT INTO product VALUES('PD0001','보자기');

INSERT INTO product VALUES('PD0002','인견수의');

INSERT INTO product VALUES('PD0003','린넨수의');

INSERT INTO product VALUES('PD0004','일반관');

INSERT INTO product VALUES('PD0005','요람장S');

INSERT INTO product VALUES('PD0006','고급관S');

INSERT INTO product VALUES('PD0007','기본함');

INSERT INTO product VALUES('PD0008','한지수목함');

INSERT INTO product VALUES('PD0009','호두나무 유골함');

INSERT INTO product VALUES('PD0010','무지개 유골함');

INSERT INTO product VALUES('PD0011','스톤함');

INSERT INTO product VALUES('PD0012','고급보자기');

INSERT INTO product VALUES('PD0013','생화');

INSERT INTO product VALUES('PD0014','호두나무 스톤함');

INSERT INTO product VALUES('PD0015','린넨 투톤 수의');

Insert into extra\_charge\_category values('일반',10000);

Insert into extra\_charge\_category values('특수',1000);

Insert into package\_service values('PS001','베이직',250000,'일반');

Insert into package\_service values('PS002','포포즈패키지',500000,'일반');

Insert into package\_service values('PS003','요람장패키지',700000,'일반');

Insert into package\_service values('PS004','프리미엄패키지',900000,'일반');

Insert into package\_service values('PS005','VIP프리미엄패키지',1100000,'일반');

Insert into package\_service values('PS006','메모리얼스톤패키지',1150000,'일반');

Insert into package\_service values('PS007','베이직',200000,'특수');

Insert into package\_service values('PS008','포포즈패키지',300000,'특수');

Insert into package\_service values('PS009','프리미엄패키지',450000,'특수');

Insert into package\_service values('PS010','VIP프리미엄패키지',600000,'특수');

Insert into package\_product values('PS001','PD0001');

Insert into package\_product values('PS001','PD0006');

Insert into package\_product values('PS002','PD0002');

Insert into package\_product values('PS002','PD0007');

Insert into package\_product values('PS002','PD0013');

Insert into package\_product values('PS002','PD0012');

Insert into package\_product values('PS003','PD0003');

Insert into package\_product values('PS003','PD0005');

Insert into package\_product values('PS003','PD0008');

Insert into package\_product values('PS003','PD0013');

Insert into package\_product values('PS003','PD0012');

Insert into package\_product values('PS004','PD0003');

Insert into package\_product values('PS004','PD0006');

Insert into package\_product values('PS004','PD0010');

Insert into package\_product values('PS004','PD0012');

Insert into package\_product values('PS004','PD0013');

Insert into package\_product values('PS005','PD0015');

Insert into package\_product values('PS005','PD0006');

Insert into package\_product values('PS005','PD0009');

Insert into package\_product values('PS005','PD0013');

Insert into package\_product values('PS005','PD0012');

Insert into package\_product values('PS006','PD0015');

Insert into package\_product values('PS006','PD0006');

Insert into package\_product values('PS006','PD0014');

Insert into package\_product values('PS006','PD0013');

Insert into package\_product values('PS006','PD0012');

INSERT INTO RESERVATION VALUES('R0001', 385000, '광주점', '병원', TO\_DATE('11:33:24', 'HH24:mi:SS'), '2019-12-15', '예약 취소', 'C0001', 'PS001', 'P001', 'EX0001');

INSERT INTO RESERVATION VALUES('R0002', 850000, '김포점', '온/오프라인 광고', TO\_DATE('10:30:20', 'HH24:mi:SS'), '2020-11-11', '예약 취소', 'C0002', 'PS002', 'P002', 'EX0002');

INSERT INTO RESERVATION VALUES('R0003', 750000, '화성점', '기타', TO\_DATE('15:33:24', 'HH24:mi:SS'), '2020-12-25', '예약 취소', 'C0003', 'PS003', 'P003', 'EX0003');

INSERT INTO RESERVATION VALUES('R0004', 1050000, '양주점', '병원', TO\_DATE('18:27:26', 'HH24:mi:SS'), '2021-01-01', '예약 취소', 'C0004', 'PS004', 'P004', 'EX0004');

INSERT INTO RESERVATION VALUES('R0005', 1300000, '세종점', '기타', TO\_DATE('20:13:24', 'HH24:mi:SS'), '2021-05-05', '예약 취소', 'C0005', 'PS005', 'P005', 'EX0005');

