**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Roll No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Q1: Find the clusters using HAC (Average)? Draw the Dendrogram as well?**

|  |  |  |
| --- | --- | --- |
| **Points** | **X** | **Y** |
| **P1** | **1** | **1** |
| **P2** | **3** | **2** |
| **P3** | **9** | **1** |
| **P4** | **3** | **7** |
| **P5** | **7** | **2** |
| **P6** | **9** | **7** |

**Q2: Use Apriori algorithm to find all the frequent itemsets. (Minimum Confidence is 40% and Minimum support is 25%)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BillNo** | **Honey** | **Cheese** | **Bread** | **Milk** | **Yogurt** | **Cake** |
| **1** | **0** | **0** | **1** | **1** | **0** | **1** |
| **2** | **1** | **1** | **1** | **0** | **1** | **0** |
| **3** | **0** | **0** | **1** | **0** | **1** | **1** |
| **4** | **1** | **1** | **1** | **0** | **0** | **0** |
| **5** | **0** | **0** | **1** | **1** | **1** | **0** |
| **6** | **0** | **1** | **0** | **1** | **0** | **1** |
| **7** | **0** | **1** | **1** | **1** | **0** | **0** |
| **8** | **1** | **0** | **1** | **1** | **1** | **0** |