Name: **ZOHAIB HASSAN SOOMRO**

RollNo#: **19SW42**

Subject: **DBS(Pr.)**

**LAB#3 TASKS**

**Task#1:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEM** | **COLORS** | **PRICE($)** | **TAX** |
| T-Shirt | Red, Blue | 12.00 | 0.60 |
| Polo | Red, Yellow | 12.00 | 0.60 |
| Sweat Shirt | Blue, Black | 25.00 | 1.25 |

**Convert the above table in 1NF, 2NF, 3NF.**

**Ans:**

1. **1st NF:**

|  |  |  |  |
| --- | --- | --- | --- |
| **ITEM** | **COLORS** | **PRICE($)** | **TAX** |
| T-Shirt | Red | 12.00 | 0.60 |
| T-Shirt | Blue | 12.00 | 0.60 |
| Polo | Red | 12.00 | 0.60 |
| Polo | Yellow | 12.00 | 0.60 |
| Sweat Shirt | Blue | 25.00 | 1.25 |
| Sweat Shirt | Black | 25.00 | 1.25 |

1. **2nd NF:**

Candidate Keys= ITEM+COLORS

Non-prime attributes= PRICE($)+TAX

|  |  |  |
| --- | --- | --- |
| **ITEM** | **PRICE($)** | **TAX** |
| T-Shirt | 12.00 | 0.60 |
| Polo | 12.00 | 0.60 |
| Sweat Shirt | 25.00 | 1.25 |

|  |  |
| --- | --- |
| **ITEM** | **COLORS** |
| T-Shirt | Red |
| T-Shirt | Blue |
| Polo | Red |
| Polo | Yellow |
| Sweat Shirt | Blue |
| Sweat Shirt | Black |

1. **3rd NF:**

|  |  |
| --- | --- |
| **PRICE($)** | **TAX** |
| 12.00 | 0.60 |
| 25.00 | 1.25 |

|  |  |
| --- | --- |
| **ITEM** | **PRICE($)** |
| T-Shirt | 12.00 |
| Polo | 12.00 |
| Sweat Shirt | 25.00 |

|  |  |
| --- | --- |
| **ITEM** | **COLORS** |
| T-Shirt | Red |
| T-Shirt | Blue |
| Polo | Red |
| Polo | Yellow |
| Sweat Shirt | Blue |
| Sweat Shirt | Black |

**Task#2:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUPPLIER** | **NAME** | **CITY\_ID** | **CITY** | **PART** | **QUANTITY** |
| S1 | Ali | 10 | Paris | P3 | 257 |
| S1 | Ali | 10 | Paris | P1 | 500 |
| S1 | Ali | 10 | Paris | P4 | 125 |
| S2 | James | 12 | London | P3 | 200 |
| S7 | Robert | 10 | Paris | P4 | 342 |

**Convert the above table in 1NF, 2NF, 3NF.**

**Ans:**

1. **1st NF:**

The Table is already in 1NF:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SUPPLIER** | **NAME** | **CITY\_ID** | **CITY** | **PART** | **QUANTITY** |
| S1 | Ali | 10 | Paris | P3 | 257 |
| S1 | Ali | 10 | Paris | P1 | 500 |
| S1 | Ali | 10 | Paris | P4 | 125 |
| S2 | James | 12 | London | P3 | 200 |
| S7 | Robert | 10 | Paris | P4 | 342 |

1. **2nd NF:**

|  |  |  |  |
| --- | --- | --- | --- |
| **SUPPLIER** | **NAME** | **CITY\_ID** | **CITY** |
| S1 | Ali | 10 | Paris |
| S2 | James | 12 | London |
| S7 | Robert | 10 | Paris |

|  |  |  |
| --- | --- | --- |
| **SUPPLIER** | **PART** | **QUANTITY** |
| S1 | P3 | 257 |
| S1 | P1 | 500 |
| S1 | P4 | 125 |
| S2 | P3 | 200 |
| S7 | P4 | 342 |

1. **3rd NF:**

|  |  |  |
| --- | --- | --- |
| **SUPPLIER** | **NAME** | **CITY\_ID** |
| S1 | Ali | 10 |
| S2 | James | 12 |
| S7 | Robert | 10 |

|  |  |
| --- | --- |
| **CITY\_ID** | **CITY** |
| 10 | Paris |
| 12 | London |
| 10 | Paris |

|  |  |  |
| --- | --- | --- |
| **SUPPLIER** | **PART** | **QUANTITY** |
| S1 | P3 | 257 |
| S1 | P1 | 500 |
| S1 | P4 | 125 |
| S2 | P3 | 200 |
| S7 | P4 | 342 |