

Computer Science Practice

Tuesday, 11:00 am with Daniele Soria

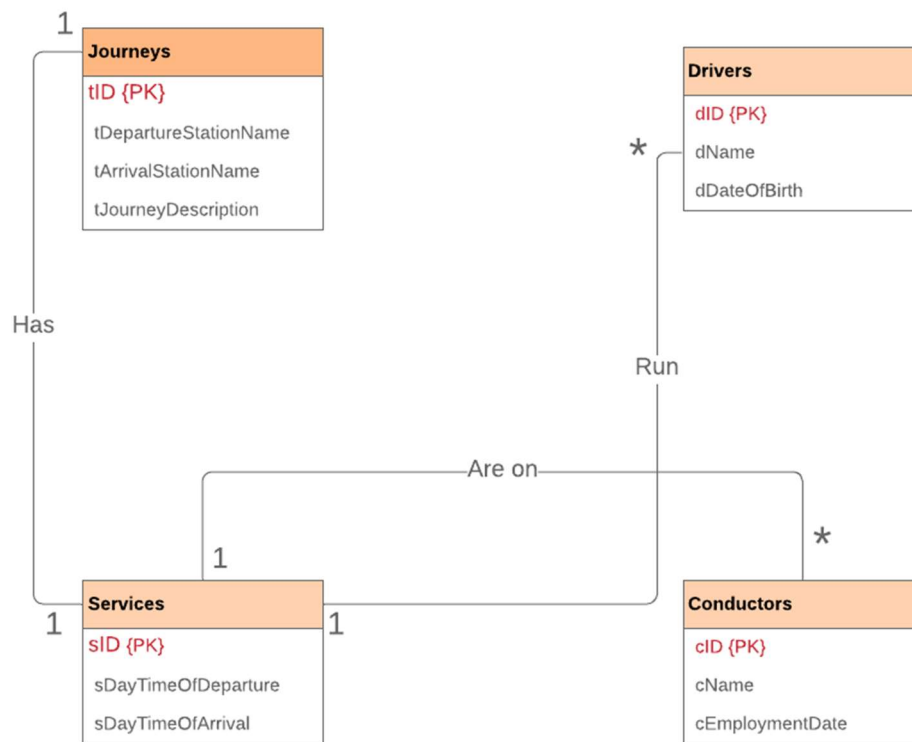
Beatrice Maria Antoniu

W1688177

Task 1

Task 1 - FabTrains

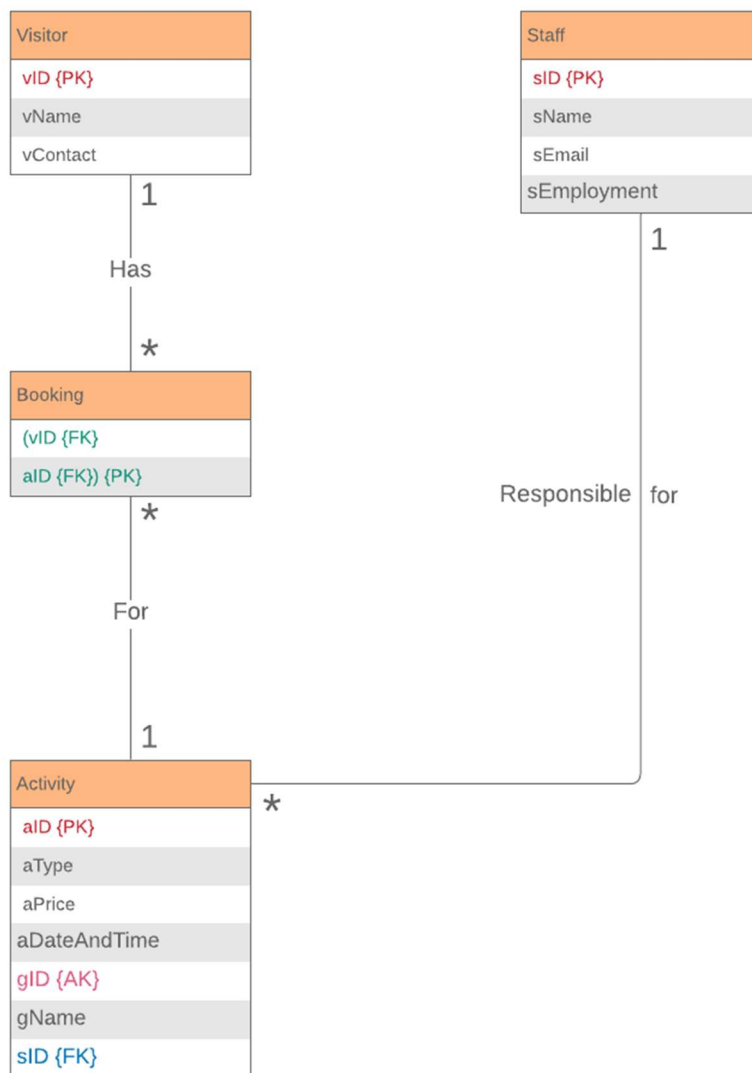
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Task 2

