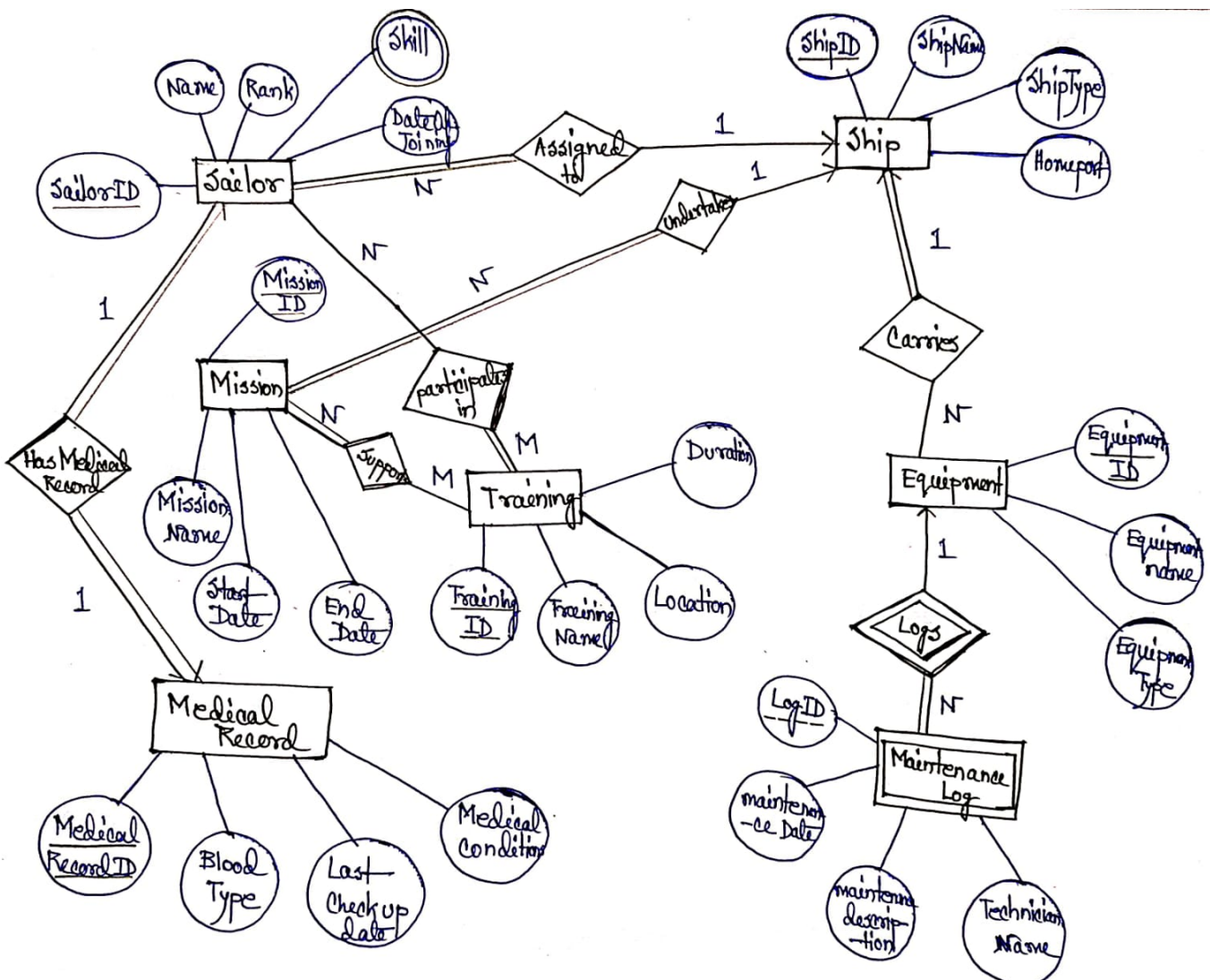


## Question :

Select a real-world scenario or organization, and undertake the following tasks: design an ER Model diagram to represent the data, convert it into the corresponding relational schema, write SQL scripts to create the necessary database structure, and demonstrate sample queries with example data along with their outputs.

