**Riphah International University**

Midterm Spring 2022

**Dated 30/5/2022**

Hamza is running a car workshop. He has to manage different kind of employees like mechanic, painter etc. A car comes to workshop, first they perform the inspection of the car by filling up the questionnaire. Questionnaire contains different questions regarding different parts of the car. After the inspection, car`s session starts to perform all the repair work of the car. Hamza has to track all the tasks being performed on the car and also track the employee that who did which task on the car. At the same time bill in the draft is also generated and all the spare parts and other items are noted in it. When car session is completed, then invoice is generated against the car which contains the list of the items used in the repair and also shows the total bill, discounts given and the customer information. When customers pays the amount it’s added to the cash book and if there is some receivable against the customer it is then added to the credit book. Hamza is also running a spare parts shop where he directly sell the spare parts to customer. Invoices against the customer is generated which contains the list of items purchased, the customer details and the bill. At the end of the day, Hamza has to check the cash book that how much sales has been done for the current day. At the end of the month Hamza has to check the monthly sales, monthly receivables, services sales report that how much sales they have generated from the services and the report against the employees that which employee performed the most and generated most sales.

**Read the above scenario and perform**

1. Find out all the objects
2. Create a class diagram along with the relationships.

**Rubric**

|  |  |
| --- | --- |
| Tasks | Marks |
| Object Identification and classification | 10 |
| Class diagram | 10 |
| Aggregation | 5 |
| Composition | 5 |
| Association | 5 |
| Inheritance | 5 |