



**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH
(AIUB)**

FACULTY OF SCIENCE & TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

INTRODUCTION TO DATABASE

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Section: H, Group: 10

PROJECT ON

BIKE SHOP DATABASE MANAGEMENT SYSTEM

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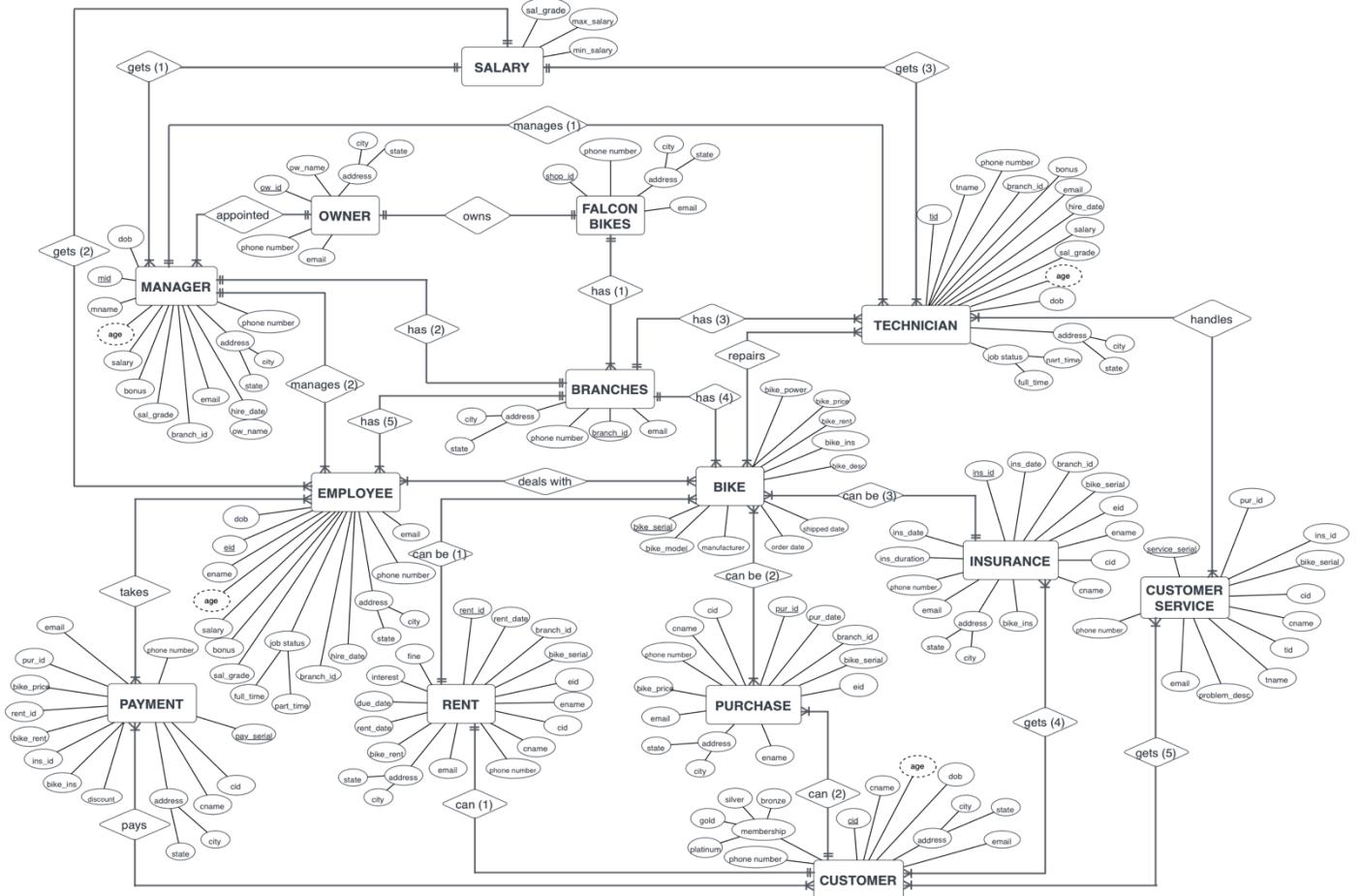
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CASE STUDY

Case Study for 'Falcon Bikes' database management

The only owner of Falcon Bikes maintains a database management system where the data from different activities inside his shop is recorded and updated regularly. The shop is identified by shop_id. Phone number, email and city and state recorded as address are its attributes. The owner is identified by his ow_id. His other recorded attributes are ow_name, phone number, email and address consisting of city and state. The shop has lots of branches in different locations. Each branch is identified by its own unique branch_id. Phone number, email is stored in the database along with city and state as address. The owner appoints all the managers and each branch has only one manager. However branches have lots of employees and technicians as well. The manager manages all the employees and technicians in his branch. Each employee is identified using their eid. Ename, dob, age, phone number, email, city and state as address, job status where full-time and part-time can be input, salary, bonus, sal_grade, branch_id, hire_date is recorded in the database as well. Each manager has their unique mid. Mname, dob, age, phone number, email, city and state as address, salary, bonus, sal_grade, branch_id, hire_date is recorded in the database as well. All the technicians have a unique tid. Their tname, dob, age, phone number, email, city and state as address, job status where full-time and part-time can be input, salary, bonus, sal_grade, branch_id, hire_date is recorded in the database. The technicians repair the bikes. All the managers, technicians and employees get a salary based on their grade. Salary is identified using sal_grade. Min_salary and max_salary are recorded as well. Branches have different types of bikes. Bikes are identified using their own bike_serial. The database also stores bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins. All the employees deals the customer with bikes. Customer details are stored in the database with a unique cid, cname, dob, age, phone number, email, city and state as address. It also includes a membership where bronze, silver, gold and platinum is input. Bikes can be purchased, rented and it can also be insured. Purchase details are stored with a unique pur_id. The database also stores pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city and state as address, bike_price. Many bikes can be purchased at the same time. Rent details are stored in the database as rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city and state as address, bike_rent, rent_date, due_date, interest, fine. One bike can be rented only once at a time. Multiple bikes can be insured multiple times. The insurance details are saved with a unique ins_id. The database also stores branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city and state as address, bike_ins, ins_date, ins_duration. All the customers pays the payment, and the employee takes the payment. The payment details are stored in the database as pay_serial which is unique, bike_serial, cid, cname, phone number, email, city and state as address, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, discount. The customer can purchase multiple bikes at a time. However one can only rent one bike at a time. A customer can get multiple insurances. If a customer encounters problems, he can get customer service. A customer can get multiple customer services. Customer service details have unique service_serial. The database also stores pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges. Multiple technicians can handle the customer service.

ER DIAGRAM



NORMALISATION

RELATION 01

Owns (ow_id, ow_name, phone number, email, city, state, shop_id, phone number, email, city, state)

1NF: No Multivalued Attribute

2NF:

- ow_id, ow_name, phone number, email, city, state
- shop_id, phone number, email, city, state, ow_id

3NF:

- ow_id, ow_name, phone number, email, cs_id
- cs_id, city, state
- shop_id, phone number, email, cs_id, ow_id
- cs_id, city, state

TABLES:

- ow_id, ow_name, phone number, email, cs_id
- cs_id, city, state
- shop_id, phone number, email, cs_id, ow_id
- cs_id, city, state

RELATION 02

Manages (1) (mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date, tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date)

1NF: No Multivalued Attribute

2NF:

- mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date
- tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, mid

3NF:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- cs_id, city, state
- age_id, dob, age
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, mid, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- cs_id, city, state
- age_id, dob, age
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, mid, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

RELATION 03

Manages (2) (mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date, eid, ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date)

1NF: No Multivalued Attribute

2NF:

- mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date
- eid, ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, mid

3NF:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- cs_id, city, state
- age_id, dob, age
- eid, ename, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id, mid
- cs_id, city, state
- age_id, dob, age

TABLES:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- cs_id, city, state
- age_id, dob, age
- eid, ename, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id, mid
- cs_id, city, state
- age_id, dob, age

RELATION 04

Has (1) (shop_id, phone number, email, city, state, branch_id, phone number, email, city, state)

1NF: No Multivalued Attribute

2NF:

- shop_id, phone number, email, city, state
- branch_id, phone number, email, city, state, shop _id

3NF:

- shop_id, phone number, email, cs_id
- cs_id, city, state
- branch_id, phone number, email, shop _id, cs_id
- cs_id, city, state

TABLES:

- shop_id, phone number, email, cs_id
- cs_id, city, state
- branch_id, phone number, email, shop _id, cs_id
- cs_id, city, state

RELATION 05

Has (2) (mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date, branch_id, phone number, email, city, state)

1NF: No Multivalued Attribute

2NF:

- mid, mname, dob, age, phone number, email, city, state, salary, bonus, sal_grade, branch_id, hire_date
- branch_id, phone number, email, city, state, mid

3NF:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state
- branch_id, phone number, email, cs_id, mid
- cs_id, city, state

TABLES:

- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state
- branch_id, phone number, email, cs_id, mid
- cs_id, city, state

RELATION 06

Has (3) (branch_id, phone number, email, city, state, tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date)

1NF: No Multivalued Attribute

2NF:

- branch_id, phone number, email, city, state
- tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date

3NF:

- branch_id, phone number, email, cs_id
- cs_id, city, state
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- branch_id, phone number, email, cs_id
- cs_id, city, state
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id
- age_id, dob, age
- cs_id, city, state

RELATION 07

has (4) (bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, branch_id, phone number, email, city, state)

1NF: No Multivalued Attribute

2NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, branch_id
- branch_id, phone number, email, city, state

3NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, branch_id
- branch_id, phone number, email, cs_id
- cs_id, city , state

TABLES:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, branch_id
- branch_id, phone number, email, cs_id
- cs_id, city , state

RELATION 08

has (5) (branch_id, phone number, email, city, state, eid, ename, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state, state)

1NF: No Multivalued Attribute

2NF:

- branch_id, phone number, email, city, state
- eid, ename, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state

3NF:

- branch_id, phone number, email, cs_id
- cs_id, city, state
- eid, ename, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- branch_id, phone number, email, cs_id
- cs_id, city, state
- eid, ename, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id
- cs_id, city, state
- age_id, dob, age

RELATION 09

Gets (1) (sal_grade, min_salary, max_salary, mid, mname, dob, age, phone number, email, city, salary, bonus, sal_grade, branch_id, hire_date, state)

1NF: No Multivalued Attribute

2NF:

- sal_grade, min_salary, max_salary
- mid, mname, dob, age, phone number, email, city, salary, bonus, sal_grade, branch_id, hire_date, state

3NF:

- sal_grade, min_salary, max_salary
- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- sal_grade, min_salary, max_salary
- mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

RELATION 10

Gets (2) (sal_grade, min_salary, max_salary, eid, ename, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state)

1NF: No Multivalued Attribute

2NF:

- sal_grade, min_salary, max_salary
- eid, ename, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state

3NF:

- sal_grade, min_salary, max_salary
- eid, ename, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- sal_grade, min_salary, max_salary
- eid, ename, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

RELATION 11

Gets(3) (sal_grade, min_salary, max_salary, tid, tname, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state)

1NF: No Multivalued Attribute

2NF:

- sal_grade, min_salary, max_salary
- tid, tname, dob, age, phone number, email, city, job status, salary, bonus, sal_grade, branch_id, hire_date, state

3NF:

- sal_grade, min_salary, max_salary
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- sal_grade, min_salary, max_salary
- tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
- age_id, dob, age
- cs_id, city, state

RELATION 12

Gets (4) (cid, cname, dob, age, phone number, email, city, membership, state, ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, bike_ins)

1NF: No Multivalued Attribute

2NF:

- cid, cname, dob, age, phone number, email, city, membership, state
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, bike_ins, ins_duration, state
- cusins_id, ins_id, cid

3NF:

- cid, cname, phone number, email, membership, cs_id, age_id
- cs_id, city, state
- age_id, dob, age
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, bike_ins, ins_duration, cs_id
- cusins_id, ins_id, cid
- cs_id, city, state

TABLES:

- cid, cname, phone number, email, membership, cs_id, age_id
- cs_id, city, state
- age_id, dob, age
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, bike_ins, ins_duration, cs_id
- cusins_id, ins_id, cid
- cs_id, city, state

RELATION 13

Gets (5) (cid, cname, dob, age, phone number, email, city, state, membership, service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges)

1NF: No Multivalued Attribute

2NF:

- cid, cname, dob, age, phone number, email, city, state, membership
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- cserv_serial, cid, service_serial

3NF:

- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- cserv_serial, cid, service_serial

TABLES:

- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- cserv_serial, cid, service_serial

RELATION 14

Can Be (1) (rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_rent, rent_date, due_date, interest, fine, bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins)

1NF: No Multivalued Attribute

2NF:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_rent, rent_date, due_date, interest, fine
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins

3NF:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
- cs_id, city, state
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins

TABLES:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
- cs_id, city, state
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins

RELATION 15

Can Be (2) (bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_price)

1NF: No Multivalued Attribute

2NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_price
- bkpur_serial, bike_serial, pur_id

3NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
- cs_id, city, state
- bkpur_serial, bike_serial, pur_id

TABLES:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
- cs_id, city, state
- bkpur_serial, bike_serial, pur_id

RELATION 16

Can Be (3) (bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins, ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_ins, ins_duration)

1NF: No Multivalued Attribute

2NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_ins, ins_duration
- bkns_id, bike_serial, ins_id

3NF:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_ins, ins_duration
- cs_id, city, state
- bkns_id, bike_serial, ins_id

TABLES:

- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_ins, ins_duration
- cs_id, city, state
- bkns_id, bike_serial, ins_id

RELATION 17

Can (1) (rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_rent, rent_date, due_date, interest, fine, cid, cname, dob, age, phone number, email, city, state, membership)

1NF: No Multivalued Attribute

2NF:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_rent, rent_date, due_date, interest, fine
- cid, cname, dob, age, phone number, email, city, state, membership

