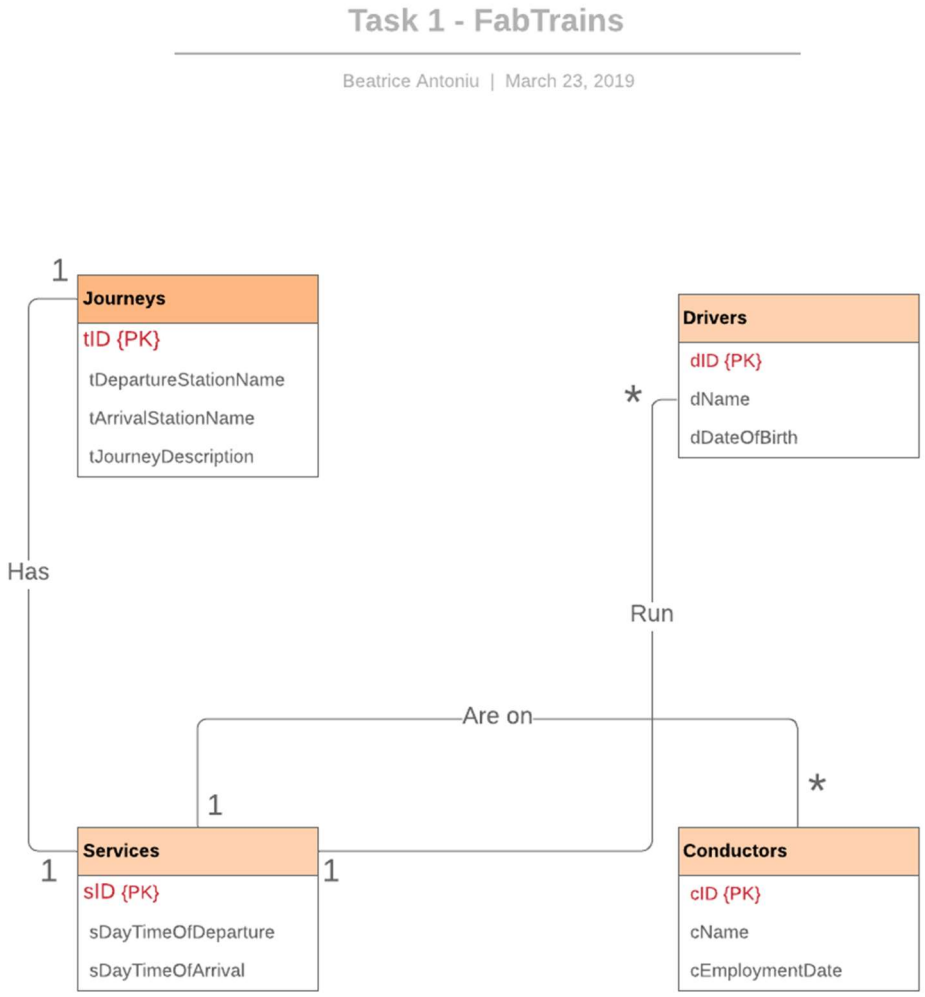
Computer Science Practice

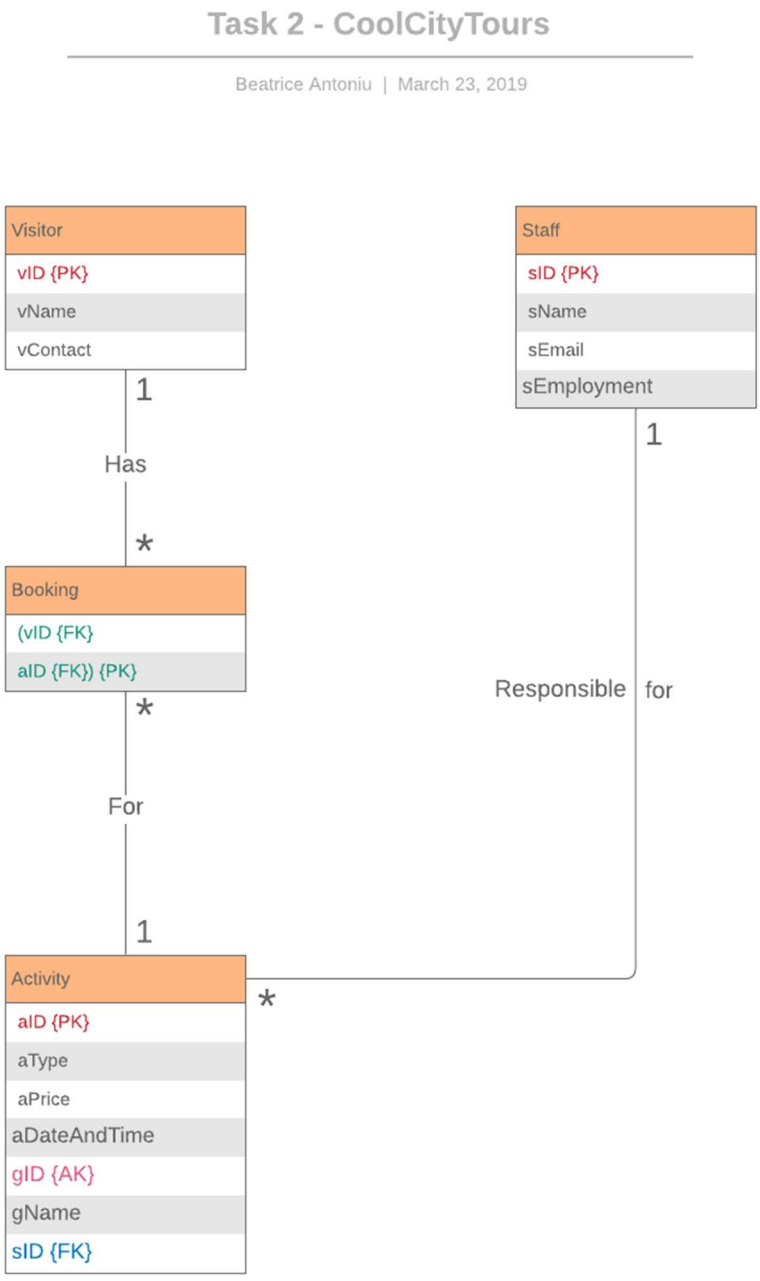
Tuesday, 11:00 am with Daniele Soria

Beatrice Maria Antoniu
W1688177

Task 1


Task 1 - FabTrains
Beatrice Antoniu | March 23, 2019
1
Journeys
tID {PK}
tDepartureStationName
tArrivalStationName
tJourneyDescription
Drivers
dID {PK}
dName
dDateOfBirth
*
Has
Run
Are on
1
*
1
1
Services
sID {PK}
sDayTimeOfDeparture
sDayTimeOfArrival
Conductors
cID {PK}
cName
cEmploymentDate

Task 2


Task 2 - CoolCityTours
Beatrice Antoniu | March 23, 2019
Visitor
vID {PK}
vName
vContact
1
Has
*
Booking
(vID {FK}
aID {FK}) {PK}
*
For
1
Activity
aID {PK}
aType
aPrice
aDateAndTime
gID {AK}
gName
sID {FK}
Staff
sID {PK}
sName
sEmail
sEmployment
1
Responsible for
*

