**Week 4. Database Schema for a Video Library scenario**

Customer(cust\_no: integer,cust\_name: string)

Membership(**Mem\_no: integer**, **cust\_no: integer**)

Cassette(**cass\_no:integer**, cass\_name:string, Language: String)

Iss\_rec**(iss\_no: integer**, iss\_date: date, **mem\_no: integer**, **cass\_no: integer**)

**For the above schema, perform the following—**

1. **Create Tables:** Write the SQL statements to create the employee, department, paydetails, and payroll tables as described above. Ensure that the paydetails table references both the employee and department tables, and the payroll table references the employee table. Include appropriate primary keys, foreign keys, and basic integrity constraints.

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| --- |
| CREATE TABLE customer(  cust\_no INT PRIMARY KEY,  cust\_name VARCHAR(50));    CREATE TABLE membership(  mem\_no INT PRIMARY KEY,  cust\_no INT,  FOREIGN KEY(cust\_no)REFERENCES customer(cust\_no));    CREATE TABLE cassette(  cass\_no INT PRIMARY KEY,  cass\_name VARCHAR(100),  language varchar(50));    CREATE TABLE iss\_rec(  iss\_no INT PRIMARY KEY,  iss\_date DATE,mem\_no INT ,  cass\_no INT,  FOREIGN KEY(mem\_no)REFERENCES membership(mem\_no),  FOREIGN KEY(cass\_no)REFERENCES cassette(cass\_no)); |

1. **Insert Data**: Insert 5 records into each of the tables with the given data.

**customer:**

|  |  |
| --- | --- |
| **cust\_no** | **cust\_name** |
| 1001 | John Doe |
| 1002 | Jane Smith |
| 1003 | Michael Johnson |
| 1004 | Emily Brown |
| 1005 | David Lee |

**membership:**

|  |  |
| --- | --- |
| **mem\_no** | **cust\_no** |
| 5001 | 1001 |
| 5002 | 1002 |
| 5003 | 1003 |
| 5004 | 1004 |
| 5005 | 1005 |

**cassette:**

|  |  |  |
| --- | --- | --- |
| **cass\_no** | **cass\_name** | **language** |
| 2001 | The Great Gatsby | English |
| 2002 | Moby Dick | English |
| 2003 | Pride and Prejudice | Spanish |
| 2004 | Jane Eyre | Spanish |
| 2005 | Animal Farm | English |

**iss\_rec:**

|  |  |  |  |
| --- | --- | --- | --- |
| **iss\_no** | **iss\_date** | **mem\_no** | **cass\_no** |
| 1 | 2024-07-01 | 5001 | 2001 |
| 2 | 2024-07-02 | 5002 | 2002 |
| 3 | 2024-07-02 | 5003 | 2003 |
| 4 | 2024-07-04 | 5004 | 2004 |
| 5 | 2024-07-05 | 5005 | 2005 |

|  |
| --- |
| INSERT INTO customer VALUES(1001,'John Doe');  INSERT INTO customer VALUES(1002,'Jane Smith');  INSERT INTO customer VALUES(1003,'Michael Johnson');  INSERT INTO customer VALUES(1004,'Emily Brown');  INSERT INTO customer VALUES(1005,'David Lee');    INSERT INTO membership VALUES(5001,1001);  INSERT INTO membership VALUES(5002,1002);  INSERT INTO membership VALUES(5003,1003);  INSERT INTO membership VALUES(5004,1004);  INSERT INTO membership VALUES(5005,1005);    INSERT INTO cassette VALUES(2001,'The Great Gatsby','English');  INSERT INTO cassette VALUES(2002,'Moby Dick','English');  INSERT INTO cassette VALUES(2003,'Pride and Prejudice','Spanish');  INSERT INTO cassette VALUES(2004,'Jane Eyre','Spanish');  INSERT INTO cassette VALUES(2005,'Animal Farm','English');    INSERT INTO iss\_rec VALUES(1,'2024-07-01',5001,2001);  INSERT INTO iss\_rec VALUES(2,'2024-07-02',5002,2002);  INSERT INTO iss\_rec VALUES(3,'2024-07-02',5003,2003);  INSERT INTO iss\_rec VALUES(4,'2024-07-04',5004,2004);  INSERT INTO iss\_rec VALUES(5,'2024-07-05',5005,2005); |

1. List all the customer names along with their membership numbers.

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| SELECT cust\_name,mem\_no  FROM customer c,membership m  WHERE c.cust\_no=m.cust\_no; |

1. List the issue number for 2024-07-04 along with the customer names and cassette names.

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| --- |
| SELECT iss\_no,cust\_name,cass\_name  FROM customer c,cassette ca,membership m,iss\_rec i  WHERE ca.cass\_no=i.cass\_no AND m.mem\_no=i.mem\_no  AND c.cust\_no=m.cust\_no  AND i.iss\_date='2024-07-04'; |

1. List the details of the customer (customer number and customer name) who has borrowed the cassette titled "Moby Dick".

|  |
| --- |
| SELECT c.cust\_no,c.cust\_name  FROM customer c,membership m,cassette ca,iss\_rec i  WHERE i.mem\_no=m.mem\_no AND i.cass\_no=ca.cass\_no  AND c.cust\_no=m.cust\_no  AND ca.cass\_name='Moby Dick'; |

1. List the cassette names of the customer with membership number 5002 has borrowed.

|  |
| --- |
| SELECT ca.cass\_name  FROM customer c,membership m,cassette ca,iss\_rec i  WHERE i.mem\_no=m.mem\_no AND i.cass\_no=ca.cass\_no  AND m.cust\_no=c.cust\_no  AND m.mem\_no=5002; |

1. List the cassette details (cassette number, cassette name, and language) for the cassettes issued on 2024-07-05.

|  |
| --- |
| SELECT ca.cass\_no,ca.cass\_name,ca.language  FROM cassette ca,iss\_rec i  WHERE ca.cass\_no=i.cass\_no AND i.iss\_date='2024-07-05'; |

1. Create a view named issue\_details that lists the issue number (iss\_no), issue date (iss\_date), customer name (cust\_name), and cassette name (cass\_name).

|  |
| --- |
| CREATE VIEW issue\_details  AS SELECT i.iss\_no,i.iss\_date,c.cust\_name,ca.cass\_name  FROM customer c,membership m,cassette ca,iss\_rec i  WHERE m.mem\_no=i.mem\_no AND i.cass\_no=ca.cass\_no  AND c.cust\_no=m.cust\_no;  SELECT \* FROM issue\_details; |

**9.**Create a view named issues\_date\_wise that lists issue records (issue number, issue date, customer name, and cassette name) within the specific date range from 2024-07-01 to 2024-07-04.

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| CREATE VIEW issues\_date\_wise  AS SELECT i.iss\_no, i.iss\_date,c.cust\_name,ca.cass\_name  FROM iss\_rec i, customer c,cassette ca, membership m  WHERE m.mem\_no=i.mem\_no AND i.cass\_no=ca.cass\_no AND c.cust\_no=m.cust\_no  AND iss\_date BETWEEN '2024-07-01' AND '2024-07-04';  SELECT \* FROM issues\_date\_wise; |