3NF:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
- cs_id, city, state
- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state

TABLES:

- rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
- cs_id, city, state
- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state

RELATION 18

Can (2) (pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_price, cid, cname, dob, age, phone number, email, city, state, membership)

1NF: No Multivalued Attribute

2NF:

- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, city, state, bike_price
- cid, cname, dob, age, phone number, email, city, state, membership

3NF:

- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
- cs_id, city, state
- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state

TABLES:

- pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
- cs_id, city, state
- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state

RELATION 19

Takes (eid, ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, pay_serial, cid, cname, phone number, email, city, state, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount)

1NF: No Multivalued Attribute

2NF:

- eid, ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date
- pay_serial, cid, cname, phone number, email, city, state, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- empay_serial, eid, pay_serial

3NF:

- eid, ename, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- pay_serial, cid, cname, phone number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- cs_id, city, state
- empay_serial, eid, pay_serial

TABLES:

- eid, ename, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- pay_serial, cid, cname, phone number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- cs_id, city, state
- empay_serial, eid, pay_serial

RELATION 20

Deals With ([eid](#), ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, [bike_serial](#), bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins)

1NF: No Multivalued Attribute

2NF:

- [eid](#), ename, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date
- [bike_serial](#), bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- [embk_serial](#), eid, bike_serial

3NF:

- [eid](#), ename, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- [age_id](#), dob, age
- [cs_id](#), city, state
- [bike_serial](#), bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- [embk_serial](#), eid, bike_serial

TABLES:

- [eid](#), ename, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- [age_id](#), dob, age
- [cs_id](#), city, state
- [bike_serial](#), bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- [embk_serial](#), eid, bike_serial

RELATION 21

Handles (tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges)

1NF: No Multivalued Attribute

2NF:

- tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- tecserv_serial, tid, service_serial

3NF:

- tid, tname, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- tecserv_serial, tid, service_serial

TABLES:

- tid, tname, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- service_serial, pur_id, ins_id, bike_serial, cid, cname, phone number, email, problem_desc, tid, tname, charges
- tecserv_serial, tid, service_serial

RELATION 22

Repairs (tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date, bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins)

1NF: No Multivalued Attribute

2NF:

- tid, tname, dob, age, phone number, email, city, state, job status, salary, bonus, sal_grade, branch_id, hire_date
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- tecbk_serial, tid, bike_serial

3NF:

- tid, tname, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- tecbk_serial, tid, bike_serial

TABLES:

- tid, tname, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
- age_id, dob, age
- cs_id, city, state
- bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
- tecbk_serial, tid, bike_serial

RELATION 23

Pays (cid, cname, dob, age, phone number, email, city, state, membership, pay_serial, cid, cname, phone number, email, city, state, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount)

1NF: No Multivalued Attribute

2NF:

- cid, cname, dob, age, phone number, email, city, state, membership
- pay_serial, bike_serial, cid, cname, phone number, email, city, state, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- cuspay_serial, cid, pay_serial

3NF:

- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state
- pay_serial, cid, cname, phone number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- cs_id, city, state
- cuspay_serial, cid, pay_serial

TABLES:

- cid, cname, age_id, phone number, email, cs_id, membership
- age_id, dob, age
- cs_id, city, state
- pay_serial, cid, cname, phone number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
- cs_id, city, state
- cuspay_serial, cid, pay_serial

RELATION 24

Appointed (ow_id, ow_name, phone number, email, city, state, mid,
mname, dob, age, phone number, email, city, state, salary, bonus,
sal_grade, branch_id, hire_date)

1NF: No Multivalued Attribute

2NF:

- ow_id, ow_name, phone number, email, city, state
- mid, mname, dob, age, phone number, email, city, state, salary,
bonus, sal_grade, branch_id, hire_date, ow_id

3NF:

- ow_id, ow_name, phone number, email, cs_id
- cs_id, city, state
- mid, mname, age_id, phone number, email, cs_id, salary, bonus,
sal_grade, branch_id, hire_date, ow_id
- age_id, dob, age
- cs_id, city, state

TABLES:

- ow_id, ow_name, phone number, email, cs_id
- cs_id, city, state
- mid, mname, age_id, phone number, email, cs_id, salary, bonus,
sal_grade, branch_id, hire_date, ow_id
- age_id, dob, age
- cs_id, city, state

TOTAL TABLES:

1. ow_id, ow_name, phone number, email, cs_id
2. cs_id, city, state
3. shop_id, phone number, email, cs_id, ow_id
4. cs_id, city, state
5. mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
6. cs_id, city, state
7. age_id, dob, age
8. tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, mid, age_id, cs_id
9. age_id, dob, age
10. cs_id, city, state
11. mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
12. cs_id, city, state
13. age_id, dob, age
14. eid, ename, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id, mid
15. cs_id, city, state
16. age_id, dob, age
17. shop_id, phone number, email, cs_id
18. cs_id, city, state
19. branch_id, phone number, email, shop_id, cs_id
20. cs_id, city, state
21. mid, mname, phone number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id
22. age_id, dob, age
23. cs_id, city, state
24. branch_id, phone number, email, cs_id, mid
25. cs_id, city, state
26. branch_id, phone number, email, cs_id
27. cs_id, city, state
28. tid, tname, phone number, email, job status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id
29. age_id, dob, age

30. cs_id, city, state
31. bike_serial, bike_model, manufacturer, bike_power, order date,
shipped date, bike_desc, bike_price, bike_rent, bike_ins, branch_id
32. branch_id, phone number, email, cs_id
33. cs_id, city , state
34. branch_id, phone number, email, cs_id
35. cs_id, city, state
36. eid, ename, phone number, email, cs_id, job status, salary, bonus,
sal_grade, branch_id, hire_date, age_id
37. cs_id, city, state
38. age_id, dob, age
39. sal_grade, min_salary, max_salary
40. mid, mname, phone number, email, salary, bonus, sal_grade,
branch_id, hire_date, age_id, cs_id
41. age_id, dob, age
42. cs_id, city, state
43. sal_grade, min_salary, max_salary
44. eid, ename, phone number, email, job status, salary, bonus,
sal_grade, branch_id, hire_date, age_id, cs_id
45. age_id, dob, age
46. cs_id, city, state
47. sal_grade, min_salary, max_salary
48. tid, tname, phone number, email, job status, salary, bonus,
sal_grade, branch_id, hire_date, age_id, cs_id
49. age_id, dob, age
50. cs_id, city, state
51. cid, cname, phone number, email, membership, cs_id, age_id
52. cs_id, city, state
53. age_id, dob, age
54. ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname,
phone number, email, bike_ins, ins_duration, cs_id
55. cusins_id, ins_id, cid
56. cs_id, city, state
57. cid, cname, age_id, phone number, email, cs_id, membership
58. age_id, dob, age
59. cs_id, city, state
60. service_serial, pur_id, ins_id, bike_serial, cid, cname, phone
number, email, problem_desc, tid, tname, charges

61. cserv_serial, cid, service_serial
62. rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
63. cs_id, city, state
64. bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
65. bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
66. pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
67. cs_id, city, state
68. bkpur_serial, bike_serial, pur_id
69. bike_serial, bike_model, manufacturer, bike_power, order date, shipped date, bike_desc, bike_price, bike_rent, bike_ins
70. ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_ins, ins_duration
71. cs_id, city, state
72. bkins_id, bike_serial, ins_id
73. rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
74. cs_id, city, state
75. cid, cname, age_id, phone number, email, cs_id, membership
76. age_id, dob, age
77. cs_id, city, state
78. pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone number, email, cs_id, bike_price
79. cs_id, city, state
80. cid, cname, age_id, phone number, email, cs_id, membership
81. age_id, dob, age
82. cs_id, city, state
83. eid, ename, age_id, phone number, email, cs_id, job status, salary, bonus, sal_grade, branch_id, hire_date
84. age_id, dob, age
85. cs_id, city, state
86. pay_serial, cid, cname, phone number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount

87. cs_id, city, state
88. empay_serial, eid, pay_serial
89. eid, ename, age_id, phone number, email, cs_id, job status, salary,
bonus, sal_grade, branch_id, hire_date
90. age_id, dob, age
91. cs_id, city, state
92. bike_serial, bike_model, manufacturer, bike_power, order date,
shipped date, bike_desc, bike_price, bike_rent, bike_ins
93. embk_serial, eid, bike_serial
94. tid, tname, age_id, phone number, email, cs_id, job status, salary,
bonus, sal_grade, branch_id, hire_date
95. age_id, dob, age
96. cs_id, city, state
97. service_serial, pur_id, ins_id, bike_serial, cid, cname, phone
number, email, problem_desc, tid, tname, charges
98. tecserv_serial, tid, service_serial
99. tid, tname, age_id, phone number, email, cs_id, job status, salary,
bonus, sal_grade, branch_id, hire_date
100. age_id, dob, age
101. cs_id, city, state
102. bike_serial, bike_model, manufacturer, bike_power, order date,
shipped date, bike_desc, bike_price, bike_rent, bike_ins
103. tecbk_serial, tid, bike_serial
104. cid, cname, age_id, phone number, email, cs_id, membership
105. age_id, dob, age
106. cs_id, city, state
107. pay_serial, cid, cname, phone number, email, cs_id, pur_id,
bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
108. cs_id, city, state
109. cuspay_serial, cid, pay_serial
110. ow_id, ow_name, phone number, email, cs_id
111. cs_id, city, state
112. mid, mname, age_id, phone number, email, cs_id, salary, bonus,
sal_grade, branch_id, hire_date, ow_id
113. age_id, dob, age
114. cs_id, city, state

FINAL TABLES:

1. pay_serial, cid, cname, phone_number, email, cs_id, pur_id, bike_price, rent_id, bike_rent, ins_id, bike_ins, Discount
2. empay_serial, eid, pay_serial
3. embk_serial, eid, bike_serial
4. tecserv_serial, tid, service_serial
5. tecbk_serial, tid, bike_serial
6. cuspay_serial, cid, pay_serial
7. mid, mname, phone_number, email, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id, ow_id
8. bike_serial, bike_model, manufacturer, bike_power, order_date, shipped_date, bike_desc, bike_price, bike_rent, bike_ins, branch_id
9. cs_id, city, state
10. age_id, dob, age
11. sal_grade, min_salary, max_salary
12. ins_id, ins_date, branch_id, bike_serial, eid, ename, cid, cname, phone_number, email, bike_ins, ins_duration, cs_id
13. cusins_id, ins_id, cid
14. branch_id, phone_number, email, shop_id, cs_id
15. eid, ename, phone_number, email, job_status, salary, bonus, sal_grade, branch_id, hire_date, cs_id, age_id, mid
16. ow_id, ow_name, phone_number, email, cs_id
17. shop_id, phone_number, email, cs_id, ow_id
18. tid, tname, phone_number, email, job_status, salary, bonus, sal_grade, branch_id, hire_date, age_id, cs_id, mid
19. bkpur_serial, bike_serial, pur_id
20. cid, cname, age_id, phone_number, email, cs_id, membership
21. bkins_id, bike_serial, ins_id
22. cserv_serial, cid, service_serial
23. pur_id, pur_date, branch_id, bike_serial, eid, ename, cid, cname, phone_number, email, cs_id, bike_price
24. rent_id, branch_id, bike_serial, eid, ename, cid, cname, phone_number, email, cs_id, bike_rent, rent_date, due_date, interest, fine
25. service_serial, pur_id, ins_id, bike_serial, cid, cname, phone_number, email, problem_desc, tid, tname, charges

TABLE CREATION

1. LOCATION DETAILS:

```
CREATE TABLE Location_details(
cs_id NUMBER (15) CONSTRAINT pk_location PRIMARY KEY,
city VARCHAR2 (50),
state VARCHAR2 (50)
);
```

2. OWNER DETAILS:

```
CREATE TABLE Owner_details (
ow_id NUMBER (15) CONSTRAINT pk_owner PRIMARY KEY,
ow_name VARCHAR2 (50) NOT NULL,
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_owner REFERENCES Location_details (cs_id)
);
```

3. SHOP DETAILS:

```
CREATE TABLE Shop_details(
shop_id NUMBER (15) CONSTRAINT pk_shop PRIMARY KEY,
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_shop REFERENCES Location_details (cs_id),
ow_id NUMBER (15) CONSTRAINT fk_ow_shop REFERENCES Owner_details (ow_id)
);
```

4. BRANCH DETAILS:

```
CREATE TABLE Branch_details(
branch_id NUMBER (15) CONSTRAINT pk_branch PRIMARY KEY,
phone_number NUMBER (20),
email VARCHAR2 (50),
shop_id NUMBER (15) CONSTRAINT fk_shop_branch REFERENCES Shop_details (shop_id),
cs_id NUMBER (15) CONSTRAINT fk_cs_branch REFERENCES Location_details (cs_id)
);
```

5. BIKE DETAILS:

```
CREATE TABLE Bike_details(
bike_serial NUMBER (15) CONSTRAINT pk_bike PRIMARY KEY,
bike_model VARCHAR2 (50) UNIQUE,
manufacturer VARCHAR2 (50) DEFAULT 'Unknown',
bike_power VARCHAR2 (50) DEFAULT 'Unknown',
order_date DATE,
shipped_date DATE,
bike_desc VARCHAR2 (200) DEFAULT 'No Description',
bike_price NUMBER (10) NOT NULL,
bike_rent NUMBER (10) NOT NULL,
bike_ins NUMBER (10) NOT NULL,
branch_id NUMBER (15) CONSTRAINT fk_branch_bike REFERENCES Branch_details (branch_id)
);
```

6. AGE DETAILS:

```
CREATE TABLE Age_details (
age_id NUMBER (15) CONSTRAINT pk_age PRIMARY KEY,
dob DATE,
age NUMBER (3)
);
```

7. SALARY DETAILS:

```
CREATE TABLE Salary_details (
sal_grade NUMBER (5) CONSTRAINT pk_salary PRIMARY KEY,
min_salary NUMBER (10),
max_salary NUMBER (10)
);
```