Task 3

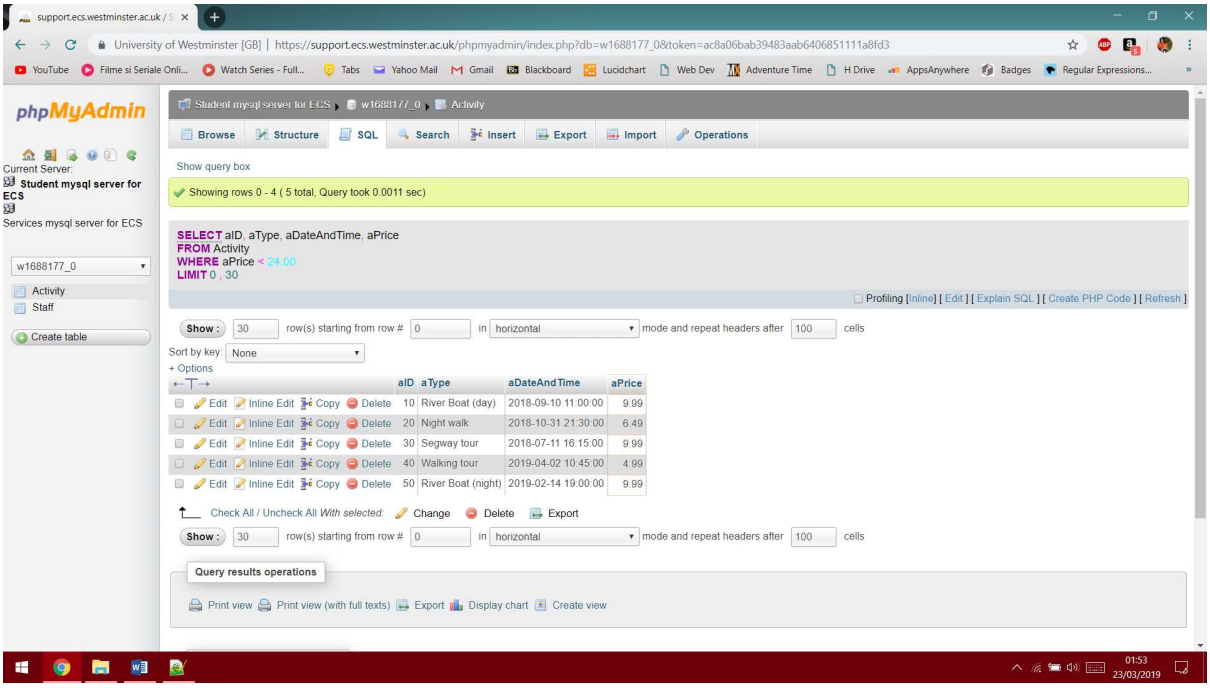
```
CREATE TABLE Staff (
        sID INT NOT NULL,
        sName VARCHAR(50) NOT NULL,
        sEmail VARCHAR(255),
        sEmployment VARCHAR(9),
        CONSTRAINT staff_sid_pk PRIMARY KEY(sID)
);

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

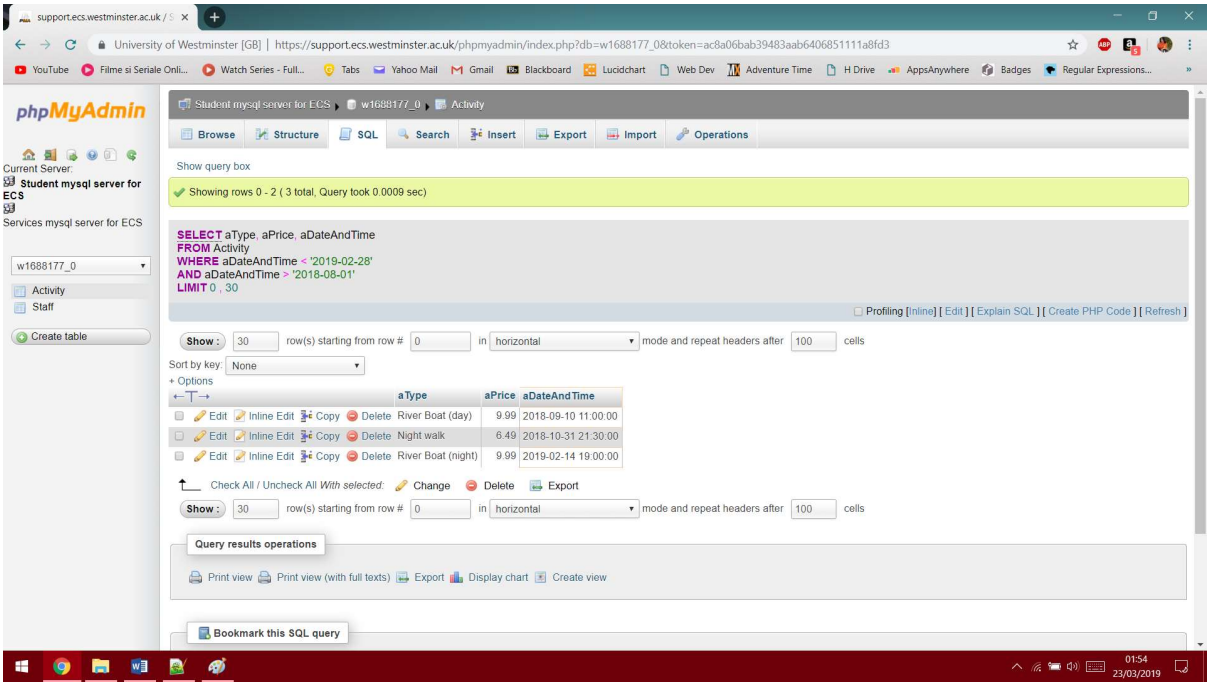
```
INSERT INTO Staff (sID, sName, sEmail, sEmployment)