### 1. ER Model

The following ER Diagram models the operations of a Navy Fleet Management System. It encompasses critical entities such as sailors, ships, missions, equipment, and training, along with their attributes. The model also defines the relationships between these entities, such as how sailors are assigned to ships, how ships are deployed on missions, the training programs that sailors undergo, and the maintenance logs for equipment. In addition, it captures medical records of sailors, the skills they possess, and the connections between training programs and mission readiness, creating a comprehensive representation of the Navy's operational framework.



## 2. Converting ER Diagram to Relational Model

The ER Model is transformed into relational tables using a systematic 7-step process:

- Step 1: Relations are created for all **strong entity types**, with their attributes included as primary keys. The entities and their respective attributes are as follows:
  - **Sailors:** SailorID, Name, Address, Rank, DateOfJoining
  - **Ships:** ShipID, ShipName, ShipType, HomePort
  - **Missions:** MissionID, MissionName, StartDate, EndDate
  - **Trainings:** TrainingID, TrainingName, Duration, Location
  - **Equipments:** EquipmentID, EquipmentName, EquipmentType
  - **MedicalRecords:** MedicalRecordID, BloodType, LastCheckupDate
- Step 2: The **weak entity type** MaintenanceLog is converted into a relation by including its attributes (LogID, MaintenanceDate, MaintenanceDescription, TechnicianName) along with a foreign key referencing the primary key of the associated strong entity Equipments.
- Step 3: To handle the **1:1 relationship** MedicalRecord, the primary key of the Sailors table (SailorID) is added as a foreign key to the MedicalRecords table.
- Step 4: For **1:N relationships**, the following adjustments are made:
  - The relationship Assigned To is implemented by adding ShipID as a foreign key in the Sailors table.
  - The relationship Carries is represented by adding ShipID as a foreign key in the Equipments table.
  - The relationship Undertakes is reflected by including ShipID as a foreign key in the Missions table.
- Step 5: **M:N relationships** are addressed by introducing new relations:
  - The relationship Participates in is represented by creating a SailorTraining table, which includes the primary keys of Sailors and Trainings as foreign keys.
  - The relationship supports For is handled by creating a TrainingMission table, including the primary keys of Trainings and Missions as foreign keys.
- Step 6: The **multivalued attribute** SailorSkill is normalized into a separate table that includes SailorID as a foreign key along with individual skill values stored in multiple rows.
- Step 7: No N-ary relationships are present, so no additional steps are needed.

### Resulting Relational Model :

#### Sailors:

Sailor ID (PK)	Name	Rank	DateOfJoining	Ship ID (FK)
----------------	------	------	---------------	--------------

#### Ships:

Ship ID (PK)	ShipName	ShipType	Homeport
--------------	----------	----------	----------

**Missions:**

<i>Mission ID (PK)</i>	MissionName	Start Date	End Date	Ship ID (FK)
------------------------	-------------	------------	----------	--------------

**Trainings:**

<i>Training ID (P)</i>	TrainingName	Duration	Location
------------------------	--------------	----------	----------

**Equipments:**

<i>Equipment ID(PK)</i>	Equipment Name	Equipment Type	Ship ID (FK)
-------------------------	----------------	----------------	--------------

**MaintenanceLog:**

<i>Log ID (Partial Key)</i>	<i>Equipment ID (P/FK)</i>	MaintenanceDate	Maintenance Description
-----------------------------	----------------------------	-----------------	-------------------------

Technician Name
-----------------

**SailorTraining:**

<i>Sailor ID (P/FK)</i>	<i>Training ID (P/FK)</i>
-------------------------	---------------------------

**TrainingMission:**

<i>Training ID (P/FK)</i>	<i>Mission ID (P/FK)</i>
---------------------------	--------------------------

**MedicalRecords:**

<i>MedicalRecord ID (PK)</i>	Sailor ID (FK)	BloodType	LastCheckupDate	MedicalConditions
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**SailorSkill:**

<i>Sailor ID (P/FK)</i>	<i>Skill(PK)</i>
-------------------------	------------------