8. MANAGER DETAILS:

```
CREATE TABLE Manager_details (
    mid NUMBER (15) CONSTRAINT pk_manager PRIMARY KEY,
    mname VARCHAR2 (50) NOT NULL,
    phone_number NUMBER (20),
    email VARCHAR2 (50),
    salary NUMBER (10) NOT NULL,
    bonus NUMBER (5,2),
    sal_grade NUMBER (5) CONSTRAINT fk_sal_manager REFERENCES Salary_details (sal_grade),
    branch_id NUMBER (15) CONSTRAINT fk_branch_manager REFERENCES Branch_details (branch_id),
    hire_date DATE NOT NULL,
    age_id NUMBER (15) CONSTRAINT fk_age_manager REFERENCES Age_details (age_id),
    cs_id NUMBER (15) CONSTRAINT fk_cs_manager REFERENCES Location_details (cs_id),
    ow_id NUMBER (15) CONSTRAINT fk_ow_manager REFERENCES Owner_details (ow_id)
)
```

9. EMPLOYEE DETAILS:

```
CREATE TABLE Employee_details (
    eid NUMBER (15) CONSTRAINT pk_employee PRIMARY KEY,
    ename VARCHAR2 (50) NOT NULL,
    phone_number NUMBER (20),
    email VARCHAR2 (50),
    job_status VARCHAR2 (50) CONSTRAINT chk_jobstatus_employee CHECK(job_status IN('Full-Time', 'Part-Time')),
    salary NUMBER (10) NOT NULL,
    bonus NUMBER (5,2),
    sal_grade NUMBER (5) CONSTRAINT fk_sal_employee REFERENCES Salary_details (sal_grade),
    branch_id NUMBER (15) CONSTRAINT fk_branch_employee REFERENCES Branch_details (branch_id),
    hire_date DATE,
    cs_id NUMBER (15) CONSTRAINT fk_cs_employee REFERENCES Location_details (cs_id),
    age_id NUMBER (15) CONSTRAINT fk_age_employee REFERENCES Age_details (age_id),
    mid NUMBER (15) CONSTRAINT fk_mid_employee REFERENCES Manager_details (mid)
)
```

10. TECHNICIAN DETAILS:

```
CREATE TABLE Technician_details (
    tid NUMBER (15) CONSTRAINT pk_technician PRIMARY KEY,
    tname VARCHAR2 (50) NOT NULL,
    phone_number NUMBER (20),
    email VARCHAR2 (50),
    job_status VARCHAR2 (50) CONSTRAINT chk_jobstatus_technician CHECK(job_status IN('Full-Time', 'Part-Time')),
    salary NUMBER (10) NOT NULL,
    bonus NUMBER (5,2),
    sal_grade NUMBER (5) CONSTRAINT fk_sal_technician REFERENCES Salary_details (sal_grade),
    branch_id NUMBER (15) CONSTRAINT fk_branch_technician REFERENCES Branch_details (branch_id),
    hire_date DATE,
    age_id NUMBER (15) CONSTRAINT fk_age_technician REFERENCES Age_details (age_id),
    cs_id NUMBER (15) CONSTRAINT fk_cs_technician REFERENCES Location_details (cs_id),
    mid NUMBER (15) CONSTRAINT fk_mid_technician REFERENCES Manager_details (mid)
)
```

11. CUSTOMER DETAILS:

```
CREATE TABLE Customer_details (
cid NUMBER (15) CONSTRAINT pk_customer PRIMARY KEY,
cname VARCHAR2 (50) NOT NULL,
age_id NUMBER (15) CONSTRAINT fk_age_customer REFERENCES Age_details (age_id),
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_customer REFERENCES Location_details (cs_id),
membership VARCHAR2 (50) CONSTRAINT chk_membership_customer CHECK(membership IN('Bronze', 'Silver', 'Gold', 'Platinum'))
);
```

12. PURCHASE DETAILS:

```
CREATE TABLE Purchase_details (
pur_id NUMBER (15) CONSTRAINT pk_purchase PRIMARY KEY,
pur_date DATE NOT NULL,
branch_id NUMBER (15) CONSTRAINT fk_branch_purchase REFERENCES Branch_details (branch_id),
bike_serial NUMBER (15) CONSTRAINT fk_bike_purchase REFERENCES Bike_details (bike_serial),
eid NUMBER (15) CONSTRAINT fk_employee_purchase REFERENCES Employee_details (eid),
ename VARCHAR2 (50),
cid NUMBER (15) CONSTRAINT fk_customer_purchase REFERENCES Customer_details (cid),
cname VARCHAR2 (50),
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_purchase REFERENCES Location_details (cs_id),
bike_price NUMBER (10) NOT NULL
);
```

13. RENT DETAILS:

```
CREATE TABLE Rent_details (
rent_id NUMBER (15) CONSTRAINT pk_rent PRIMARY KEY,
branch_id NUMBER (15) CONSTRAINT fk_branch_rent REFERENCES Branch_details (branch_id),
bike_serial NUMBER (15) CONSTRAINT fk_bike_rent REFERENCES Bike_details (bike_serial),
eid NUMBER (15) CONSTRAINT fk_employee_rent REFERENCES Employee_details (eid),
ename VARCHAR2 (50),
cid NUMBER (15) CONSTRAINT fk_customer_rent REFERENCES Customer_details (cid),
cname VARCHAR2 (50),
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_rent REFERENCES Location_details (cs_id),
bike_rent NUMBER (10) NOT NULL,
rent_date DATE NOT NULL,
due_date DATE NOT NULL,
interest NUMBER (5,2),
fine NUMBER (10)
)
```

14. INSURANCE DETAILS:

```
CREATE TABLE Insurance_details (
ins_id NUMBER (15) CONSTRAINT pk_insurance PRIMARY KEY,
ins_date DATE,
branch_id NUMBER (15) CONSTRAINT fk_branch_insurance REFERENCES Branch_details (branch_id),
bike_serial NUMBER (15) CONSTRAINT fk_bike_insurance REFERENCES Bike_details (bike_serial),
eid NUMBER (15) CONSTRAINT fk_employee_insurance REFERENCES Employee_details (eid),
ename VARCHAR2 (50),
cid NUMBER (15) CONSTRAINT fk_customer_insurance REFERENCES Customer_details (cid),
cname VARCHAR2 (50),
phone_number NUMBER (20),
email VARCHAR2 (50),
bike_ins NUMBER (10) NOT NULL,
ins_duration DATE NOT NULL,
cs_id NUMBER (15) CONSTRAINT fk_cs_insurance REFERENCES Location_details (cs_id)
);
```

15. PAYMENT DETAILS:

```
CREATE TABLE Payment_details(
pay_serial NUMBER (15) CONSTRAINT pk_payment PRIMARY KEY,
cid NUMBER (15) CONSTRAINT fk_customer_payment REFERENCES Customer_details (cid),
cname VARCHAR2 (50),
phone_number NUMBER (20),
email VARCHAR2 (50),
cs_id NUMBER (15) CONSTRAINT fk_cs_payment REFERENCES Location_details (cs_id),
pur_id NUMBER (15) CONSTRAINT fk_purchase_payment REFERENCES Purchase_details (pur_id),
bike_price NUMBER (10),
rent_id NUMBER (15) CONSTRAINT fk_rent_payment REFERENCES Rent_details (rent_id),
bike_rent NUMBER (10),
ins_id NUMBER (15) CONSTRAINT fk_insurance_payment REFERENCES Insurance_details (ins_id),
bike_ins NUMBER (10),
Discount NUMBER (5,2)
)
```

16. EMPLOYEE PAYMENT:

```
CREATE TABLE Employee_Payment (
empay_serial NUMBER (15) CONSTRAINT pk_empay PRIMARY KEY,
eid NUMBER (15) CONSTRAINT fk_employee_empay REFERENCES Employee_details (eid),
pay_serial NUMBER (15) CONSTRAINT fk_payment_empay REFERENCES Payment_details (pay_serial)
);
```

17. EMPLOYEE BIKE:

```
CREATE TABLE Employee_Bike (
embk_serial NUMBER (15) CONSTRAINT pk_embk PRIMARY KEY,
eid NUMBER (15) CONSTRAINT fk_employee_embk REFERENCES Employee_details (eid),
bike_serial NUMBER (15) CONSTRAINT fk_bike_embk REFERENCES Bike_details (bike_serial)
);
```

18. TECHNICIAN BIKE:

```
CREATE TABLE Technician_Bike (
tecbk_serial NUMBER (15) CONSTRAINT pk_tecbk PRIMARY KEY,
tid NUMBER (15) CONSTRAINT fk_technician_tecbk REFERENCES Technician_details (tid),
bike_serial NUMBER (15) CONSTRAINT fk_bike_tecbk REFERENCES Bike_details (bike_serial)
);
```

19. CUSTOMER PAYMENT:

```
CREATE TABLE Customer_Payment (
cuspay_serial NUMBER (15) CONSTRAINT pk_cuspay PRIMARY KEY,
cid NUMBER (15) CONSTRAINT fk_customer_cuspay REFERENCES Customer_details (cid),
pay_serial NUMBER (15) CONSTRAINT fk_payment_cuspay REFERENCES Payment_details (pay_serial)
);
```

20. CUSTOMER INSURANCE:

```
CREATE TABLE Customer_Insurance (
cusins_id NUMBER (15) CONSTRAINT pk_cusins PRIMARY KEY,
ins_id NUMBER (15) CONSTRAINT fk_insurance_cusins REFERENCES Insurance_details (ins_id),
cid NUMBER (15) CONSTRAINT fk_customer_cusins REFERENCES Customer_details (cid)
);
```

21. BIKE PURCHASE:

```
CREATE TABLE Bike_Purchase (
bkpur_serial NUMBER (15) CONSTRAINT pk_bkpur PRIMARY KEY,
bike_serial NUMBER (15) CONSTRAINT fk_bike_bkpur REFERENCES Bike_details (bike_serial),
pur_id NUMBER (15) CONSTRAINT fk_purchase_bkpur REFERENCES Purchase_details (pur_id)
);
```

22. BIKE INSURANCE:

```
CREATE TABLE Bike_Insurance (
bkins_id NUMBER (15) CONSTRAINT pk_bkins PRIMARY KEY,
bike_serial NUMBER (15) CONSTRAINT fk_bike_bkins REFERENCES Bike_details (bike_serial),
ins_id NUMBER (15) CONSTRAINT fk_insurance_bkins REFERENCES Insurance_details (ins_id)
);
```

23. CUSTOMERSERVICE DETAILS:

```
CREATE TABLE Customerservice_details (
service_serial NUMBER (15) CONSTRAINT pk_service PRIMARY KEY,
pur_id NUMBER (15) CONSTRAINT fk_purchase_service REFERENCES Purchase_details (pur_id),
ins_id NUMBER (15) CONSTRAINT fk_insurance_service REFERENCES Insurance_details (ins_id),
bike_serial NUMBER (15) CONSTRAINT fk_bike_service REFERENCES Bike_details (bike_serial),
cid NUMBER (15) CONSTRAINT fk_customer_service REFERENCES Customer_details (cid),
cname VARCHAR2 (50),
phone_number NUMBER (20),
email VARCHAR2 (50),
problem_desc VARCHAR2 (200) DEFAULT '',
tid NUMBER (15) CONSTRAINT fk_technician_service REFERENCES Technician_details (tid),
tname VARCHAR2 (50),
charges NUMBER (10) NOT NULL
);
```

24. CUSTOMER CUSTOMERSERVICE:

```
CREATE TABLE Customer_Customerservice (
cserv_serial NUMBER (15) CONSTRAINT pk_cserv PRIMARY KEY,
cid NUMBER (15) CONSTRAINT fk_customer_cserv REFERENCES Customer_details (cid),
service_serial NUMBER (15) CONSTRAINT fk_service_cserv REFERENCES Customerservice_details (service_serial)
);
```

25. TECHNICIAN SERVICE:

```
CREATE TABLE Technician_Service (
tecserv_serial NUMBER (15) CONSTRAINT pk_tecserv PRIMARY KEY,
tid NUMBER (15) CONSTRAINT fk_technician_tecserv REFERENCES Technician_details (tid),
service_serial NUMBER (15) CONSTRAINT fk_service_tecserv REFERENCES Customerservice_details (service_serial)
);
```

DATA INSERTION

1. LOCATION DETAILS:

```
4 INSERT INTO Location_details (cs_id,city,state) VALUES (9001,'Charleston','West Virginia');
5 INSERT INTO Location_details (cs_id,city,state) VALUES (9002,'Troy','New York');
6 INSERT INTO Location_details (cs_id,city,state) VALUES (9003,'New Orleans','Louisiana');
7 INSERT INTO Location_details (cs_id,city,state) VALUES (9004,'Oklahoma City','Oklahoma');
8 INSERT INTO Location_details (cs_id,city,state) VALUES (9005,'Jackson','Mississippi');
9 INSERT INTO Location_details (cs_id,city,state) VALUES (9006,'Phoenix','Arizona');
10 INSERT INTO Location_details (cs_id,city,state) VALUES (9007,'Columbus','Ohio');
11 INSERT INTO Location_details (cs_id,city,state) VALUES (9008,'Atlanta','Georgia');
12 INSERT INTO Location_details (cs_id,city,state) VALUES (9009,'Honolulu','Hawaii');
13 INSERT INTO Location_details (cs_id,city,state) VALUES (9010,'Salt Lake City','Utah');
14
15 Select * from Location_details
16
17
18
19
```

CS_ID	CITY	STATE
9001	Charleston	West Virginia
9002	Troy	New York
9003	New Orleans	Louisiana
9004	Oklahoma City	Oklahoma
9005	Jackson	Mississippi
9006	Phoenix	Arizona
9007	Columbus	Ohio
9008	Atlanta	Georgia
9009	Honolulu	Hawaii
9010	Salt Lake City	Utah