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

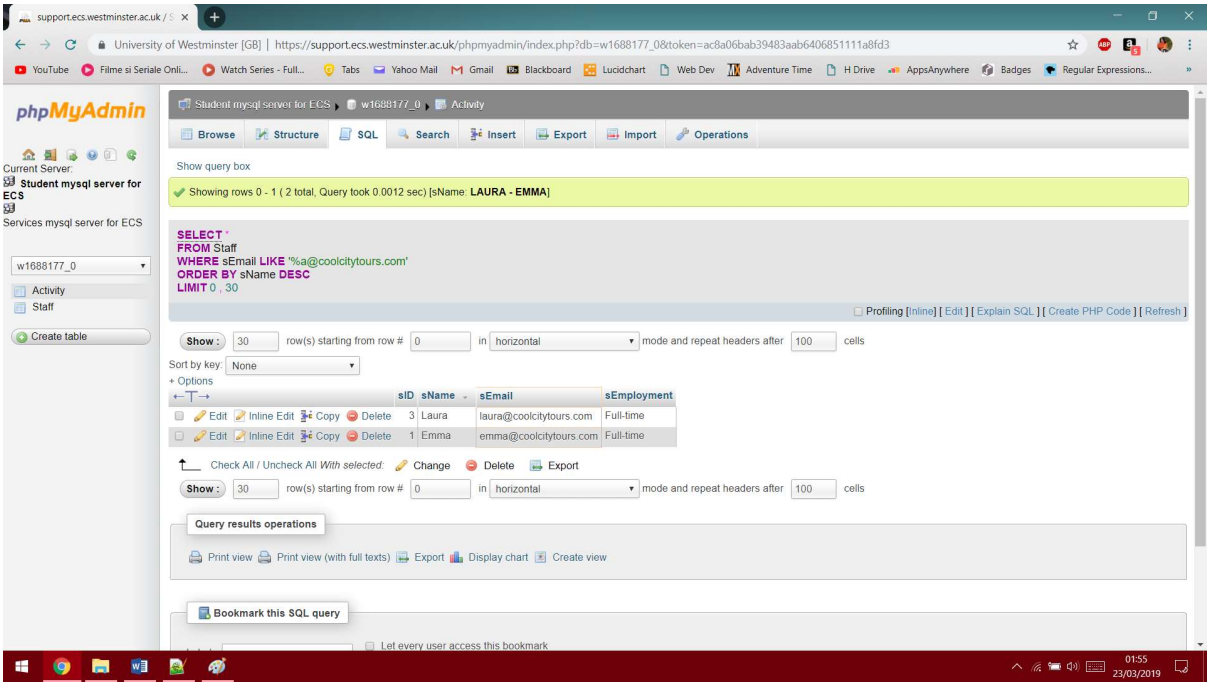
a) SELECT aID, aType, aDateAndTime, aPrice
FROM Activity
WHERE aPrice < 24.00;



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



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



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