**Lab 08:**

Consider the scenario that a company purchasing different vehicle products like Car, Truck, Vans etc. from different suppliers. The company may buy each product from multiple suppliers. The company keeps the price of each product and it is dependent on the supplier, which means that the same product could be purchase from different supplier at different price. The company stores the address of each supplier by just its city name and assumes that each supplier is located only at one place. For some reasons the company also store the population of the city where the supplier is located. In order to store the data for this company, we have created the following table call PURCHASE.

**PURCHASE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Product\_Name** | **Supplier** | **Product\_Price** | **City** | **City\_Population** |
| Corolla Car | Toyota | 1500000 | Lahore | 1000000 |
| Cultus Car | Suzuki | 1200000 | Peshawar | 800000 |
| Suzuki Van | Suzuki | 1300000 | Peshawar | 800000 |
| Alto Mehran | Suzuki | 700000 | Peshawar | 800000 |
| Civic Car | Honda | 1800000 | Karachi | 20000000 |

Having one glance on the given table, we can easily come to know that it is in first normal form (1NF) as it does not have repeating groups.

Your task is to convert it into 2NF.

**Solution:**

On the basis of functional and full functional dependencies, we can decompose the given table into the following two tables.

**PRODUCT:**

|  |  |  |
| --- | --- | --- |
| **Product\_Name** | **Supplier** | **Product\_Price** |
| Corolla Car | Toyota | 1500000 |
| Cultus Car | Suzuki | 1200000 |
| Suzuki Van | Suzuki | 1300000 |
| Alto Mehran | Suzuki | 700000 |
| Civic Car | Honda | 1800000 |

**SUPPLIER:**

|  |  |  |
| --- | --- | --- |
| **Supplier** | **City** | **City\_Population** |
| Toyota | Lahore | 1000000 |
| Suzuki | Peshawar | 800000 |
| Suzuki | Peshawar | 800000 |
| Suzuki | Peshawar | 800000 |
| Honda | Karachi | 20000000 |

**Mechanism to Conduct Lab:**

Lab will be conducted via Adobe Connect.