2. OWNER DETAILS:

```
4 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8001,'Steven king',5551234567,'steven@gmail.com',9001);
5 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8002,'Neena Kochhar',5551234568,'Neena@gmail.com',9002);
6 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8003,'Lex Dehaan',5551234569,'lex@gmail.com',9003);
7 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8004,'Bruce Ernst',5551234570,'bruce@gmail.com',9004);
8 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8005,'David Austin',5551234571,'david@gmail.com',9005);
9 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8006,'Valli Pataballa',5551234572,'Valli@gmail.com',9006);
10 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8007,'Rudro Khan',1988555999,'Rudro@gmail.com',9007);
11 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8008,'Meheraf hasan',1788855555,'hasan@gmail.com',9008);
12 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8009,'Asif Chawdhury',5551234575,'asif@gmail.com',9009);
13 INSERT INTO Owner_details (ow_id,ow_name,phone_number,email,cs_id) VALUES (8010,'Barak Obama',5551234576,'obama@gmail.com',9010);
14
15 Select * from Owner_details
16
17
18
19
```

OW_ID	OW_NAME	PHONE_NUMBER	EMAIL	CS_ID
8001	Steven king	5551234567	steven@gmail.com	9001
8002	Neena Kochhar	5551234568	Neena@gmail.com	9002
8003	Lex Dehaan	5551234569	lex@gmail.com	9003
8004	Bruce Ernst	5551234570	bruce@gmail.com	9004
8005	David Austin	5551234571	david@gmail.com	9005
8006	Valli Pataballa	5551234572	Valli@gmail.com	9006
8007	Rudro Khan	1988555999	Rudro@gmail.com	9007
8008	Meheraf hasan	1788855555	hasan@gmail.com	9008
8009	Asif Chawdhury	5551234575	asif@gmail.com	9009
8010	Barak Obama	5551234576	obama@gmail.com	9010

3. SHOP DETAILS:

```
3 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (1,5661224561,'stshop@gmail.com',9001,8001);
4 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (2,5661224562,'nnshop@gmail.com',9002,8002);
5 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (3,5661224563,'lxshop@gmail.com',9003,8003);
6 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (4,5661224564,'bushop@gmail.com',9004,8004);
7 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (5,5661224565,'dashop@gmail.com',9005,8005);
8 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (6,5661224566,'vshop@gmail.com',9006,8006);
9 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (7,5661224567,'rkshop@gmail.com',9007,8007);
10 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (8,5661224568,'hshop@gmail.com',9008,8008);
11 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (9,5661224569,'asshop@gmail.com',9009,8009);
12 INSERT INTO Shop_details (shop_id,phone_number,email,cs_id,ow_id) VALUES (10,5661224570,'baoshop@gmail.com',9010,8010);
13
14 Select * from Shop_details
```

SHOP_ID	PHONE_NUMBER	EMAIL	CS_ID	OW_ID
1	5661224561	stshop@gmail.com	9001	8001
2	5661224562	nnshop@gmail.com	9002	8002
3	5661224563	lxshop@gmail.com	9003	8003
4	5661224564	bushop@gmail.com	9004	8004
5	5661224565	dashop@gmail.com	9005	8005
6	5661224566	vshop@gmail.com	9006	8006
7	5661224567	rkshop@gmail.com	9007	8007
8	5661224568	hshop@gmail.com	9008	8008
9	5661224569	asshop@gmail.com	9009	8009
10	5661224570	baoshop@gmail.com	9010	8010

4. BRANCH DETAILS:

```
4 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1001,6771224561,'stbranch@gmail.com',1,9001);
5 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1002,6771224562,'nnbranch@gmail.com',2,9002);
6 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1003,6771224563,'lxbranch@gmail.com',3,9003);
7 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1004,6771224564,'bubranch@gmail.com',4,9004);
8 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1005,6771224565,'dabranch@gmail.com',5,9005);
9 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1006,6771224566,'vbranch@gmail.com',6,9006);
10 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1007,6771224567,'rkbranch@gmail.com',7,9007);
11 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1008,6771224568,'hbranch@gmail.com',8,9008);
12 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1009,6771224569,'asbranch@gmail.com',9,9009);
13 INSERT INTO Branch_details (branch_id,phone_number,email,shop_id,cs_id) VALUES (1010,6771224570,'baobranch@gmail.com',10,9010);
14
15 Select * from Branch_details
16
17
18
19
20
```

BRANCH_ID	PHONE_NUMBER	EMAIL	SHOP_ID	CS_ID
1001	6771224561	stbranch@gmail.com	1	9001
1002	6771224562	nnbranch@gmail.com	2	9002
1003	6771224563	lxbranch@gmail.com	3	9003
1004	6771224564	bubranch@gmail.com	4	9004
1005	6771224565	dabranch@gmail.com	5	9005
1006	6771224566	vbranch@gmail.com	6	9006
1007	6771224567	rkbranch@gmail.com	7	9007
1008	6771224568	hbranch@gmail.com	8	9008
1009	6771224569	asbranch@gmail.com	9	9009
1010	6771224570	baobranch@gmail.com	10	9010

5. BIKE DETAILS:

```

4   INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
5   VALUES (10001,'Hero HF 100','Hero','97.2cc','21-Jun-2021','26-Jan-2022','(5000 rpm) Made in India',50000,10000,22000,1007);
6
7   INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
8   VALUES (10002,'Hero XPulse 200T','Hero','199.6cc','01-Jul-2021','01-Jan-2022','(8000 rpm) Made in India',116000,40000,60000,1004);
9
10  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
11  VALUES (10003,'Hero Passion Pro i3S','Hero','113.2cc','01-Jul-2021','10-Jan-2022','(7500 rpm) Made in India',67000,12000,24000,1008);
12
13  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
14  VALUES (10004,'Bajaj Pulsar 125','Bajaj','124.4cc','25-Jul-2021','01-Feb-2022','(8500 rpm) Made in India',104000,38000,57000,1001);
15
16  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
17  VALUES (10005,'Honda CB Unicorn 160','Honda','160cc','01-Aug-2021','28-Feb-2022','(8000 rpm) Made in China',98000,32000,55000,1010);
18
19  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
20  VALUES (10006,'Honda SP 125','Honda','125cc','01-Apr-2021','01-Dec-2021','(6000 rpm) Made in China',78000,15000,27000,1003);
21
22  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
23  VALUES (10007,'Yamaha FZ S3','Yamaha','149cc','01-Feb-2021','01-Sep-2021','(7200 rpm) Made in Japan',116000,41000,63500,1006);
24
25  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
26  VALUES (10008,'TVS Apache RTR 160','TVS','160cc','11-Sep-2021','19-Mar-2022','(8750 rpm) Made in India',118000,41600,63000,1008);
27
28  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
29  VALUES (10009,'Honda Dio','Honda','110cc','01-Jun-2022','01-Sep-2022','(7100 rpm) Made in China',65000,11000,22500,1007);
30
31  INSERT INTO Bike_details (bike_serial,bike_model,manufacturer,bike_power,order_date,shipped_date,bike_desc,bike_price,bike_rent,bike_ins,branch_id)
32  VALUES (10010,'TVS XL 100','TVS','100cc','01-Jan-2022','01-Apr-2022','(6000 rpm) Made in India',43000,9000,20000,1002);
33
34  Select * from Bike_details;

```

BIKE_SERIAL	BIKE_MODEL	MANUFACTURER	BIKE_POWER	ORDER_DATE	SHIPPED_DATE	BIKE_DESC	BIKE_PRICE	BIKE_RENT	BIKE_INS	BRANCH_ID
10001	Hero HF 100	Hero	97.2cc	21-JUN-21	26-JAN-22	(5000 rpm) Made in India	50000	10000	22000	1007
10002	Hero XPulse 200T	Hero	199.6cc	01-JUL-21	01-JAN-22	(8000 rpm) Made in India	116000	40000	60000	1004
10003	Hero Passion Pro i3S	Hero	113.2cc	01-JUL-21	10-JAN-22	(7500 rpm) Made in India	67000	12000	24000	1008
10004	Bajaj Pulsar 125	Bajaj	124.4cc	25-JUL-21	01-FEB-22	(8500 rpm) Made in India	104000	38000	57000	1001
10005	Honda CB Unicorn 160	Honda	160cc	01-AUG-21	28-FEB-22	(8000 rpm) Made in China	98000	32000	55000	1010
10006	Honda SP 125	Honda	125cc	01-APR-21	01-DEC-21	(6000 rpm) Made in China	78000	15000	27000	1003
10007	Yamaha FZ S3	Yamaha	149cc	01-FEB-21	01-SEP-21	(7200 rpm) Made in Japan	116000	41000	63500	1006
10008	TVS Apache RTR 160	TVS	160cc	11-SEP-21	19-MAR-22	(8750 rpm) Made in India	118000	41600	63000	1008
10009	Honda Dio	Honda	110cc	01-JUN-22	01-SEP-22	(7100 rpm) Made in China	65000	11000	22500	1007
10010	TVS XL 100	TVS	100cc	01-JAN-22	01-APR-22	(6000 rpm) Made in India	43000	9000	20000	1002

6. AGE DETAILS:

```

4   INSERT INTO Age_details (age_id,dob,age) VALUES (7001,'01-Jan-1972',50);
5   INSERT INTO Age_details (age_id,dob,age) VALUES (7002,'28-Feb-1975',47);
6   INSERT INTO Age_details (age_id,dob,age) VALUES (7003,'19-Jun-1987',35);
7   INSERT INTO Age_details (age_id,dob,age) VALUES (7004,'22-Apr-1989',33);
8   INSERT INTO Age_details (age_id,dob,age) VALUES (7005,'01-July-1981',41);
9   INSERT INTO Age_details (age_id,dob,age) VALUES (7006,'05-Aug-2000',22);
10  INSERT INTO Age_details (age_id,dob,age) VALUES (7007,'29-Mar-1993',29);
11  INSERT INTO Age_details (age_id,dob,age) VALUES (7008,'17-May-1995',27);
12  INSERT INTO Age_details (age_id,dob,age) VALUES (7009,'22-Sep-1992',30);
13  INSERT INTO Age_details (age_id,dob,age) VALUES (7010,'09-Jan-1991',31);
14
15  Select * from Age_details;
16
17

```

AGE_ID	DOB	AGE
7001	01-JAN-72	50
7002	28-FEB-75	47
7003	19-JUN-87	35
7004	22-APR-89	33
7005	01-JUL-81	41
7006	05-AUG-00	22
7007	29-MAR-93	29
7008	17-MAY-95	27
7009	22-SEP-92	30
7010	09-JAN-91	31

7. SALARY DETAILS:

```

4  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (1,22250,43000);
5  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (2,18500,35500);
6  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (3,15000,29000);
7  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (4,12000,23000);
8  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (5,11000,22000);
9  INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (6,8000,16000);
10 INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (7,6400,12000);
11 INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (8,5900,11300);
12 INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (9,5500,11000);
13 INSERT INTO Salary_details (sal_grade,min_salary,max_salary) VALUES (10,5200,10200);
14
15 Select * from Salary_details;
16
17

```

SAL_GRADE	MIN_SALARY	MAX_SALARY
1	22250	43000
2	18500	35500
3	15000	29000
4	12000	23000
5	11000	22000
6	8000	16000
7	6400	12000
8	5900	11300
9	5500	11000
10	5200	10200

8. MANAGER DETAILS:

```

4  INSERT INTO Manager_details (mid,mname,phone_number,email,salary,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
5  VALUES (103,'Ismael',6881224561,'ismael@gmail.com',12000,6,1004,'21-Jun-2018',7008,9010,8010);
6
7  INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
8  VALUES (105,'Jose',6881224565,'jose@gmail.com',18000,0.17,4,1006,'22-Jul-2007',7009,9001,8004);
9
10 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
11 VALUES (106,'Luis',6881224564,'luis@gmail.com',20000,0.08,4,1007,'29-Aug-2006',7010,9005,8006);
12
13 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
14 VALUES (111,'Den',6881224562,'den@gmail.com',21000,0.16,3,1005,'11-Sep-2008',7007,9004,8008);
15
16 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
17 VALUES (115,'Alexander',6881224567,'alexander@gmail.com',8000,7,1008,'22-Apr-2018',7003,9009,8005);
18
19 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
20 VALUES (118,'Shelli',6881224568,'shelli@gmail.com',20000,0.2,3,1010,'11-Dec-2011',7002,9008,8004);
21
22 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
23 VALUES (121,'Sigal',6881224563,'sigal@gmail.com',6000,9,1001,'05-Oct-2020',7004,9002,8006);
24
25 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
26 VALUES (133,'Baida',6881224569,'baida@gmail.com',30000,0.17,2,1009,'12-Jun-2010',7006,9006,8008);
27
28 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
29 VALUES (135,'Karen',6881224570,'karen@gmail.com',13500,5,1003,'21-Jan-2019',7005,9003,8004);
30
31 INSERT INTO Manager_details (mid,mname,phone_number,email,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,ow_id)
32 VALUES (140,'Matthew',6881224566,'matthew@gmail.com',34000,0.1,1,1002,'21-Jan-2006',7001,9007,8009);
33
34 Select * from Manager_details;
35

```

MID	MNAME	PHONE_NUMBER	EMAIL	SALARY	BONUS	SAL_GRADE	BRANCH_ID	HIRE_DATE	AGE_ID	CS_ID	OW_ID
103	Ismael	6881224561	ismael@gmail.com	12000	-	6	1004	21-JUN-18	7008	9010	8010
105	Jose	6881224565	jose@gmail.com	18000	.17	4	1006	22-JUL-07	7009	9001	8004
106	Luis	6881224564	luis@gmail.com	20000	.08	4	1007	29-AUG-06	7010	9005	8006
111	Den	6881224562	den@gmail.com	21000	.16	3	1005	11-SEP-08	7007	9004	8008
115	Alexander	6881224567	alexander@gmail.com	8000	-	7	1008	22-APR-18	7003	9009	8005
118	Shelli	6881224568	shelli@gmail.com	20000	.2	3	1010	11-DEC-11	7002	9008	8004
121	Sigal	6881224563	sigal@gmail.com	6000	-	9	1001	05-OCT-20	7004	9002	8006
133	Baida	6881224569	baida@gmail.com	30000	.17	2	1009	12-JUN-10	7006	9006	8008
135	Karen	6881224570	karen@gmail.com	13500	-	5	1003	21-JAN-19	7005	9003	8004
140	Matthew	6881224566	matthew@gmail.com	34000	.1	1	1002	21-JAN-06	7001	9007	8009

