BHARATIYA VIDYA BHAVAN'S

SARDAR PATEL INSTITUTE OF TECHNOLOGY

MUNSHI NAGAR, ANDHERI (WEST), MUMBAI – 400 058, India
(Autonomous College Affiliated to University of Mumbai)

Executed

Atharva Shah

Duration: 1 hour **UCID: 2023510051**

Marks: 25 Marks

General Instructions:

Viva will be taken at the time of practical as well as after the practical if required.
The figures to the right indicate full marks.
If you are using any additional information, state it clearly.
Once you finish with the code show it to the examiner for testing. Write your answer in Word file and upload it on Moodle.

Q. 1 A)	**Consider the reservation database given below. The primary keys are underlined and the data types are specified:** **Sailor** (Sname: varchar(50) , s_rating: number(10)) **Boat** (bname:varchar(50) , color:varchar(20), b_rating:number:number(10)) **Reservation** (sname:varchar(50), bname:varchar(50),wekkday:varchar(50)) a) Create the above tables by properly specifying the primary keys and the foreign keys and named constraints. b) Enter atleast five tuples for each relation. c) Because of technical problems Boat name Bay is not participating in Reservation database. Write a SQL query to reflect this change. d)List all boats reserved on Monday and their color. e) Write a SQL query to change the length of "color" column to 30.	**10**
B)	Write a PL/SQL function to find out number of sailors whose names start with 'A'.	**10**
C)	List the sailor with highest rating.	**5**

Q1)

```
create database exam;
use exam;
--creating tables
create table Sailor (
  sname VARCHAR(50) PRIMARY KEY,
  s_rating INT (10) NOT NULL );

create table Boat (
  bname VARCHAR (50) PRIMARY KEY,
  color VARCHAR (20) NOT NULL,
  b_rating INT(10) NOT NULL );
create table Reservation (
  sname VARCHAR(50), bname VARCHAR(50) ,weekday VARCHAR(50),
  FOREIGN KEY (sname) REFERENCES Sailor (sname) ON DELETE SET NULL,
  FOREIGN KEY (bname) REFERENCES Boat (bname) ON DELETE SET NULL );

-- Insert Statements
INSERT INTO Sailor (sname , s_rating) VALUES ('John',8),('Mike',6),
  ('Sarah', 9) ,('Emily', 7) ,('David', 5);
```

```
INSERT INTO Boat (bname, color, b-rating) VALUES ('Boat1', 'Blue', 9),
('Boat2', 'Red', 7), ('Boat3', 'Yellow', 8), ('Boat4', 'Green', 6), ('Boat5',
'Orange', 7);

INSERT INTO Reservation (sname, bname, weekday) VALUES
('John', 'Boat1', 'Monday'), ('Mike', 'Boat2', 'Tuesday'),
('Sarah', 'Boat1', 'wednesday'), ('Emily', 'Boat3', 'Thursday'), ('David',
'Boat4', 'Friday');

-- Deleting Absent Boats
Delete from Boat where bname = 'Boat4';
-- All boats reserved on Monday with color
SELECT bname, color from Boat where bname in (SELECT bname
from Reservation where weekday = 'Monday');
-- change column Length
ALTER TABLE Boat MODIFY color VARCHAR(30) NOT NULL;
```

Q2) Function Definition

```
CREATE DEFINER = 'root'@'localhost' FUNCTION `sailor_count` DETERMINIST
BEGIN
  DECLARE scount INT(10);
  SELECT COUNT(*) from Sailor where sname LIKE 'S%' into scount;
  RETURN scount;
END

=
  SELECT sailor_count();
```

Q3) -- List sailor with Highest Rating.

```
SELECT * from Sailor ORDER BY s_rating DESC LIMIT 1;
-- Alternate Solution.
SELECT sname, s_rating from Sailor where s_rating =
  (SELECT MAX(s_rating) from Sailor);
```