**DBMS PROJECT AND DELIVERABLES**

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| **1** | **Course Title** | Databases Systems 1 |
| **2** | **Course Code** | CSC 371 |
| **3** | **Credit Hours** | 4(3,1) |
| **4** | **Semester** | Fall 2020 |
| **5** | **Resource Person** | Dr. Abid Sohail |
| **6** | **Supporting Team Members** | Muhammad Abubakar Siddique – FA20-BSE-084 |
| **7** | **Contact Hours (Theory)** | 3 hours per week |
| **8** | **Contact Hours (Lab)** | 3 hours per week |
| **9** | **Office Hours** | 08:30 am to 04:30 pm |

Overall term project is divided into 4 deliverable and for each deliverable the students were asked to submit the document and after checking the documents they were asked to incorporate changes. Finally, the project was asked to develop using only backend technology of SQL Servers that is using store procedures or triggers.

# Quiz 1

# You are required to answer following question with respect to your selected project.

**Question 1:**

**Find the list of Nouns are verbs from your textual description?**

**Textual Description**

**Railway Reservation System** is being done in the areas that are now comprising Pakistan in the year 1858 in Karachi.

The Railway Reservation System is being operated by an **Admin** and **Employees**. The passenger will book the ticket. When the **Passenger** will use the system to reserve the train he/she will select his/her source, destination, and date of the journey. Then the system will show the available trains ready for reservation at the entered date. Passengers will select train, class, available coach number, and available seat number. Then the Passenger will fill out his/her details. Then the system will generate the ticket. The ticket has a fare. Tickets will also have information such as Passenger ID, ticket number, source, destination, TrainID, class, seat number, departure time, arrival time, and fare. The Passenger can pay the fare online or by hand. When his/her payment is confirmed ticket will be booked.

The reserved train will have information such as source, destination, departure time, arrival time, number of stop stations, and the stop station's name. The reserved train contains different classes. The reserved trains will also have routes.

The employee keeps the details of the Passenger such as Passenger ID, name, gender, phone number, and address. And also the details of his/her reserved train. The employee is only responsible for storing the data when the Passenger ticket is confirmed.

Admin will store the data of the available trains, their coaches, and coach types such as Full and Composite, and save the details of train classes such as Business, AC Sleeper, Economy, First Class Sleeper, and Second Class. Station has different routes. Admin will also store the details of **Operated Stations** Such as Station ID, station name, number of lines, and number of platforms.

**Nouns**

1. Employee
2. Passenger
3. Train
4. Station
5. Coach
6. Ticket
7. Route
8. Fare
9. Reserved Train
10. Train\_Id
11. Ticket\_Number
12. Seat\_Number
13. Pass\_Id
14. Source
15. Destination
16. Train\_Id
17. Class
18. Station\_Id
19. Station\_Name
20. Number\_Of\_Lines
21. Number\_Of\_Platform
22. Pass\_Id
23. Pass\_Name
24. Pass\_Gender
25. Pass\_PhoneNumber
26. Emp\_Id

**Verbs**

The highlighted parts in the following statements are Verbs.

* The employee **keeps the details** of the Passenger.
* The ticket **has** a fare.
* The passenger **will book** the ticket.
* The reserved trains will also **have** routes.
* The reserved train **contains** different classes.
* Station **has** different routes.

It will also include the following:

* Buy Ticket
* Add Details

**Question 2:**

**From the question 1 identified nouns, verify the entities and attributes. Also attach the relevant attributes with entities.**

**Nouns**

1. Employee
2. Passenger
3. Train
4. Station
5. Coach
6. Ticket
7. Route
8. Fare
9. Reserved Train
10. Train\_Id
11. Ticket\_Number
12. Seat\_Number
13. Pass\_Id
14. Source
15. Destination
16. Train\_Id
17. Class
18. Station\_Id
19. Station\_Name
20. Number\_Of\_Lines
21. Number\_Of\_Platform
22. Pass\_Id
23. Pass\_Name
24. Pass\_Gender
25. Pass\_PhoneNumber
26. Emp\_Id

**Entities**

* Employee
* Passenger
* Train
* Class
* Station
* Coach
* Ticket
* Route
* Fare
* Reserved Train

**Attributes**

* Train\_Id
* Ticket\_Number
* Seat\_Number
* Pass\_Id
* Source
* Destination
* Train\_Id
* Class
* Station\_Id
* Station\_Name
* Number\_Of\_Lines
* Number\_Of\_Platform
* Pass\_Id
* Pass\_Name
* Pass\_Gender
* Pass\_PhoneNumber
* Emp\_Id
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**Question 3:**

**Identify the core data storage entities (Transactional Entities)**

**Transactional Entities**

Entities containing measurements that can be summarized.

* Ticket
* Route
* Reserved\_Train

**Question 4:**

**Draw the diagram to show the major inflows of data and outflows (Reports) of proposed system**



**Inflows**

* Reserve trains Details
* Routes Details
* Ticket Details
* Fare Details

**Outflows**

* Passengers Report
* Stop Stations Report
* Tickets Report
* Reserve Trains Report
* Fare Reports According To Routes