9. EMPLOYEE DETAILS:

```

4  INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
5  VALUES (101,'Peter',6841224563,'peter@gmail.com','Full-Time',10000,6,1003,'22-Jun-2018',9006,7006,103);
6
7  INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
8  VALUES (102,'David',6381224563,'david@gmail.com','Part-Time',7000,9,1009,'01-Jan-2019',9001,7001,103);
9
10 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id)
11 VALUES (103,'Ismael',6881224561,'ismael@gmail.com','Full-Time',12000,6,1004,'21-Jun-2018',9010,7008);
12
13 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
14 VALUES (104,'Oliver',1881224564,'oliver@gmail.com','Full-Time',17000,.15,3,1010,'01-Sep-2007',9004,7010,105);
15
16 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id)
17 VALUES (105,'Jose',6881224565,'jose@gmail.com','Part-Time',18000,4,1006,'22-Jul-2007',9001,7009);
18
19 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,cs_id,age_id)
20 VALUES (106,'Luis',6881224564,'luis@gmail.com','Full-Time',20000,.08,4,1007,'29-Aug-2006',9005,7010);
21
22 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
23 VALUES (107,'King',1881224565,'king@gmail.com','Full-Time',13000,5,1005,'01-Feb-2020',9007,7007,111);
24
25 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
26 VALUES (108,'Sully',1881224566,'sully@gmail.com','Full-Time',21000,.16,2,1002,'22-Apr-2018',9008,7008,121);
27
28 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
29 VALUES (109,'Smith',1881224567,'smith@gmail.com','Part-Time',8000,7,1007,'11-Jun-2016',9002,7002,121);
30
31 INSERT INTO Employee_details (eid,ename,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,cs_id,age_id,mid)
32 VALUES (110,'McEwen',1881224568,'mcewen@gmail.com','Part-Time',10000,6,1006,'31-Dec-2018',9003,7003,133);
33
34 Select * from Employee_details;
35

```

EID	ENAME	PHONE_NUMBER	EMAIL	JOB_STATUS	SALARY	BONUS	SAL_GRADE	BRANCH_ID	HIRE_DATE	CS_ID	AGE_ID	MID
101	Peter	6841224563	peter@gmail.com	Full-Time	10000	-	6	1003	22-JUN-18	9006	7006	103
102	David	6381224563	david@gmail.com	Part-Time	7000	-	9	1009	01-JAN-19	9001	7001	103
103	Ismael	6881224561	ismael@gmail.com	Full-Time	12000	-	6	1004	21-JUN-18	9010	7008	-
104	Oliver	1881224564	oliver@gmail.com	Full-Time	17000	.15	3	1010	01-SEP-07	9004	7010	105
105	Jose	6881224565	jose@gmail.com	Part-Time	18000	-	4	1006	22-JUL-07	9001	7009	-
106	Luis	6881224564	luis@gmail.com	Full-Time	20000	.08	4	1007	29-AUG-06	9005	7010	-
107	King	1881224565	king@gmail.com	Full-Time	13000	-	5	1005	01-FEB-20	9007	7007	111
108	Sully	1881224566	sully@gmail.com	Full-Time	21000	.16	2	1002	22-APR-18	9008	7008	121
109	Smith	1881224567	smith@gmail.com	Part-Time	8000	-	7	1007	11-JUN-16	9002	7002	121
110	McEwen	1881224568	mcewen@gmail.com	Part-Time	10000	-	6	1006	31-DEC-18	9003	7003	133

10. CUSTOMER DETAILS:

```
4 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
5 VALUES (501,'Taylor',7008,6001224570,'tj@gmail.com',9007,'Gold');
6
7 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
8 VALUES (502,'Jason',7001,6001224568,'jason@gmail.com',9004,'Platinum');
9
10 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
11 VALUES (503,'Olson',7010,6001224566,'olson@gmail.com',9008,'Silver');
12
13 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
14 VALUES (504,'Karen',7007,6001224564,'ki@gmail.com',9001,'Silver');
15
16 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
17 VALUES (505,'Hazel',7009,6001224567,'hazel@gmail.com',9010,'Platinum');
18
19 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
20 VALUES (506,'Stephen',7005,6001224565,'stephen@gmail.com',9003,'Gold');
21
22 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
23 VALUES (507,'Cindy',7004,6001224562,'seo@gmail.com',9006,'Bronze');
24
25 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
26 VALUES (508,'Joshua',7006,6001224563,'joshua@gmail.com',9008,'Silver');
27
28 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
29 VALUES (509,'Patel',7002,6001224561,'patel@gmail.com',9007,'Gold');
30
31 INSERT INTO Customer_details (cid,cname,age_id,phone_number,email,cs_id,membership)
32 VALUES (510,'Raja',7003,6001224569,'rajs@gmail.com',9002,'Platinum');
33
34 Select * from Customer_details;
35
```

CID	CNAME	AGE_ID	PHONE_NUMBER	EMAIL	CS_ID	MEMBERSHIP
501	Taylor	7008	6001224570	tj@gmail.com	9007	Gold
502	Jason	7001	6001224568	jason@gmail.com	9004	Platinum
503	Olson	7010	6001224566	olson@gmail.com	9008	Silver
504	Karen	7007	6001224564	ki@gmail.com	9001	Silver
505	Hazel	7009	6001224567	hazel@gmail.com	9010	Platinum
506	Stephen	7005	6001224565	stephen@gmail.com	9003	Gold
507	Cindy	7004	6001224562	seo@gmail.com	9006	Bronze
508	Joshua	7006	6001224563	joshua@gmail.com	9008	Silver
509	Patel	7002	6001224561	patel@gmail.com	9007	Gold
510	Raja	7003	6001224569	rajs@gmail.com	9002	Platinum

11. TECHNICIAN DETAILS:

```

4 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
5 VALUES (301,'Payam',6991224561,'payam@gmail.com','Full-Time',18000,0.07,3,1007,'22-Jul-2007',7008,9005,121);
6
7 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
8 VALUES (302,'Shanta',6991224562,'shanta@gmail.com','Part-Time',8000,6,1005,'29-Jul-2022',7003,9010,105);
9
10 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
11 VALUES (303,'Kevin',6991224563,'kevin@gmail.com','Full-Time',20000,0.16,2,1002,'29-Aug-2006',7004,9002,105);
12
13 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
14 VALUES (304,'Julia',6991224564,'julia@gmail.com','Full-Time',16000,5,1008,'27-Mar-2011',7002,9003,111);
15
16 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
17 VALUES (305,'Irene',6991224565,'irene@gmail.com','Full-Time',18000,0.13,4,1001,'11-Dec-2011',7007,9001,133);
18
19 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
20 VALUES (306,'James',6991224566,'james@gmail.com','Full-Time',40000,0.1,1,1006,'01-Jan-1995',7001,9004,106);
21
22 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
23 VALUES (307,'Stevi',6991224567,'stevi@gmail.com','Full-Time',12000,6,1009,'22-Nov-2016',7009,9007,103);
24
25 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
26 VALUES (308,'Laura',6991224568,'laura@gmail.com','Part-Time',7000,7,1004,'01-Aug-2022',7006,9008,140);
27
28 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
29 VALUES (309,'Mozhe',6991224569,'mozhe@gmail.com','Full-Time',16000,0.13,4,1010,'12-Jun-2010',7001,9009,121);
30
31 INSERT INTO Technician_Details (tid,tname,phone_number,email,job_status,salary,bonus,sal_grade,branch_id,hire_date,age_id,cs_id,mid)
32 VALUES (310,'Marlow',6991224570,'marlow10@gmail.com','Full-Time',19000,0.11,4,1003,'21-Jan-2010',7005,9006,133);
33
34 Select * from Technician_Details;
35

```

TID	TNAME	PHONE_NUMBER	EMAIL	JOB_STATUS	SALARY	BONUS	SAL_GRADE	BRANCH_ID	HIRE_DATE	AGE_ID	CS_ID	MID
301	Payam	6991224561	payam@gmail.com	Full-Time	18000	.07	3	1007	22-JUL-07	7008	9005	121
302	Shanta	6991224562	shanta@gmail.com	Part-Time	8000	-	6	1005	29-JUL-22	7003	9010	105
303	Kevin	6991224563	kevin@gmail.com	Full-Time	20000	.16	2	1002	29-AUG-06	7004	9002	105
304	Julia	6991224564	julia@gmail.com	Full-Time	16000	-	5	1008	27-MAR-11	7002	9003	111
305	Irene	6991224565	irene@gmail.com	Full-Time	18000	.13	4	1001	11-DEC-11	7007	9001	133
306	James	6991224566	james@gmail.com	Full-Time	40000	.1	1	1006	01-JAN-95	7001	9004	106
307	Stevi	6991224567	stevi@gmail.com	Full-Time	12000	-	6	1009	22-NOV-16	7009	9007	103
308	Laura	6991224568	laura@gmail.com	Part-Time	7000	-	7	1004	01-AUG-22	7006	9008	140
309	Mozhe	6991224569	mozhe@gmail.com	Full-Time	16000	.13	4	1010	12-JUN-10	7001	9009	121
310	Marlow	6991224570	marlow10@gmail.com	Full-Time	19000	.11	4	1003	21-JAN-10	7005	9006	133

12. PURCHASE DETAILS:

```

4  INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
5  VALUES (20001,'6-May-2022',1007,10001,107,'Peter',501,'Taylor',6001224570,'tj@gmail.com',9007,50000);
6
7  INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
8  VALUES (20002,'10-Jun-2022',1004,10002,104,'David',502,'Jason',6001224568,'jason@gmail.com',9004,116000);
9
10 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
11 VALUES (20003,'12-Feb-2022',1008,10003,108,'Ismael',503,'Olson',6001224566,'olson@gmail.com',9008,67000);
12
13 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
14 VALUES (20004,'02-Apr-2022',1001,10004,102,'Oliver',504,'Karen',6001224564,'ki@gmail.com',9001,104000);
15
16 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
17 VALUES (20005,'02-Aug-2022',1010,10005,103,'Jose',505,'Hazel',6001224567,'hazel@gmail.com',9010,98000);
18
19 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
20 VALUES (20006,'30-Mar-2022',1003,10006,110,'Luis',506,'Stephen',6001224565,'stephen@gmail.com',9003,78000);
21
22 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
23 VALUES (20007,'31-Dec-2021',1006,10007,101,'King',507,'Cindy',6001224562,'seo@gmail.com',9006,116000);
24
25 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
26 VALUES (20008,'20-Jun-2022',1008,10008,108,'Sully',508,'Joshua',6001224563,'joshua@gmail.com',9008,118000);
27
28 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
29 VALUES (20009,'01-Dec-2022',1007,10009,107,'Smith',509,'Patel',6001224561,'patel@gmail.com',9007,65000);
30
31 INSERT INTO Purchase_details (pur_id,pur_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_price)
32 VALUES (20010,'10-Sep-2022',1002,10010,109,'Mcewen',510,'Raja',6001224569,'rajs@gmail.com',9002,43000);
33
34 Select * from Purchase_details;

```

PUR_ID	PUR_DATE	BRANCH_ID	BIKE_SERIAL	EID	ENAME	CID	CNAME	PHONE_NUMBER	EMAIL	CS_ID	BIKE_PRICE
20001	06-MAY-22	1007	10001	107	Peter	501	Taylor	6001224570	tj@gmail.com	9007	50000
20002	10-JUN-22	1004	10002	104	David	502	Jason	6001224568	jason@gmail.com	9004	116000
20003	12-FEB-22	1008	10003	108	Ismael	503	Olson	6001224566	olson@gmail.com	9008	67000
20004	02-APR-22	1001	10004	102	Oliver	504	Karen	6001224564	ki@gmail.com	9001	104000
20005	02-AUG-22	1010	10005	103	Jose	505	Hazel	6001224567	hazel@gmail.com	9010	98000
20006	30-MAR-22	1003	10006	110	Luis	506	Stephen	6001224565	stephen@gmail.com	9003	78000
20007	31-DEC-21	1006	10007	101	King	507	Cindy	6001224562	seo@gmail.com	9006	116000
20008	20-JUN-22	1008	10008	108	Sully	508	Joshua	6001224563	joshua@gmail.com	9008	118000
20009	01-DEC-22	1007	10009	107	Smith	509	Patel	6001224561	patel@gmail.com	9007	65000
20010	10-SEP-22	1002	10010	109	Mcewen	510	Raja	6001224569	rajs@gmail.com	9002	43000