INSERT INTO RESERVATION VALUES('R0006', 350000, '부산점', '온/오프라인 광고', TO\_DATE('09:19:11', 'HH24:mi:SS'), '2022-03-14', '진행 대기중', 'C0006', 'PS001', 'P006', 'EX0006');

INSERT INTO RESERVATION VALUES('R0007', 855000, '김포점', '기타', TO\_DATE('06:22:05', 'HH24:mi:SS'), '2022-08-15', '진행중', 'C0007', 'PS003', 'P007', 'EX0007');

INSERT INTO RESERVATION VALUES('R0008', 1670000, '양주점', '온/오프라인 광고', TO\_DATE('21:45:08', 'HH24:mi:SS'), '2023-05-08', '진행중', 'C0008', 'PS005', 'P008', 'EX0008');

INSERT INTO RESERVATION VALUES('R0009', 650000, '부산점', '기타', TO\_DATE('22:38:04', 'HH24:mi:SS'), '2023-09-01', '진행중', 'C0009', 'PS002', 'P009', 'EX0009');

INSERT INTO RESERVATION VALUES('R0010', 953000, '광주점', '온/오프라인 광고', TO\_DATE('06:57:17', 'HH24:mi:SS'), '2023-10-14', '진행중', 'C0010', 'PS004', 'P010', 'EX0010');

INSERT INTO RESERVATION VALUES('R0011', 900000, '화성점', '병원', TO\_DATE('19:33:20', 'HH24:mi:SS'), '2023-10-20', '진행중', 'C0011', 'PS004', 'P011', 'EX0011');

INSERT INTO RESERVATION VALUES('R0012', 1150000, '광주점', '기타', TO\_DATE('20:20:15', 'HH24:mi:SS'), '2023-10-20', '진행 대기중', 'C0012', 'PS006', 'P012', 'EX0012');

INSERT INTO RESERVATION VALUES('R0013', 700000, '김포점', '기타', TO\_DATE('20:58:08', 'HH24:mi:SS'), '2023-11-05', '예약 취소', 'C0013', 'PS003', 'P013', 'EX0013');

INSERT INTO RESERVATION VALUES('R0014', 600000, '김포점', '병원', TO\_DATE('20:59:20', 'HH24:mi:SS'), '2023-11-07', '진행 대기중', 'C0014', 'PS003', 'P014', 'EX0014');

INSERT INTO RESERVATION VALUES('R0015', 800000, '화성점', '병원', TO\_DATE('06:57:17', 'HH24:mi:SS'), '2023-11-11', '진행 대기중', 'C0015', 'PS004', 'P015', 'EX0015');

[SELECT]

1. Print out the customer's id, phonenum, who is observing how to make the Memorial Stone. (In order to inform the customer where and when to make the Memorial Stone.)

* select customer.cid,customer.phone\_num from customer, reservation, extra\_service, memorial\_stone where customer.cid = reservation.cid and reservation.enum = extra\_service.enum and extra\_service.enum = memorial\_stone.enum and memorial\_stone.attendance = 'T';
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Group flowers by type and count the number of flowers that are in progress in Reservation. Also, rename the columns appropriately. (Purpose of preparing flowers for the funeral.)

* select flower as flowerName, count(flower)as countOfFlower from flower\_decoration\_flower, flower\_decoration, extra\_service, reservation where reservation.enum = extra\_service.enum and extra\_service.enum = flower\_decoration.enum and flower\_decoration.enum = flower\_decoration\_flower.enum and progress = '진행중' group by flower;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Pick the customer who has the coupon and print out the ID, nickname, and phonenum. Also, sort by the customer ID

* select distinct customer.cid, nickname, phone\_num from coupon\_expirationperiod, customer where coupon\_expirationperiod.cid = customer.cid order by customer.cid;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Print out the names, breeds, genders, and weights of any of the pets weighing less than 10 kg. (Check the animals weighing less than 5 kg and make sure they weigh the same as the breed.)

* select pname, breeds, sex, weight from pet where weight<10;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Print out the schedule of the reservation including the mobile service service (column name to rdate and rtime), the pickup location (column name to pick-up\_Place), the reservation place (name to reservation\_Place), the customer ID, nickname, and the customer's phone number. Sort by schedule. (To pick up customers using mobile service from the pickup location to the reservation location according to the funeral schedule.)

* select rdate, to\_char(rtime, 'HH24:mi:SS') as time, mobile\_service.place as pickup\_Place, reservation.place as reservation\_Place, customer.cid, nickname, customer.phone\_num from customer, reservation, extra\_service, mobile\_service where customer.cid = reservation.cid and reservation.enum = extra\_service.enum and extra\_service.enum = mobile\_service.enum order by rdate;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Show the customer's id and nickname, phone\_num, and inflow\_route, where the reservation fee is higher than average. Also, sort by customer id. (To check the inflow path of customers who paid a large reservation fee and check the customer's information.)