### 3. Creating the schema and adding data

The following SQL statements will be used to create the database schema :

```

1 CREATE TABLE Sailors (
2     SailorID INT PRIMARY KEY,
3     Name VARCHAR(100),
4     Address VARCHAR(255),
5     'Rank' VARCHAR(50),
6     ShipID INT,
7     DateOfJoining DATE,
8     FOREIGN KEY (ShipID) REFERENCES Ships(ShipID)
9 );
10 INSERT INTO Sailors (SailorID, Name, Address, 'Rank',ShipID,
11     DateOfJoining) VALUES
12 (1, 'Arjun Patel', '123 Seaside Blvd, Mumbai', 'Captain
13     ',1,'2015-06-15'),
14 (2, 'Priya Singh', '456 Ocean Ave, Delhi', 'Lieutenant',1,
15     '2017-09-01'),
16 (3, 'Ravi Kumar', '789 Bay St, Bangalore', 'Commander',2,'2013-04-22'),
17 (4, 'Meera Sharma', '321 Harbor Rd, Chennai', 'Lieutenant',2,
18     '2019-12-05'),
19 (5, 'Vikram Deshmukh', '654 Dockside Dr, Pune', 'Ensign',5,
20     '2020-11-20');
21
22 -- Table: Ships
23 CREATE TABLE Ships (

```

```

19     ShipID INT PRIMARY KEY,
20     ShipName VARCHAR(100),
21     ShipType VARCHAR(50),
22     HomePort VARCHAR(100)
23 );
24 INSERT INTO Ships (ShipID, ShipName, ShipType, HomePort) VALUES
25 (1, 'USS Enterprise', 'Aircraft Carrier', 'Pearl Harbor'),
26 (2, 'HMS Victory', 'Frigate', 'Portsmouth'),
27 (3, 'USS Nimitz', 'Aircraft Carrier', 'San Diego'),
28 (4, 'RMS Titanic', 'Ocean Liner', 'Southampton'),
29 (5, 'HMS Queen Elizabeth', 'Aircraft Carrier', 'Portsmouth');
30
31 -- Table: Missions
32 CREATE TABLE Missions (
33     MissionID INT PRIMARY KEY,
34     MissionName VARCHAR(100),
35     StartDate DATE,
36     EndDate DATE,
37     ShipID INT,
38     FOREIGN KEY (ShipID) REFERENCES Ships(ShipID)
39 );
40 INSERT INTO Missions (MissionID, MissionName, StartDate, EndDate,
41     ShipID) VALUES
42 (1, 'High Risk Recon', '2023-06-01', '2023-06-30', 1),
43 (2, 'Peacekeeping Mission', '2023-03-15', '2023-04-01', 2),
44 (3, 'High Risk Operation', '2023-08-10', '2023-08-25', 3),
45 (4, 'Rescue Operation', '2023-10-05', '2023-10-20', 4),
46 (5, 'Training Exercise', '2024-01-01', '2024-01-15', 5);
47
48 -- Table: Trainings
49 CREATE TABLE Trainings (
50     TrainingID INT PRIMARY KEY,
51     TrainingName VARCHAR(100),
52     Duration INT, -- Duration in days
53     Location VARCHAR(100)
54 );
55 INSERT INTO Trainings (TrainingID, TrainingName, Duration, Location)
56     VALUES
57 (1, 'Advanced Combat Training', 30, 'Pearl Harbor'),
58 (2, 'Navigation and Strategy', 45, 'San Diego'),
59 (3, 'Survival Skills', 15, 'Portsmouth'),
60 (4, 'Leadership and Management', 20, 'Southampton'),
61 (5, 'First Aid and Medical Training', 10, 'San Diego');
62
63 -- Table: Equipments
64 CREATE TABLE Equipments (
65     EquipmentID INT PRIMARY KEY,
66     EquipmentName VARCHAR(100),
67     EquipmentType VARCHAR(50),
68     ShipID INT,
69     FOREIGN KEY (ShipID) REFERENCES Ships(ShipID)
70 );
71 INSERT INTO Equipments (EquipmentID, EquipmentName, EquipmentType,
72     ShipID) VALUES
73 (1, 'Radar System', 'Electronic', 1),
74 (2, 'Fire Extinguisher', 'Safety', 2),
75 (3, 'Sonar', 'Electronic', 3),
76 (4, 'Lifeboat', 'Safety', 4),
77 (5, 'Satellite Communication', 'Communication', 5);
78
79 -- Table: MedicalRecords
80 CREATE TABLE MedicalRecords (
81     MedicalRecordID INT PRIMARY KEY,