13. RENT DETAILS:

```

4  INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
5  VALUES (30001,1007,10001,107,'Peter',510,'Taylor',6001224569,'tj@gmail.com',9010,10000,'03-Mar-2022','03-Jun-2022',.1,1000);
6
7  INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
8  VALUES (30002,1004,10002,104,'David',509,'Jason',6001224561,'jason@gmail.com',9008,40000,'01-Mar-2022','01-Jul-2022',.3,4000);
9
10 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
11 VALUES (30003,1008,10003,108,'Ismael',508,'Olson',6001224563,'olson@gmail.com',9008,12000,'12-Apr-2022','12-Apr-2022',.2,1000);
12
13 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
14 VALUES (30004,1001,10004,102,'Oliver',507,'Karen',6001224562,'ki@gmail.com',9007,38000,'21-Jun-2022','21-Jun-2022',.3,3000);
15
16 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
17 VALUES (30005,1010,10005,103,'Jose',506,'Hazel',6001224565,'hazel@gmail.com',9007,32000,'30-Aug-2022','30-Aug-2022',.3,3000);
18
19 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
20 VALUES (30006,1003,10006,110,'Luis',505,'Stephen',6001224567,'stephen@gmail.com',9006,15000,'10-Jun-2022','10-Sep-2022',.15,1000);
21
22 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
23 VALUES (30007,1006,10007,101,'King',504,'Cindy',6001224564,'seo@gmail.com',9004,41000,'31-Dec-2021','31-Jan-2021',.2,4000);
24
25 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
26 VALUES (30008,1008,10008,108,'Sully',503,'Joshua',6001224566,'joshua@gmail.com',9003,41600,'19-Apr-2022','19-Jun-2022',.3,4000);
27
28 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
29 VALUES (30009,1007,10009,107,'Smith',502,'Patel',6001224568,'patel@gmail.com',9002,11000,'20-Nov-2022','20-Jan-2023',.1,1000);
30
31 INSERT INTO Rent_details (rent_id,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,cs_id,bike_rent,rent_date,due_date,interest,fine)
32 VALUES (30010,1002,10010,109,'Mcewen',501,'Raja',6001224570,'rajs@gmail.com',9001,9000,'15-May-2022','15-Jun-2022',.05,500);
33
34 Select * from Rent_details;

```

RENT_ID	BRANCH_ID	BIKE_SERIAL	EID	ENAME	CID	CNAME	PHONE_NUMBER	EMAIL	CS_ID	BIKE_RENT	RENT_DATE	DU_DATE	INTEREST	FINE
30001	1007	10001	107	Peter	510	Taylor	6001224569	tj@gmail.com	9010	10000	03-MAR-22	03-JUN-22	.1	1000
30002	1004	10002	104	David	509	Jason	6001224561	jason@gmail.com	9008	40000	01-MAR-22	01-JUL-22	.3	4000
30003	1008	10003	108	Ismael	508	Olson	6001224563	olson@gmail.com	9008	12000	12-APR-22	12-APR-22	.2	1000
30004	1001	10004	102	Oliver	507	Karen	6001224562	ki@gmail.com	9007	38000	21-JUN-22	21-JUN-22	.3	3000
30005	1010	10005	103	Jose	506	Hazel	6001224565	hazel@gmail.com	9007	32000	30-AUG-22	30-AUG-22	.3	3000
30006	1003	10006	110	Luis	505	Stephen	6001224567	stephen@gmail.com	9006	15000	10-JUN-22	10-SEP-22	.15	1000
30007	1006	10007	101	King	504	Cindy	6001224564	seo@gmail.com	9004	41000	31-DEC-21	31-JAN-21	.2	4000
30008	1008	10008	108	Sully	503	Joshua	6001224566	joshua@gmail.com	9003	41600	19-APR-22	19-JUN-22	.3	4000
30009	1007	10009	107	Smith	502	Patel	6001224568	patel@gmail.com	9002	11000	20-NOV-22	20-JAN-23	.1	1000
30010	1002	10010	109	Mcewen	501	Raja	6001224570	rajs@gmail.com	9001	9000	15-MAY-22	15-JUN-22	.05	500

14. INSURANCE DETAILS:

```

4  INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
5  VALUES (40001,'18-May-2022',1007,10001,107,'Peter',501,'Taylor',6001224570,'tj@gmail.com',22000,'18-May-2025',9007);
6
7  INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
8  VALUES (40002,'20-Jun-2022',1004,10002,104,'David',502,'Jason',6001224568,'jason@gmail.com',60000,'20-Jun-2026',9004);
9
10 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
11 VALUES (40003,'13-Feb-2022',1008,10003,108,'Ismael',503,'Olson',6001224566,'olson@gmail.com',24000,'13-Feb-2027',9008);
12
13 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
14 VALUES (40004,'02-Apr-2022',1001,10004,102,'Oliver',504,'Karen',6001224564,'ki@gmail.com',57000,'02-Apr-2025',9001);
15
16 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
17 VALUES (40005,'15-Aug-2022',1010,10005,103,'Jose',505,'Hazel',6001224567,'hazel@gmail.com',55000,'15-Aug-2025',9010);
18
19 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
20 VALUES (40006,'30-Mar-2022',1003,10006,110,'Luis',506,'Stephen',6001224565,'stephen@gmail.com',27000,'30-Mar-2023',9003);
21
22 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
23 VALUES (40007,'31-Dec-2021',1006,10007,101,'King',507,'Cindy',6001224562,'seo@gmail.com',63500,'31-Dec-2024',9006);
24
25 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
26 VALUES (40008,'20-Jun-2022',1008,10008,108,'Sully',508,'Joshua',6001224563,'joshua@gmail.com',63000,'20-Jun-2027',9008);
27
28 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
29 VALUES (40009,'17-Dec-2022',1007,10009,107,'Smith',509,'Patel',6001224561,'patel@gmail.com',22500,'17-Dec-2025',9007);
30
31 INSERT INTO Insurance_details (ins_id,ins_date,branch_id,bike_serial,eid,ename,cid,cname,phone_number,email,bike_ins,ins_duration,cs_id)
32 VALUES (40010,'29-Sep-2022',1002,10010,109,'McEwen',510,'Raja',6001224569,'rajs@gmail.com',20000,'29-Sep-2032',9002);
33
34 Select * from Insurance_details;

```

INS_ID	INS_DATE	BRANCH_ID	BIKE_SERIAL	EID	ENAME	CID	CNAME	PHONE_NUMBER	EMAIL	BIKE_INS	INS_DURATION	CS_ID
40001	18-MAY-22	1007	10001	107	Peter	501	Taylor	6001224570	tj@gmail.com	22000	18-MAY-25	9007
40002	20-JUN-22	1004	10002	104	David	502	Jason	6001224568	jason@gmail.com	60000	20-JUN-26	9004
40003	13-FEB-22	1008	10003	108	Ismael	503	Olson	6001224566	olson@gmail.com	24000	13-FEB-27	9008
40004	02-APR-22	1001	10004	102	Oliver	504	Karen	6001224564	ki@gmail.com	57000	02-APR-25	9001
40005	15-AUG-22	1010	10005	103	Jose	505	Hazel	6001224567	hazel@gmail.com	55000	15-AUG-25	9010
40006	30-MAR-22	1003	10006	110	Luis	506	Stephen	6001224565	stephen@gmail.com	27000	30-MAR-23	9003
40007	31-DEC-21	1006	10007	101	King	507	Cindy	6001224562	seo@gmail.com	63500	31-DEC-24	9006
40008	20-JUN-22	1008	10008	108	Sully	508	Joshua	6001224563	joshua@gmail.com	63000	20-JUN-27	9008
40009	17-DEC-22	1007	10009	107	Smith	509	Patel	6001224561	patel@gmail.com	22500	17-DEC-25	9007
40010	29-SEP-22	1002	10010	109	McEwen	510	Raja	6001224569	rajs@gmail.com	20000	29-SEP-32	9002

15. PAYMENT DETAILS:

```

4 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
5 VALUES (50001,501,'Taylor',6001224570,'tj@gmail.com',9007,20001,50000,30010,9000,40001,22000,.1);
6
7 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
8 VALUES (50002,502,'Jason',6001224568,'jason@gmail.com',9004,20002,116000,30009,11000,40002,60000,.2);
9
10 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
11 VALUES (50003,503,'Olson',6001224566,'olson@gmail.com',9008,20003,67000,30008,41600,40003,24000,.05);
12
13 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
14 VALUES (50004,504,'Karen',6001224564,'ki@gmail.com',9001,20004,104000,30007,41000,40004,57000,.05);
15
16 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
17 VALUES (50005,505,'Hazel',6001224567,'hazel@gmail.com',9010,20005,98000,30006,15000,40005,55000,.2);
18
19 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
20 VALUES (50006,506,'Stephen',6001224565,'stephen@gmail.com',9003,20006,78000,30005,32000,40006,27000,.1);
21
22 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
23 VALUES (50007,507,'Cindy',6001224562,'seo@gmail.com',9006,20007,116000,30004,38000,40007,63500,.02);
24
25 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
26 VALUES (50008,508,'Joshua',6001224563,'joshua@gmail.com',9008,20008,118000,30003,12000,40008,63000,.05);
27
28 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
29 VALUES (50009,509,'Patel',6001224561,'patel@gmail.com',9007,20009,65000,30002,40000,40009,22500,.1);
30
31 INSERT INTO Payment_details (pay_serial,cid,cname,phone_number,email,cs_id,pur_id,bike_price,rent_id,bike_rent,ins_id,bike_ins,Discount)
32 VALUES (50010,510,'Raja',6001224569,'rajs@gmail.com',9002,20010,43000,30001,10000,40010,20000,.2);
33
34 Select * from Payment_details;

```

PAY_SERIAL	CID	CNAME	PHONE_NUMBER	EMAIL	CS_ID	PUR_ID	BIKE_PRICE	RENT_ID	BIKE_RENT	INS_ID	BIKE_INS	DISCOUNT
50001	501	Taylor	6001224570	tj@gmail.com	9007	20001	50000	30010	9000	40001	22000	.1
50002	502	Jason	6001224568	jason@gmail.com	9004	20002	116000	30009	11000	40002	60000	.2
50003	503	Olson	6001224566	olson@gmail.com	9008	20003	67000	30008	41600	40003	24000	.05
50004	504	Karen	6001224564	ki@gmail.com	9001	20004	104000	30007	41000	40004	57000	.05
50005	505	Hazel	6001224567	hazel@gmail.com	9010	20005	98000	30006	15000	40005	55000	.2
50006	506	Stephen	6001224565	stephen@gmail.com	9003	20006	78000	30005	32000	40006	27000	.1
50007	507	Cindy	6001224562	seo@gmail.com	9006	20007	116000	30004	38000	40007	63500	.02
50008	508	Joshua	6001224563	joshua@gmail.com	9008	20008	118000	30003	12000	40008	63000	.05
50009	509	Patel	6001224561	patel@gmail.com	9007	20009	65000	30002	40000	40009	22500	.1
50010	510	Raja	6001224569	rajs@gmail.com	9002	20010	43000	30001	10000	40010	20000	.2

16. EMPLOYEE PAYMENT:

```
4 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60001,107,50001);
5 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60002,104,50002);
6 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60003,108,50003);
7 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60004,102,50004);
8 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60005,103,50005);
9 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60006,110,50006);
10 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60007,101,50007);
11 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60008,108,50008);
12 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60009,107,50009);
13 INSERT INTO Employee_Payment (empay_serial,eid,pay_serial) VALUES (60010,109,50010);
14
15 Select * from Employee_Payment;
16
```

EMPAY_SERIAL	EID	PAY_SERIAL
60001	107	50001
60002	104	50002
60003	108	50003
60004	102	50004
60005	103	50005
60006	110	50006
60007	101	50007
60008	108	50008
60009	107	50009
60010	109	50010

17. EMPLOYEE BIKE:

```
4 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61001,107,10001);
5 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61002,104,10002);
6 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61003,108,10003);
7 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61004,102,10004);
8 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61005,103,10005);
9 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61006,110,10006);
10 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61007,101,10007);
11 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61008,108,10008);
12 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61009,107,10009);
13 INSERT INTO Employee_Bike (embk_serial,eid,bike_serial) VALUES (61010,109,10010);
14
15 Select * from Employee_Bike;
16
```

EMBK_SERIAL	EID	BIKE_SERIAL
61001	107	10001
61002	104	10002
61003	108	10003
61004	102	10004
61005	103	10005
61006	110	10006
61007	101	10007
61008	108	10008
61009	107	10009
61010	109	10010

18. TECHNICIAN BIKE:

```
4 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62001,302,10001);
5 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62002,308,10002);
6 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62003,310,10003);
7 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62004,302,10004);
8 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62005,301,10005);
9 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62006,303,10006);
10 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62007,304,10007);
11 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62008,305,10008);
12 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62009,309,10009);
13 INSERT INTO Technician_Bike (tecbk_serial,tid,bike_serial) VALUES (62010,306,10010);
14
15 Select * from Technician_Bike;
16
```

TECBK_SERIAL	TID	BIKE_SERIAL
62001	302	10001
62002	308	10002
62003	310	10003
62004	302	10004
62005	301	10005
62006	303	10006
62007	304	10007
62008	305	10008
62009	309	10009
62010	306	10010

19. CUSTOMER PAYMENT:

```
4 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63001,501,50001);
5 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63002,502,50002);
6 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63003,503,50003);
7 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63004,504,50004);
8 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63005,505,50005);
9 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63006,506,50006);
10 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63007,507,50007);
11 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63008,508,50008);
12 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63009,509,50009);
13 INSERT INTO Customer_Payment (cuspay_serial,cid,pay_serial) VALUES (63010,510,50010);
14
15 Select * from Customer_Payment;
16
```

CUSPAY_SERIAL	CID	PAY_SERIAL
63001	501	50001
63002	502	50002
63003	503	50003
63004	504	50004
63005	505	50005
63006	506	50006
63007	507	50007
63008	508	50008
63009	509	50009
63010	510	50010

20. CUSTOMER INSURANCE:

```
4 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64001,40001,501);
5 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64002,40002,502);
6 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64003,40003,503);
7 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64004,40004,504);
8 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64005,40005,505);
9 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64006,40006,506);
10 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64007,40007,507);
11 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64008,40008,508);
12 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64009,40009,509);
13 INSERT INTO Customer_Insurance (cusins_id,ins_id,cid) VALUES (64010,40010,510);
14
15 Select * from Customer_Insurance;
16
```

CUSINS_ID	INS_ID	CID
64001	40001	501
64002	40002	502
64003	40003	503
64004	40004	504
64005	40005	505
64006	40006	506
64007	40007	507
64008	40008	508
64009	40009	509
64010	40010	510