* select customer.cid, nickname, phone\_num, inflow\_route from customer, reservation where customer.cid = reservation.cid and price > (select avg(price) from reservation) order by cid;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Find the total deposit per id for all customers. Also, change the combined column name as appropriate and arrange it as customer id. (Basic deposit + package service, +extra service)

* select reservation.cid, (reservation.price+extra\_service.price+package\_service.price) as sum\_price from reservation, extra\_service, package\_service where reservation.enum = extra\_service.enum and reservation.psnum = package\_service.psnum order by reservation.cid;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Tie the reservations to their respective places and find the sum of the prices. Also, change the name of the agreement column of the price as appropriate (to find out where they have work or are scheduled to come in and to find out the total amount of the reservation)

* select place, sum(price) as sum\_price from reservation where progress = '진행중' or progress = '진행 대기중' group by place order by place;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Print out the ID, name, department, and phone\_num of employees working at the Gwangju branch in Gyeonggi-do (so that customers can see the information of the employees working at the Gwangju branch)

* select employee.eid, name, department, phone\_num from employee, management, funeral where employee.eid = management.eid and management.rcnum = funeral.rcnum and fname = '경기 광주점';
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

1. Print out the employee ID of each department, the name of the funeral home, and the number of people located in each funeral home. Also, change the column name of the number of people per department appropriately and arrange the desc by the name of the department. (To identify the number of people who have managers in which department is located and to eliminate the services of departments that do not have managers at which department is located.)

* select department, fname, count(fname) as num\_of\_people from employee, management, funeral where employee.eid = management.eid and management.rcnum = funeral.rcnum group by department, fname order by department desc;
* 텍스트, 스크린샷, 소프트웨어, 컴퓨터 아이콘이(가) 표시된 사진

  자동 생성된 설명

**7. System Manual**

(1)Run sqldeveloper.exe.

(2). Access the database where you want to create a table.

(3)Create a table by executing the CREATE TABLE statement of item 6-1 one by one from the top.

(4)Add data to the table by executing the INSERT statement of item 6-2.

(5). When inquiring about data, execute the SELECT statement in item 6-2 or add, delete, modify and

If a query is required, execute INSERT, DELETE, UPDATE, and SELECT statements for the generated table.

**8. Additional Descriptions**

[Requirement Change Points]

※ Time -> Open Time and Closing Time

※ One reservation must include one or more supplementary services, and one supplementary service must be included in one or more reservations. -> One reservation must include one additional service, and one additional service must be included in one or more reservations.

[ER Change Points]

※ Coupon CNum -> CPNum, Charnel\_House의 CNum -> CHNum

=> Change property name due to column name duplication

※ Funeral의 Time -> OpneTime, CloseTime

=> Isolation for data input

※ Reservation – Extra\_Service n:n -> n:1

RESERVATION\_EXTRA\_SERVICE elimination and add column Enum in Reservation

=> [21]

※ Date, Time, AS, Category -> RDate, RTime, AS\_Service, Charge\_Type

=> Renaming properties due to reservation issues

[Relational Model Change Points]

[3]  
CHARNEL\_ HOUSE\_Square\_Num (CHNUM, RCNum, Square\_Num)  
Foreign key (CHNUM, RCNum) references CHARNEL HOUSE(CHNUM, RCNum)

[11]  
PET (PID, pname, weight, sex, breeds, CID, CHNUM, RCNUM)  
Foreign key (CID) references CUSTOMER (CID)  
Foreign key (CHNUM, RCNUM) references CHARNEL HOUSE (CHNUM, RCNUM)

※ elimination  
RESERVATION\_EXTRA\_SERVICE (RNUM, ENUM)  
Foreign key (RNUM) references RESERVATION (RNUM)  
Foreign key (ENUM) references EXTRA\_SERVICE (ENUM)

=>

1NF : Does not contain values for overlapping properties

2NF : 1NF , RNUM, ENUM (Full function dependencies)

3NF : 2NF, RNUM, ENUM (No columns dependent on attributes other than RNUM, ENUM)

**9. Reference**

1) https://www.kbfg.com/kbresearch/report/reportView.do?reportId=2000396

2) <https://www.mk.co.kr/news/it/10342270>

3) <https://www.sedaily.com/NewsView/29SB2RN3F>

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