

Section 1: Metadata**1.1. Project Information** to be filled by the student

Title: Automobile Workshop	
Start: Week 10	End: Week 15

1.2. Student(s) Information

Name: Shahzaib Amir	ID: 05578
Section: L3	Batch: 2023
Name: Muhammad Saad	ID: 05496
Section: L3	Batch: 2023
Name: Sudais Baig	ID: 05588
Section: L3	Batch: 2023

Section 2: The Project

2.1. Project Description: *Please provide a brief introduction of the project including its scope.*

Automobile Repair Shop Data Model

Running a vehicle/auto shop is a truly intricate business. You'll have to make arrangements while a few clients will drive in. Additionally, you'll have to compose and organize employees, track fixes/repairs, materials, charge clients, and so on. A Car Repair Showroom owner has to keep record of all the customers who come to his garage to avail his car repairing service. In addition to this, he also has to keep record of the parts available in his warehouse.

We will implement this scenario by designing the model using ERD and build the database using SQL for showroom owner. Front end would be designed as user-friendly

The model consists of 5 subject areas:

- Repair shops & employees
- Customers & contacts
- Vehicles
- Services & offers and
- Visits

2.2 Functional Requirements

This section describes each function/feature provided by your system. These functions are logically grouped into modules based on their purposes. The users in your system must be categorized such as client, customer or administrator etc. These users will be accessing the database with the level of access that they are authorized with.

Module 1: Repair Shops & Employees

All the following functions can only be accessed as an administrator.

- Function 1: Information about every Repair Shop

The system lets us store and display a list of all our repair shops. We can expect that we'll operate more than one at some point. Each shop is uniquely defined by its `shop_name` and the id of the city it belongs to (`city_id`). We'll also store the shop's address and additional `details` in the textual format if any.

- Function 2: Information about Employees

For each employee, the system lets us store his/her details including their name, employment period, position and specialty.

- Function 3: Schedule

The system also lets us store and display exact schedules for all our employees on a daily level. We'll also have the option to store multiple intervals for the same employee during the same day.

Module 2: Customers & Contact

We'll store information about all customers we worked with before or we had contact with. Only administrator and certain employees can access these functions.

- Function 1: Customer Information is stored separately. Contact Information is store separately.
- Function 2: The system allows us to find any information about our present customers, or past customers. It also allows us to access their contact information, and contact them.
- Function 3: A customer can be contacted to be notified of any progress made, or any parts that arrived for them.

Module 3: Vehicles & Parts

After knowing our resources and customers, we need to store vehicles we'll work with and the parts that goes in them. The administrator and a few employees can access this information.

- Function 1: The system lets us store all the information about the make and model of every vehicle that drives in our repair shop. It also stores all the information about all the spare parts that come and go.
- Function 2: The system also allows us to update any records about any vehicles A reference to the customer this vehicle belongs to is stored. In case vehicle changes the owner, we'll insert it as a new record, but we'll know this is the same vehicle based on the serial number.
- Function 3: The system notifies us upon the arrival of any new parts or if any spare parts go out of stock.

Module 4: Services & Offers

- Function 1: The list of all services is stored in the `service_catalog` table. Each service consists of a few tasks and is uniquely defined by its `service_name`. Besides the name, we'll also store a description. This function displays all this information in an orderly fashion.
- Function 2: The system allows us to add some discounts, if we have any, the percentage of `service_discount` and the `is_active` flag. The service discount shall be used for all tasks included in this service.
- Function 3: The system also allows us to contact customers. After the contact with customers, we'll make offers to them. The offer could be a complete service, with all its tasks or a set of tasks.
- Function 4: The system stores details of all the tasks offered. For each offer, no matter if we offered a complete service or not, we'll store the set of all tasks, including a current price of that task at the moment this record was inserted.

Module 5: Payment and Receipts

- Function 1: The system would display the receipts of the transaction of the customer showing all the details of services charged, including the discounts (if any).
- Function 2: The system automatically stores all tasks that were actually part of that visit. For each record here, the system will store a bunch of information about the visit.

2.3. Planned Schedule: *Kindly list the start/end dates and the timeline for the achievement of any intermediate milestones and the expected contribution to be made by the participant(s).*

Starting Date	Ending Date	Description	Group member
1/11/2020	8/11/2020	Designing ERD using DB Designer/SQL	Sudais Baig + Muhammad Saad
9/11/2020	15/11/2020	Continuation of previous week's work + Creation of Database using SQL	Shahzaib Amir + Sudais Baig
16/11/2020	22/11/2020	Creation of Form/Receipt of the Showroom (Front end work)	Muhammad Saad + Shahzaib Amir
23/11/2020	30/11/2020	Testing of the Database using Queries + Presentation (if needed)	Shahzaib Amir + Muhammad Saad + Sudais Baig
PRESENTATION WEEK (REHEARSAL) + Final check			