21. BIKE PURCHASE:

```
4 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65001,10001,20001);
5 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65002,10002,20002);
6 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65003,10003,20003);
7 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65004,10004,20004);
8 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65005,10005,20005);
9 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65006,10006,20006);
10 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65007,10007,20007);
11 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65008,10008,20008);
12 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65009,10009,20009);
13 INSERT INTO Bike_Purchase (bkpur_serial,bike_serial,pur_id) VALUES (65010,10010,20010);
14
15 Select * from Bike_Purchase;
16
```

BKPUR_SERIAL	BIKE_SERIAL	PUR_ID
65001	10001	20001
65002	10002	20002
65003	10003	20003
65004	10004	20004
65005	10005	20005
65006	10006	20006
65007	10007	20007
65008	10008	20008
65009	10009	20009
65010	10010	20010

22. BIKE INSURANCE:

```
4 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66001,10001,40001);
5 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66002,10002,40002);
6 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66003,10003,40003);
7 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66004,10004,40004);
8 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66005,10005,40005);
9 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66006,10006,40006);
10 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66007,10007,40007);
11 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66008,10008,40008);
12 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66009,10009,40009);
13 INSERT INTO Bike_Insurance (bkins_id,bike_serial,ins_id) VALUES (66010,10010,40010);
14
15 Select * from Bike_Insurance;
16
```

BKINS_ID	BIKE_SERIAL	INS_ID
66001	10001	40001
66002	10002	40002
66003	10003	40003
66004	10004	40004
66005	10005	40005
66006	10006	40006
66007	10007	40007
66008	10008	40008
66009	10009	40009
66010	10010	40010

23. CUSTOMER CUSTOMERSERVICE:

```
4 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67001,501,70001);
5 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67002,502,70002);
6 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67003,503,70003);
7 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67004,504,70004);
8 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67005,505,70005);
9 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67006,506,70006);
10 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67007,507,70007);
11 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67008,508,70008);
12 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67009,509,70009);
13 INSERT INTO Customer_Customerservice (cserv_serial,cid,service_serial) VALUES (67010,510,70010);
14
15 Select * from Customer_Customerservice;
16
```

CSERV_SERIAL	CID	SERVICE_SERIAL
67001	501	70001
67002	502	70002
67003	503	70003
67004	504	70004
67005	505	70005
67006	506	70006
67007	507	70007
67008	508	70008
67009	509	70009
67010	510	70010

24. CUSTOMERSERVICE DETAILS:

```

4  INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
5  VALUES (70001,20001,40001,10001,501,'Taylor',6001224570,'tj@gmail.com','Broken tail light',302,'Shanta',1000);
6
7  INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
8  VALUES (70002,20002,40002,10002,502,'Jason',6001224568,'jason@gmail.com','Break does not work',308,'Laura',500);
9
10 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
11 VALUES (70003,20003,40003,10003,503,'Olson',6001224566,'olson@gmail.com','Lock does not work ',310,'Marlow',2300);
12
13 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
14 VALUES (70004,20004,40004,10004,504,'Karen',6001224564,'ki@gmail.com','Loose bike kickstand',302,'Shanta',2100);
15
16 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
17 VALUES (70005,20005,40005,10005,505,'Hazel',6001224567,'hazel@gmail.com','Battery is not good ',301,'Payam',450);
18
19 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
20 VALUES (70006,20006,40006,10006,506,'Stephen',6001224565,'stephen@gmail.com','Headlight broken',303,'Kevin',1200);
21
22 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
23 VALUES (70007,20007,40007,10007,507,'Cindy',6001224562,'seo@gmail.com','Fog light is not good enough',304,'Julia',5000);
24
25 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
26 VALUES (70008,20008,40008,10008,508,'Joshua',6001224563,'joshua@gmail.com','Meter does not work properly',305,'Irene',900);
27
28 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
29 VALUES (70009,20009,40009,10009,509,'Patel',6001224561,'patel@gmail.com','Self start does not work',309,'Mozhe',1200);
30
31 INSERT INTO Customerservice_details (service_serial,pur_id,ins_id,bike_serial,cid,cname,phone_number,email,problem_desc,tid,tname,charges)
32 VALUES (70010,20010,40010,10010,510,'Raja',6001224569,'rajs@gmail.com','Enhine sounds a lot',306,'James',200);
33
34 Select * from Customerservice_details;

```

SERVICE_SERIAL	PUR_ID	INS_ID	BIKE_SERIAL	CID	CNAME	PHONE_NUMBER	EMAIL	PROBLEM_DESC	TID	TNAME	CHARGES
70001	20001	40001	10001	501	Taylor	6001224570	tj@gmail.com	Broken tail light	302	Shanta	1000
70002	20002	40002	10002	502	Jason	6001224568	jason@gmail.com	Break does not work	308	Laura	500
70003	20003	40003	10003	503	Olson	6001224566	olson@gmail.com	Lock does not work	310	Marlow	2300
70004	20004	40004	10004	504	Karen	6001224564	ki@gmail.com	Loose bike kickstand	302	Shanta	2100
70005	20005	40005	10005	505	Hazel	6001224567	hazel@gmail.com	Battery is not good	301	Payam	450
70006	20006	40006	10006	506	Stephen	6001224565	stephen@gmail.com	Headlight broken	303	Kevin	1200
70007	20007	40007	10007	507	Cindy	6001224562	seo@gmail.com	Fog light is not good enough	304	Julia	5000
70008	20008	40008	10008	508	Joshua	6001224563	joshua@gmail.com	Meter does not work properly	305	Irene	900
70009	20009	40009	10009	509	Patel	6001224561	patel@gmail.com	Self start does not work	309	Mozhe	1200
70010	20010	40010	10010	510	Raja	6001224569	rajs@gmail.com	Enhine sounds a lot	306	James	200

25. TECHNICIAN SERVICE:

```
4 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68001,301,70001);
5 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68002,302,70002);
6 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68003,303,70003);
7 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68004,304,70004);
8 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68005,305,70005);
9 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68006,306,70006);
10 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68007,307,70007);
11 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68008,308,70008);
12 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68009,309,70009);
13 INSERT INTO Technician_Service (tecserv_serial,tid,service_serial) VALUES (68010,310,70010);
14
15 Select * from Technician_Service;
16
```

TECSERV_SERIAL	TID	SERVICE_SERIAL
68001	301	70001
68002	302	70002
68003	303	70003
68004	304	70004
68005	305	70005
68006	306	70006
68007	307	70007
68008	308	70008
68009	309	70009
68010	310	70010

QUERY WRITING

1. GENERAL QUERY (5)

- i. Find out the customer's name and the discounted price for Bike Purchase and show the data concatenated as "The Discounted Price for John is \$30000"

```
SELECT cname, 'The Discounted Price for'||cname||' is $'|| ((bike_price) - bike_price*discount)  
AS discounted FROM payment_details;
```

```
3  SELECT cname, 'The Discounted Price for'||cname||' is $'|| ((bike_price)-bike_price*discount) AS discounted FROM payment_details  
4
```

CNAME	DISCOUNTED
Taylor	The Discounted Price for Taylor is \$45000
Jason	The Discounted Price for Jason is \$92800
Olson	The Discounted Price for Olson is \$63650
Karen	The Discounted Price for Karen is \$98800
Hazel	The Discounted Price for Hazel is \$78400
Stephen	The Discounted Price for Stephen is \$70200
Cindy	The Discounted Price for Cindy is \$113680
Joshua	The Discounted Price for Joshua is \$112100
Patel	The Discounted Price for Patel is \$58500
Raja	The Discounted Price for Raja is \$34400

- ii. Find out the technician id, technician name, salary, bonus of those who get a bonus

```
SELECT tid, tname, salary, bonus FROM technician_details WHERE bonus IS NOT NULL;
```

```
3  SELECT tid, tname, salary, bonus FROM technician_details WHERE bonus IS NOT NULL;
```

TID	TNAME	SALARY	BONUS
301	Payam	18000	.07
303	Kevin	20000	.16
305	Irene	18000	.13
306	James	40000	.1
309	Mozhe	16000	.13
310	Marlow	19000	.11

- iii. Find out the manager id, manager name, phone number, email, owner id of those who works for owner id 8004, 8006, 8008

```
SELECT mid, mname, phone_number, email, ow_id FROM manager_details WHERE ow_id IN(8004, 8006, 8008);
```

3 `SELECT mid, mname, phone_number, email, ow_id FROM manager_details WHERE ow_id IN(8004, 8006, 8008);`

MID	MNAME	PHONE_NUMBER	EMAIL	OW_ID
105	Jose	6881224565	jose@gmail.com	8004
106	Luis	6881224564	luis@gmail.com	8006
111	Den	6881224562	den@gmail.com	8008
118	Shelli	6881224568	shelli@gmail.com	8004
121	Sigal	6881224563	sigal@gmail.com	8006
133	Baida	6881224569	baida@gmail.com	8008
135	Karen	6881224570	karen@gmail.com	8004

- iv. Find out the employee id, employee name, salary and their yearly salary as "Yearly Salary" of those whose yearly salary exceeds 100000

```
SELECT eid, ename, salary, salary*12 AS "Yearly Salary" FROM employee_details WHERE salary*12>100000;
```

3 `SELECT eid, ename, salary, salary*12 AS "Yearly Salary" FROM employee_details WHERE salary*12>100000;`

EID	ENAME	SALARY	Yearly Salary
101	Peter	10000	120000
103	Ismael	12000	144000
104	Oliver	17000	204000
105	Jose	18000	216000
106	Luis	20000	240000
107	King	13000	156000
108	Sully	21000	252000
110	Mcewen	10000	120000

- v. Find out the employee id, employee name of those who has 'e' in their names

```
SELECT ename FROM employee_details WHERE ename LIKE '%e%';
```

3 `SELECT ename FROM employee_details WHERE ename LIKE '%e%';`

ENAME
Peter
Ismael
Oliver
Jose
Mcewen

2. GROUP FUNCTION (5)

- i. Show the maximum salary of the employees as "Maximum Salary", average salary as "Average Salary" and minimum salary as "Minimum Salary"

```
SELECT MAX(salary) AS "Maximum salary", MIN(salary) AS "Minimum salary",
AVG(nvl(salary,0)) AS "Average salary" FROM employee_details;
```

```
3 SELECT MAX(salary) AS "Maximum salary", MIN(salary) AS "Minimum salary", AVG(nvl(salary,0)) AS "Average salary" FROM employee_details;
4
```

Maximum salary	Minimum salary	Average salary
21000	7000	13600

- ii. Show the manager id and number of employees that work under each manager from the Employee_Details table and group the manager id in descending order

```
SELECT mid, COUNT(eid) FROM Employee_Details GROUP BY mid HAVING mid IS NOT NULL
ORDER BY mid DESC;
```

```
3 SELECT mid, COUNT(eid) FROM Employee_Details GROUP BY mid HAVING mid IS NOT NULL ORDER BY mid DESC;
4
```

MID	COUNT(EID)
105	2
103	5

- iii. Display the average employee salary of those who has salary grade more less than 8 and group by salary grade.

```
SELECT ROUND(AVG(salary)), sal_grade FROM Employee_details HAVING sal_grade < 8
GROUP BY sal_grade
```

```
3 SELECT ROUND(AVG(salary)), sal_grade FROM Employee_details HAVING sal_grade < 8 GROUP BY sal_grade
4
```

ROUND(AVG(SALARY))	SAL_GRADE
10667	6
8000	7
21000	2
19000	4
13000	5
17000	3

- iv. Display the Maximum manager salary of those who has salary grade more 6 and group by salary grade.

```
SELECT MAX(salary), sal_grade FROM Manager_details HAVING sal_grade > 6 GROUP BY sal_grade;
```

```
4  SELECT MAX(salary), sal_grade FROM Manager_details HAVING sal_grade > 6 GROUP BY sal_grade;
5
```

MAX(SALARY)	SAL_GRADE
8000	7
6000	9

- v. Display the average salary, salary grade of employees who gets bonus and group by salary grade

```
SELECT AVG(salary), sal_grade FROM Employee_details WHERE bonus IS NOT NULL GROUP BY sal_grade
```

```
4  SELECT AVG(salary), sal_grade FROM Employee_details WHERE bonus IS NOT NULL GROUP BY sal_grade
```

Avg(Salary)	Sal_Grade
21000	2
20000	4
17000	3

3. SINGLE ROW FUNCTION (5)

- i. Find out the bike serial, bike model, manufacturer, bike power, bike price of bike model 'tvs apache rtr 160'

```
SELECT bike_serial, bike_model, manufacturer, bike_power, bike_price FROM bike_details WHERE LOWER(bike_model) = 'tvs apache rtr 160';
```

```
3  SELECT bike_serial, bike_model, manufacturer, bike_power, bike_price FROM bike_details WHERE LOWER(bike_model) = 'tvs apache rtr 160';
```

BIKE_SERIAL	BIKE_MODEL	MANUFACTURER	BIKE_POWER	BIKE_PRICE
10008	TVS Apache RTR 160	TVS	160cc	118000

- ii. Find out the bike serial, bike model, manufacturer, bike power, bike price of bike model that starts with 'hero'

```
SELECT bike_serial, bike_model, manufacturer, bike_power, bike_price FROM Bike_details
WHERE LOWER(SUBSTR(bike_model, 1,4)) = 'hero';
```

```
3 SELECT bike_serial, bike_model, manufacturer, bike_power, bike_price FROM Bike_details WHERE LOWER(SUBSTR(bike_model, 1,4)) = 'hero';
```

BIKE_SERIAL	BIKE_MODEL	MANUFACTURER	BIKE_POWER	BIKE_PRICE
10001	Hero HF 100	Hero	97.2cc	50000
10002	Hero XPulse 200T	Hero	199.6cc	116000
10003	Hero Passion Pro i3S	Hero	113.2cc	67000

- iii. Find out the technician id, technician name, job status, salary, hire date of those who are working for more than 10 years.

```
SELECT tid ,tname, job_status, salary, hire_date FROM Technician_Details WHERE (SYSDATE-hire_date)/365 > 10;
```

```
3 SELECT tid ,tname, job_status, salary, hire_date FROM Technician_Details WHERE (SYSDATE-hire_date)/365 > 10;
```