```

```

79     BloodType VARCHAR(5),
80     LastCheckupDate DATE,
81     MedicalConditions TEXT,
82     SailorID INT,
83     FOREIGN KEY (SailorID) REFERENCES Sailors(SailorID)
84 );
85 INSERT INTO MedicalRecords (MedicalRecordID, BloodType, LastCheckupDate
    , MedicalConditions, SailorID) VALUES
86 (1, 'O+', '2023-06-15', 'Asthma', 1),
87 (2, 'A-', '2023-07-01', 'Healthy', 2),
88 (3, 'B+', '2023-08-10', 'Diabetes', 3),
89 (4, 'AB-', '2023-09-05', 'High Blood Pressure', 4),
90 (5, 'O-', '2023-11-01', 'Healthy', 5);
91
92 -- Table: SailorTraining (many-to-many relationship between Sailors and
    Trainings)
93 CREATE TABLE SailorTraining (
94     SailorID INT,
95     TrainingID INT,
96     PRIMARY KEY (SailorID, TrainingID),
97     FOREIGN KEY (SailorID) REFERENCES Sailors(SailorID),
98     FOREIGN KEY (TrainingID) REFERENCES Trainings(TrainingID)
99 );
100 INSERT INTO SailorTraining (SailorID, TrainingID) VALUES
101 (1, 1),
102 (1, 2),
103 (3, 3),
104 (4, 4),
105 (1, 5),
106 (3, 5),
107 (4, 5),
108 (5, 4);
109
110 -- Table: TrainingMission (many-to-many relationship between Trainings
    and Missions)
111 CREATE TABLE TrainingMission (
112     TrainingID INT,
113     MissionID INT,
114     PRIMARY KEY (TrainingID, MissionID),
115     FOREIGN KEY (TrainingID) REFERENCES Trainings(TrainingID),
116     FOREIGN KEY (MissionID) REFERENCES Missions(MissionID)
117 );
118 INSERT INTO TrainingMission (TrainingID, MissionID) VALUES
119 (1, 1),
120 (2, 2),
121 (3, 3),
122 (4, 4),
123 (5, 5);
124
125 -- Table: SailorSkill
126 CREATE TABLE SailorSkill (
127     SailorID INT,
128     Skill VARCHAR(100),
129     PRIMARY KEY (SailorID, Skill),
130     FOREIGN KEY (SailorID) REFERENCES Sailors(SailorID)
131 );
132 INSERT INTO SailorSkill (SailorID, Skill) VALUES
133 (1, 'Navigation'),
134 (2, 'Combat'),
135 (3, 'Strategy'),
136 (4, 'Leadership'),
137 (5, 'Medical'),
138 (3, 'Medical'),

```

```

139 (2, 'Medical'),
140 (5, 'Navigation'),
141 (2, 'Strategy');
142
143 -- Table: MaintenanceLog
144 CREATE TABLE MaintenanceLog (
145     LogID INT PRIMARY KEY,
146     MaintenanceDate DATE,
147     MaintenanceDescription TEXT,
148     TechnicianName VARCHAR(100),
149     EquipmentID INT,
150     FOREIGN KEY (EquipmentID) REFERENCES Equipments(EquipmentID)
151 );
152 INSERT INTO MaintenanceLog (LogID, MaintenanceDate,
153     MaintenanceDescription, TechnicianName, EquipmentID) VALUES
154 (1, '2023-05-15', 'Replaced Radar Unit', 'Anil Kapoor', 1),
155 (2, '2023-06-20', 'Calibrated Sonar System', 'Deepak Verma', 2),
156 (3, '2023-07-10', 'Serviced Lifeboat', 'Sandeep Reddy', 3),
157 (4, '2023-08-25', 'Updated Satellite Communication', 'Rajesh Iyer', 4),
158 (5, '2023-09-10', 'Fixed Fire Extinguisher', 'Karan Mehta', 5);

```

## 4. Database Contents

**Table : Sailors**

SailorID	Name	Address	Rank
1	Arjun Patel	123 Seaside Blvd, Mumbai	Captain
2	Priya Singh	456 Ocean Ave, Delhi	Lieutenant
3	Ravi Kumar	789 Bay St, Bangalore	Commander
4	Meera Sharma	321 Harbor Rd, Chennai	Lieutenant
5	Vikram Deshmukh	654 Dockside Dr, Pune	Ensign