Task 2 - CoolCityTours

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Task 3

```
CREATE TABLE Staff (  
    sID INT NOT NULL,  
    sName VARCHAR(50) NOT NULL,  
    sEmail VARCHAR(255),  
    sEmployment VARCHAR(9),  
    CONSTRAINT staff_sid_pk PRIMARY KEY(sID)  
);
```

```
CREATE TABLE Activity (  
    aID INT DEFAULT 1,  
    aType CHAR(255),  
    aPrice DECIMAL(10, 2),  
    aDateAndTime DATETIME,  
    gID INT DEFAULT 1,  
    gName VARCHAR(50) NOT NULL,  
    sID INT NOT NULL,  
    CONSTRAINT activity_aid_pk PRIMARY KEY(aID),  
    CONSTRAINT staff_sid_fk FOREIGN KEY(sID)  
        REFERENCES Staff(sID)  
);
```

Task 4

```
INSERT INTO Staff (sID, sName, sEmail, sEmployment)
VALUES (1, 'Emma', 'emma@coolcitytours.com', 'Full-time');
```

```
INSERT INTO Staff (sID, sName, sEmail, sEmployment)
VALUES (2, 'Nicholas', 'nick@coolcitytours.com', 'Part-time');
```

```
INSERT INTO Staff (sID, sName, sEmail, sEmployment)
VALUES (3, 'Laura', 'laura@coolcitytours.com', 'Full-time');
```

```
INSERT INTO Activity (aID, aType, aPrice, aDateAndTime, gID, gName, sID)
VALUES(10, 'River Boat (day)', 24.99, '2018-09-10 11:00:00', 300, 'Adrian', (SELECT sID FROM
Staff WHERE sID = 2));
```

```
INSERT INTO Activity (aID, aType, aPrice, aDateAndTime, gID, gName, sID)
VALUES(20, 'Night walk', 6.49, '2018-10-31 21:30:00', 100, 'Lucy', (SELECT sID FROM Staff
WHERE sID = 1));
```

```
INSERT INTO Activity (aID, aType, aPrice, aDateAndTime, gID, gName, sID)
VALUES(30, 'Segway tour', 21.99, '2018-07-11 16:15:00', 400, 'Elizabeth', (SELECT sID FROM
Staff WHERE sID = 3));
```

```
INSERT INTO Activity (aID, aType, aPrice, aDateAndTime, gID, gName, sID)
VALUES(40, 'Walking tour', 4.99, '2019-04-02 10:45:00', 200, 'Fatima', (SELECT sID FROM
Staff WHERE sID = 1));
```

```
INSERT INTO Activity (aID, aType, aPrice, aDateAndTime, gID, gName, sID)
VALUES(50, 'River Boat (night)', 29.99, '2019-02-14 19:00:00', 500, 'Steve', (SELECT sID
FROM Staff WHERE sID = 2));
```

Task 5

- a) `SELECT aID, aType, aDateAndTime, aPrice`
`FROM Activity`
`WHERE aPrice < 24.00;`

The screenshot shows the phpMyAdmin interface for the 'Student mysql server for ECS' database. The 'SQL' tab is selected, and the query box contains the SQL statement: `SELECT aID, aType, aDateAndTime, aPrice FROM Activity WHERE aPrice < 24.00 LIMIT 0, 30`. The query has been executed successfully, showing 4 rows. The results are displayed in a table with columns: aID, aType, aDateAndTime, and aPrice. The table contains the following data:

aID	aType	aDateAndTime	aPrice
10	River Boat (day)	2018-09-10 11:00:00	9.99
20	Night walk	2018-10-31 21:30:00	6.49
30	Segway tour	2018-07-11 16:15:00	9.99
40	Walking tour	2019-04-02 10:45:00	4.99

- b) `SELECT aType, aPrice, aDateAndTime`
`FROM Activity`
`WHERE aDateAndTime < '2019-02-28' AND aDateAndTime > '2018-08-01';`

The screenshot shows the phpMyAdmin interface for the 'Student mysql server for ECS' database. The 'SQL' tab is selected, and the query box contains the SQL statement: `SELECT aType, aPrice, aDateAndTime FROM Activity WHERE aDateAndTime < '2019-02-28' AND aDateAndTime > '2018-08-01' LIMIT 0, 30`. The query has been executed successfully, showing 3 rows. The results are displayed in a table with columns: aType, aPrice, and aDateAndTime. The table contains the following data:

aType	aPrice	aDateAndTime
River Boat (day)	9.99	2018-09-10 11:00:00
Night walk	6.49	2018-10-31 21:30:00
River Boat (night)	9.99	2019-02-14 19:00:00

c) **SELECT ***
FROM Staff
WHERE sEmail LIKE '%a@coolcitytours.com'
ORDER BY sName DESC;

The screenshot shows the phpMyAdmin interface for a MySQL database. The query executed is:

```
SELECT *
FROM Staff
WHERE sEmail LIKE '%a@coolcitytours.com'
ORDER BY sName DESC
LIMIT 0, 30
```

The results show 2 rows:

sID	sName	sEmail	sEmployment
3	Laura	laura@coolcitytours.com	Full-time
1	Emma	emma@coolcitytours.com	Full-time

d) **SELECT sName,**
AVG(aPrice) AS sPricesAverage
FROM Staff
INNER JOIN Activity ON Activity.sID = Staff.sID
GROUP BY
sName;

The screenshot shows the phpMyAdmin interface for a MySQL database. The query executed is:

```
SELECT sName, AVG(aPrice) AS sPricesAverage
FROM Staff
INNER JOIN Activity ON Activity.sID = Staff.sID
GROUP BY sName
LIMIT 0, 30
```

The results show 3 rows:

sName	sPricesAverage
Emma	5.740000
Laura	21.990000
Nicholas	27.490000