TID	TNAME	JOB_STATUS	SALARY	HIRE_DATE
301	Payam	Full-Time	18000	22-JUL-07
303	Kevin	Full-Time	20000	29-AUG-06
304	Julia	Full-Time	16000	27-MAR-11
305	Irene	Full-Time	18000	11-DEC-11
306	James	Full-Time	40000	01-JAN-95
309	Mozhe	Full-Time	16000	12-JUN-10
310	Marlow	Full-Time	19000	21-JAN-10

- iv. View the bike model and the shipping date of the bike as "Hero TF1 was shipped on 10 November 2020"

```
SELECT bike_model,bike_model||' was shipped on '|| TO_CHAR(shipped_date, 'fmDD Month
YYYY') Shipped_date FROM bike_details;
```

```
3 SELECT bike_model,bike_model||' was shipped on '|| TO_CHAR(shipped_date, 'fmDD Month YYYY') Shipped_date FROM bike_details;
```

BIKE_MODEL	SHIPPED_DATE
Hero HF 100	Hero HF 100 was shipped on 26 January 2022
Hero XPulse 200T	Hero XPulse 200T was shipped on 1 January 2022
Hero Passion Pro i3S	Hero Passion Pro i3S was shipped on 10 January 2022
Bajaj Pulsar 125	Bajaj Pulsar 125 was shipped on 1 February 2022
Honda CB Unicorn 160	Honda CB Unicorn 160 was shipped on 28 February 2022
Honda SP 125	Honda SP 125 was shipped on 1 December 2021
Yamaha FZ S3	Yamaha FZ S3 was shipped on 1 September 2021
TVS Apache RTR 160	TVS Apache RTR 160 was shipped on 19 March 2022
Honda Dio	Honda Dio was shipped on 1 September 2022
TVS XL 100	TVS XL 100 was shipped on 1 April 2022

- v. View the names of the employees and their managers id and show "No Manager" if they have no managers

```
SELECT e.ename AS "Employee", nvl(TO_CHAR(m.ename), 'No Manager') AS "Manager" FROM Employee_details e, Employee_details m WHERE e.mid = m.eid
```

```
3 SELECT e.ename as "Employee", nvl(TO_CHAR(m.ename), 'No Manager') as "Manager" FROM Employee_details e, Employee_details m WHERE e.mid = m.eid (+)
```

Employee	Manager
Peter	Ismael
David	Ismael
King	Ismael
Smith	Ismael
Mcewen	Ismael
Oliver	Jose
Sully	Jose
Ismael	No Manager
Jose	No Manager
Luis	No Manager

4. SUBQUERY (5)

- i. Find out the insurance id, bike serial, customer name, insurance date of those customers who are from 'Atlanta' city

```
SELECT ins_id, bike_serial, cname, ins_date FROM Insurance_details WHERE cs_id = (SELECT cs_id FROM Location_details WHERE city = 'Atlanta');
```

```
3 SELECT ins_id, bike_serial, cname, ins_date FROM Insurance_details WHERE cs_id = (SELECT cs_id FROM Location_details WHERE city = 'Atlanta')
```

INS_ID	BIKE_SERIAL	CNAME	INS_DATE
40003	10003	Olson	13-FEB-22
40008	10008	Joshua	20-JUN-22

- ii. Display the customer name, bike serial, bike model, bike price of the customer who purchased the most expensive bike

```
SELECT pd.cname, pd.bike_serial, b.bike_model, pd.bike_price FROM Purchase_Details pd, Bike_Details b WHERE pd.bike_price = (SELECT MAX(bike_price) FROM Purchase_Details) and pd.bike_serial = b.bike_serial;
```

```
3 SELECT pd.cname, pd.bike_serial, b.bike_model, pd.bike_price FROM Purchase_Details pd, Bike_Details b
4 WHERE pd.bike_price = (SELECT MAX(bike_price) FROM Purchase_Details) and pd.bike_serial = b.bike_serial;
```

CNAME	BIKE_SERIAL	BIKE_MODEL	BIKE_PRICE
Joshua	10008	TVS Apache RTR 160	118000

iii. Display the employee id, employee name, salary of the employees who gets more salary than the average salary of the managers

```
SELECT e.eid, e.ename, e.salary FROM Employee_details e WHERE e.salary > (SELECT AVG(m.salary) FROM Manager_details m);
```

```
3 SELECT e.eid, e.ename, e.salary FROM Employee_details e WHERE e.salary > (SELECT AVG(m.salary) FROM Manager_details m);
```

EID	ENAME	SALARY
106	Luis	20000
108	Sully	21000

iv. Display the customer name, technician name, charges for those who did their customer service and were charged more than 'Karen'

```
SELECT cname, tname, charges FROM CustomerService_details WHERE charges > (SELECT charges FROM CustomerService_details WHERE cname = 'Karen');
```

```
3 SELECT cname, tname, charges FROM CustomerService_details WHERE charges > (SELECT charges FROM CustomerService_details WHERE cname = 'Karen');
```

CNAME	TNAME	CHARGES
Olson	Marlow	2300
Cindy	Julia	5000

v. Display the bike serial, bike model, bike power, bike price of those bikes that cost more than the average bike price

```
SELECT bike_serial, bike_model, bike_power, bike_price FROM Bike_Details WHERE bike_price > (SELECT AVG(bike_price) FROM Bike_Details);
```

```
3 SELECT bike_serial, bike_model, bike_power, bike_price FROM Bike_Details WHERE bike_price > (SELECT AVG(bike_price) FROM Bike_Details);
```

BIKE_SERIAL	BIKE_MODEL	BIKE_POWER	BIKE_PRICE
10002	Hero XPulse 200T	199.6cc	116000
10004	Bajaj Pulsar 125	124.4cc	104000
10005	Honda CB Unicorn 160	160cc	98000
10007	Yamaha FZ S3	149cc	116000
10008	TVS Apache RTR 160	160cc	118000

5. JOIN

A. Equi-join (2)

- i. Find out the phone number, email, city and state of the branch from which the bike was purchased which was later sent to the customer service with service serial no. 70008.

```
SELECT b.phone_number, b.email, ld.city, ld.state FROM Customerservice_details csd,  
Purchase_details pd, Branch_Details b, Location_Details ld WHERE csd.service_serial = 70008  
AND csd.pur_id = pd.pur_id AND pd.branch_id = b.branch_id AND b.cs_id = ld.cs_id
```

```
3 SELECT b.phone_number, b.email, ld.city, ld.state FROM Customerservice_details csd, Purchase_details pd, Branch_Details b,  
4 Location_Details ld WHERE csd.service_serial = 70008 AND csd.pur_id = pd.pur_id AND pd.branch_id = b.branch_id AND b.cs_id = ld.cs_id
```

PHONE_NUMBER	EMAIL	CITY	STATE
6771224568	hbranch@gmail.com	Atlanta	Georgia

- ii. Find out the customer's name, bike serial, model, order date, bike price of the bikes purchased by customers with 'Gold' membership.

```
SELECT c.cname, b.bike_serial, b.bike_model, b.order_date, b.bike_price FROM  
Customer_Details c, Bike_Details b, Purchase_Details pd WHERE pd.bike_serial = b.bike_serial  
AND pd.cid = c.cid AND c.membership = 'Gold'
```

```
3 SELECT c.cname, b.bike_serial, b.bike_model, b.order_date, b.bike_price FROM Customer_Details c, Bike_Details b, Purchase_Details pd  
4 WHERE pd.bike_serial = b.bike_serial AND pd.cid = c.cid AND c.membership = 'Gold'
```

CNAME	BIKE_SERIAL	BIKE_MODEL	ORDER_DATE	BIKE_PRICE
Taylor	10001	Hero HF 100	21-JUN-21	50000
Stephen	10006	Honda SP 125	01-APR-21	78000
Patel	10009	Honda Dio	01-JUN-22	65000

B. Non equi-join (2)

- i. Display manager id, manager name, salary and salary grade of each manager

```
SELECT DISTINCT m.mid, m.mname, m.salary, m.sal_grade FROM Manager_details m,  
Salary_details s WHERE m.salary BETWEEN s.min_salary AND s.max_salary;
```

```
SELECT DISTINCT m.mid, m.mname, m.salary, s.sal_grade FROM Manager_details m, Salary_details s  
WHERE m.salary BETWEEN s.min_salary AND s.max_salary;
```

MID	MNAME	SALARY	SAL_GRADE
106	Luis	20000	4
135	Karen	13500	5
115	Alexander	8000	7
121	Sigal	6000	9
133	Baida	30000	2
103	Ismael	12000	6
140	Matthew	34000	1
111	Den	21000	3
105	Jose	18000	4
118	Shelli	20000	3

- ii. Display customer name, customer id, bike serial, purchase date, insurance date of those bikes which were insurance within a month of purchase

```
SELECT p.cid, p.cname, p.bike_serial, p.pur_date, i.ins_date FROM purchase_details p,  
Insurance_details i WHERE p.cid = i.cid AND ((i.ins_date - p.pur_date) <30);
```

```
3 SELECT p.cid, p.cname, p.bike_serial, p.pur_date, i.ins_date FROM purchase_details p, Insurance_details i WHERE p.cid = i.cid AND ((i.ins_date - p.pur_date) <30);  
4  
5
```

CID	CNAME	BIKE_SERIAL	PUR_DATE	INS_DATE
501	Taylor	10001	06-MAY-22	18-MAY-22
502	Jason	10002	10-JUN-22	20-JUN-22
503	Olson	10003	12-FEB-22	13-FEB-22
504	Karen	10004	02-APR-22	02-APR-22
505	Hazel	10005	02-AUG-22	15-AUG-22
506	Stephen	10006	30-MAR-22	30-MAR-22
507	Cindy	10007	31-DEC-21	31-DEC-21
508	Joshua	10008	20-JUN-22	20-JUN-22
509	Patel	10009	01-DEC-22	17-DEC-22
510	Raja	10010	10-SEP-22	29-SEP-22

C. Outer join (2)

- i. Find out the employee id, employee names, manager id of those who have manager and those who don't have any manager.

```
SELECT e.eid, e.ename, m.mid FROM employee_details e,manager_details m WHERE e.mid = m.mid (+)
```

```
3  SELECT e.eid, e.ename, m.mid FROM employee_details e,manager_details m WHERE e.mid = m.mid (+)
```

EID	ENAME	MID
101	Peter	103
102	David	103
103	Ismael	-
104	Oliver	105
105	Jose	-
106	Luis	-
107	King	103
108	Sully	105
109	Smith	103
110	McEwen	103

- ii. Find out the employee id, employee names, manager id of those who gets bonus and have manager and those who don't have any manager.

```
SELECT e.eid, e.ename, m.mid FROM employee_details e,manager_details m WHERE e.bonus IS NOT NULL AND e.mid = m.mid (+)
```

```
3  SELECT e.eid, e.ename, m.mid FROM employee_details e,manager_details m WHERE e.bonus IS NOT NULL AND e.mid = m.mid (+);
```

EID	ENAME	MID
104	Oliver	105
106	Luis	-
108	Sully	105

D. Self join (2)

- i. Find out the employee names and their manager names.

```
SELECT e.ename, m.ename FROM Employee_details e, Employee_details m WHERE e.mid =  
m.eid
```

```
3  SELECT e.ename, m.ename FROM Employee_details e, Employee_details m WHERE e.mid = m.eid  
4  
5
```

ENAME	ENAME
Peter	Ismael
David	Ismael
King	Ismael
Smith	Ismael
McEwen	Ismael
Oliver	Jose
Sully	Jose

- ii. Find out the employee id, employee name, salary of those who earns more than their managers

```
SELECT e.eid, e.ename, e.salary FROM employee_details e, employee_details m WHERE e.mid =  
m.eid AND e.salary > m.salary;
```

```
4  SELECT e.eid, e.ename, e.salary FROM employee_details e, employee_details m WHERE e.mid = m.eid AND e.salary > m.salary;
```

EID	ENAME	SALARY
107	King	13000
108	Sully	21000

6. SEQUENCE (1)

- i. Create a sequence which starts from 20 and increases by 10 and the maximum value is 200.

```
CREATE SEQUENCE seq INCREMENT BY 10 START WITH 20 MAXVALUE 200 NOCYCLE  
NOCACHE;
```

```
3  CREATE SEQUENCE seq INCREMENT BY 10 START WITH 20 MAXVALUE 200 NOCYCLE NOCACHE;  
4
```

Sequence created.

7. VIEW (1)

- i. Create a view that shows the customer's name, phone number, bike model, bike manufacturer, bike rent of those who took bike rent before '01-June-2022'.

```
CREATE VIEW view1 AS SELECT c.cname, c.phone_number, b.bike_model, b.manufacturer,  
rd.bike_rent FROM Customer_Details c, Bike_Details b, Rent_Details rd WHERE rd.cid = c.cid  
AND rd.bike_serial = b.bike_serial and rd.rent_date<'01-Jun-2022'
```

```
3 CREATE VIEW view1 AS SELECT c.cname, c.phone_number, b.bike_model, b.manufacturer, rd.bike_rent FROM Customer_Details c, Bike_Details b, Rent_Details rd  
4 WHERE rd.cid = c.cid AND rd.bike_serial = b.bike_serial and rd.rent_date<'01-Jun-2022'  
5  
6 Select * from view1
```

CNAME	PHONE_NUMBER	BIKE_MODEL	MANUFACTURER	BIKE_RENT
Raja	6001224569	Hero HF 100	Hero	10000
Patel	6001224561	Hero XPulse 200T	Hero	40000
Joshua	6001224563	Hero Passion Pro i3S	Hero	12000
Karen	6001224564	Yamaha FZ S3	Yamaha	41000
Olson	6001224566	TVS Apache RTR 160	TVS	41600
Taylor	6001224570	TVS XL 100	TVS	9000