ShipID	DateOfJoining
1	2015-06-15
1	2017-09-01
2	2013-04-22
2	2019-12-05
5	2020-11-20

**Table : Ships**

ShipID	ShipName	ShipType	HomePort
1	USS Enterprise	Aircraft Carrier	Pearl Harbor
2	HMS Victory	Frigate	Portsmouth
3	USS Nimitz	Aircraft Carrier	San Diego
4	RMS Titanic	Ocean Liner	Southampton
5	HMS Queen Elizabeth	Aircraft Carrier	Portsmouth

**Table : Missions**

MissionID	MissionName	StartDate	EndDate	ShipID
-----------	-------------	-----------	---------	--------

1	High Risk Recon	2023-06-01	2023-06-30	1
2	Peacekeeping Mission	2023-03-15	2023-04-01	2
3	High Risk Operation	2023-08-10	2023-08-25	3
4	Rescue Operation	2023-10-05	2023-10-20	4
5	Training Exercise	2024-01-01	2024-01-15	5

**Table : Trainings**

TrainingID	TrainingName	Duration	Location
1	Advanced Combat Training	30	Pearl Harbor
2	Navigation and Strategy	45	San Diego
3	Survival Skills	15	Portsmouth
4	Leadership and Management	20	Southampton
5	First Aid and Medical Training	10	San Diego

**Table : Equipments**

EquipmentID	EquipmentName	EquipmentType	ShipID
1	Radar System	Electronic	1
2	Fire Extinguisher	Safety	2
3	Sonar	Electronic	3
4	Lifeboat	Safety	4
5	Satellite Communication	Communication	5

**Table : MedicalRecords**

MedicalRecordID	BloodType	LastCheckupDate	MedicalConditions
1	O+	2023-06-15	Asthma
2	A-	2023-07-01	Healthy
3	B+	2023-08-10	Diabetes
4	AB-	2023-09-05	High Blood Pressure
5	O-	2023-11-01	Healthy

```

...-----+
...Sailor ID |
...-----+
...      1 |
...      2 |
...      3 |
...      4 |
...      5 |
...-----+

```

**Table : SailorTraining**

SailorID	TrainingID
1	1
1	2
3	3
4	4
5	4
1	5
3	5
4	5

**Table : TrainingMission**

TrainingID	MissionID
1	1
2	2
3	3
4	4
5	5

**Table : SailorSkill**

SailorID	Skill
1	Navigation
2	Combat
2	Medical
2	Strategy
3	Medical
3	Strategy
4	Leadership
5	Medical
5	Navigation

**Table : MaintenanceLog**

LogID	MaintenanceDate	MaintenanceDescription
1	2023-05-15	Replaced Radar Unit
2	2023-06-20	Calibrated Sonar System
3	2023-07-10	Serviced Lifeboat
4	2023-08-25	Updated Satellite Communication
5	2023-09-10	Fixed Fire Extinguisher

TechnicianName	Equipment ID
Anil Kapoor	1
Deepak Verma	2
Sandeep Reddy	3
Rajesh Iyer	4
Karan Mehta	5

## 5. Queries

1. Retrieve the Name and Rank of each sailor from the Sailors table.
2. Write a query to display ShipName and ShipType for ships stationed in a specified HomePort, such as "Pearl Harbor."
3. List the names of sailors (Name from Sailors) who have entries in the SailorTraining table, showing that they participated in at least one training program.
4. For a specified sailor (by SailorID), find other sailors who have the same skill(s) listed in the SailorSkill table.



- Write a query that joins Equipments and MaintenanceLog to show each piece of equipment (EquipmentName) assigned to a ship (ShipName), along with its maintenance date (MaintenanceDate) and description (MaintenanceDescription).
- List the names of sailors who have attended training programs associated with a specified mission. Use joins between SailorTraining, TrainingMission, and Missions to filter by MissionName.
- Write a query to find the sailor with the earliest DateOfJoining for each ship. Display the ship's name, sailor's name, and years of service.
- Retrieve names of sailors from Sailors who have entries in MedicalRecords (indicating they have a medical condition) and are also associated with high-risk missions in Missions (e.g., where the mission name contains "High Risk" or a similar term).
- Display the sailor's Name, Rank, years of service, and count of training programs attended. Include only sailors with at least 5 years of service. This query should use DateOfJoining to calculate years of service and count entries in SailorTraining.
- Write a query to find the equipment in the MaintenanceLog with the highest number of maintenance entries. Display the equipment name, the number of maintenance instances, and its associated ship.

## 6. Querying the database

**Query 1)** Retrieve the Name and Rank of each sailor from the Sailors table.

```
1 | SELECT NAME, 'RANK' FROM Sailors;
```

**Output :**

NAME	RANK
Arjun Patel	Captain
Priya Singh	Lieutenant
Ravi Kumar	Commander
Meera Sharma	Lieutenant
Vikram Deshmukh	Ensign

**Query 2)** Write a query to display ShipName and ShipType for ships stationed in a specified HomePort, such as "Pearl Harbor."

```
1 | SELECT ShipID, ShipName, ShipType, HomePort FROM Ships Where HomePort="
   | Pearl Harbor";
```

**Output :**

ShipID	ShipName	ShipType	HomePort
1	USS Enterprise	Aircraft Carrier	Pearl Harbor

**Query 3)** List the names of sailors (Name from Sailors) who have entries in the SailorTraining table, showing that they participated in at least one training program.

```
1 | SELECT s.SailorID, t.TrainingID, s.Name, t.TrainingName
2 | FROM Sailors s, Trainings t, SailorTraining st WHERE s.SailorID = st.
   | SailorID
3 | AND t.TrainingID=st.TrainingID;
```

**Output :**

SailorID	TrainingID	Name
1	1	Arjun Patel
1	2	Arjun Patel
1	5	Arjun Patel
3	3	Ravi Kumar
3	5	Ravi Kumar
4	4	Meera Sharma
4	5	Meera Sharma
5	4	Vikram Deshmukh

TrainingName
Advanced Combat Training
Navigation and Strategy
First Aid and Medical Training
Survival Skills
First Aid and Medical Training
Leadership and Management
First Aid and Medical Training
Leadership and Management

**Query 4)** For a specified sailor (by SailorID), find other sailors who have the same skill(s) listed in the SailorSkill table.

```

1  SELECT DISTINCT
2      s2.SailorID,
3      s2.Name,
4      CASE
5          WHEN s2.SailorID = ss1.SailorID THEN 'Specified Sailor'
6          ELSE 'Other Sailor with Same Skill'
7      END AS Specified_Sailor
8  FROM SailorSkill ss1
9  INNER JOIN SailorSkill ss2 ON ss1.Skill = ss2.Skill
10 INNER JOIN Sailors s2 ON ss2.SailorID = s2.SailorID
11 WHERE ss1.SailorID = 1;

```

**Output :**

SailorID	Name	Specified_Sailor
1	Arjun Patel	Specified Sailor
5	Vikram Deshmukh	Other Sailor with Same Skill

**Query 5)** Write a query that joins Equipments and MaintenanceLog to show each piece of equipment (EquipmentName) assigned to a ship (ShipName), along with its maintenance date (MaintenanceDate) and description (MaintenanceDescription).

```

1  SELECT E.EquipmentID as EqpID, E.EquipmentName, S3.ShipID, S3.ShipName, M.
      MaintenanceDate, M.MaintenanceDescription FROM Equipments E, Ships S3
      , MaintenanceLog M WHERE E.EquipmentID=M.EquipmentID AND E.ShipID=
      S3.ShipID;

```

**Output :**

EqpID	EquipmentName	ShipID	ShipName
-------	---------------	--------	----------

1	Radar System	1	USS Enterprise	...
2	Fire Extinguisher	2	HMS Victory	...
3	Sonar	3	USS Nimitz	...
4	Lifeboat	4	RMS Titanic	...
5	Satellite Communication	5	HMS Queen Elizabeth	...

---

MaintenanceDate	MaintenanceDescription
2023-05-15	Replaced Radar Unit
2023-06-20	Calibrated Sonar System
2023-07-10	Serviced Lifeboat
2023-08-25	Updated Satellite Communication
2023-09-10	Fixed Fire Extinguisher

**Query 6)** List the names of sailors who have attended training programs associated with a specified mission. Use joins between SailorTraining, TrainingMission, and Missions to filter by MissionName.

```

1 SELECT S.SailorID,S.NAME, M.MissionID,M.MissionName FROM Sailors S,
   Missions M, SailorTraining st, TrainingMission tm WHERE st.SailorID=
   S.SailorID
2 AND St.TrainingID=tm.TrainingID AND tm.MissionID=M.MissionID AND M.
   MissionID=5;

```

**Output :**

SailorID	NAME	MissionID	MissionName
1	Arjun Patel	5	Training Exercise
3	Ravi Kumar	5	Training Exercise
4	Meera Sharma	5	Training Exercise

**Query 7)** Write a query to find the sailor with the earliest DateOfJoining for each ship. Display the ship's name, sailor's name, and years of service.

```

1 SELECT
2     sh.ShipID, sh.ShipName,
3     s.Name AS SailorName,
4     s.SailorID,
5     TIMESTAMPDIFF(YEAR, s.DateOfJoining, CURDATE()) AS YearsOfService
6 FROM Sailors s
7 INNER JOIN Ships sh ON s.ShipID = sh.ShipID
8 WHERE s.DateOfJoining = (
9     SELECT MIN(s1.DateOfJoining)
10    FROM Sailors s1
11   WHERE s1.ShipID = s.ShipID
12 );

```

**Output :**

ShipID	ShipName	SailorName	SailorID	...
1	USS Enterprise	Arjun Patel	1	...
2	HMS Victory	Ravi Kumar	3	...
5	HMS Queen Elizabeth	Vikram Deshmukh	5	...

YearsOfService
9
11

```
...          4 |
...-----+
```

**Query 8)** Retrieve names of sailors from Sailors who have entries in MedicalRecords (indicating they have a medical condition) and are also associated with high-risk missions in Missions (e.g., where the mission name contains "High Risk" or a similar term).

```
1 SELECT DISTINCT s.Name AS SailorName ,
2   m.MissionName
3 FROM Sailors s
4 INNER JOIN MedicalRecords mr ON s.SailorID = mr.SailorID
5 INNER JOIN Missions m ON s.ShipID = m.ShipID
6 WHERE m.MissionName LIKE '%High Risk%';
```

**Output :**

```
+-----+-----+
| SailorName | MissionName |
+-----+-----+
| Arjun Patel | High Risk Recon |
| Priya Singh | High Risk Recon |
+-----+-----+
```

**Query 9)** Display the sailor's Name, Rank, years of service, and count of training programs attended. Include only sailors with at least 5 years of service. This query should use DateOfJoining to calculate years of service and count entries in SailorTraining.

```
1 SELECT
2   s.Name AS SailorName ,
3   s.Rank ,
4   TIMESTAMPDIFF(YEAR, s.DateOfJoining, CURDATE()) AS YearsOfService ,
5   COUNT(st.TrainingID) AS TrainingCount
6 FROM Sailors s
7 LEFT JOIN SailorTraining st ON s.SailorID = st.SailorID
8 WHERE TIMESTAMPDIFF(YEAR, s.DateOfJoining, CURDATE()) >= 5
9 GROUP BY s.SailorID, s.Name, s.Rank, s.DateOfJoining;
```

**Output :**

```
+-----+-----+-----+-----+
| SailorName | Rank | YearsOfService | TrainingCount |
+-----+-----+-----+-----+
| Arjun Patel | Captain | 9 | 3 |
| Priya Singh | Lieutenant | 7 | 0 |
| Ravi Kumar | Commander | 11 | 2 |
+-----+-----+-----+-----+
```

**Query 10)** Write a query to find the equipment in the MaintenanceLog with the highest number of maintenance entries. Display the equipment name, the number of maintenance instances, and its associated ship.

```
1 SELECT
2   e.EquipmentName ,
3   COUNT(ml.LogID) AS MaintenanceCount ,
4   sh.ShipName
5 FROM MaintenanceLog ml
6 INNER JOIN Equipments e ON ml.EquipmentID = e.EquipmentID
7 INNER JOIN Ships sh ON e.ShipID = sh.ShipID
8 GROUP BY e.EquipmentID, e.EquipmentName, sh.ShipName
9 ORDER BY MaintenanceCount DESC
10 LIMIT 1;
```

**Output :**

EquipmentName	MaintenanceCount	ShipName
Radar System	1	USS Enterprise