**Assignment 11.1**

1. **Use the below given data set**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| title | rating | calories | protein | fat | sodium |
| Lentil, Apple, and Turkey Wrap | 2.5 | 426 | 30 | 7 | 559 |
| Boudin Blanc Terrine with Red Onion Confit | 4.375 | 403 | 18 | 23 | 1439 |
| Potato and Fennel Soup Hodge | 3.75 | 165 | 6 | 7 | 165 |
| Mahi-Mahi in Tomato Olive Sauce | 5 |  |  |  |  |
| Spinach Noodle Casserole | 3.125 | 547 | 20 | 32 | 452 |
| The Best Blts | 4.375 | 948 | 19 | 79 | 1042 |

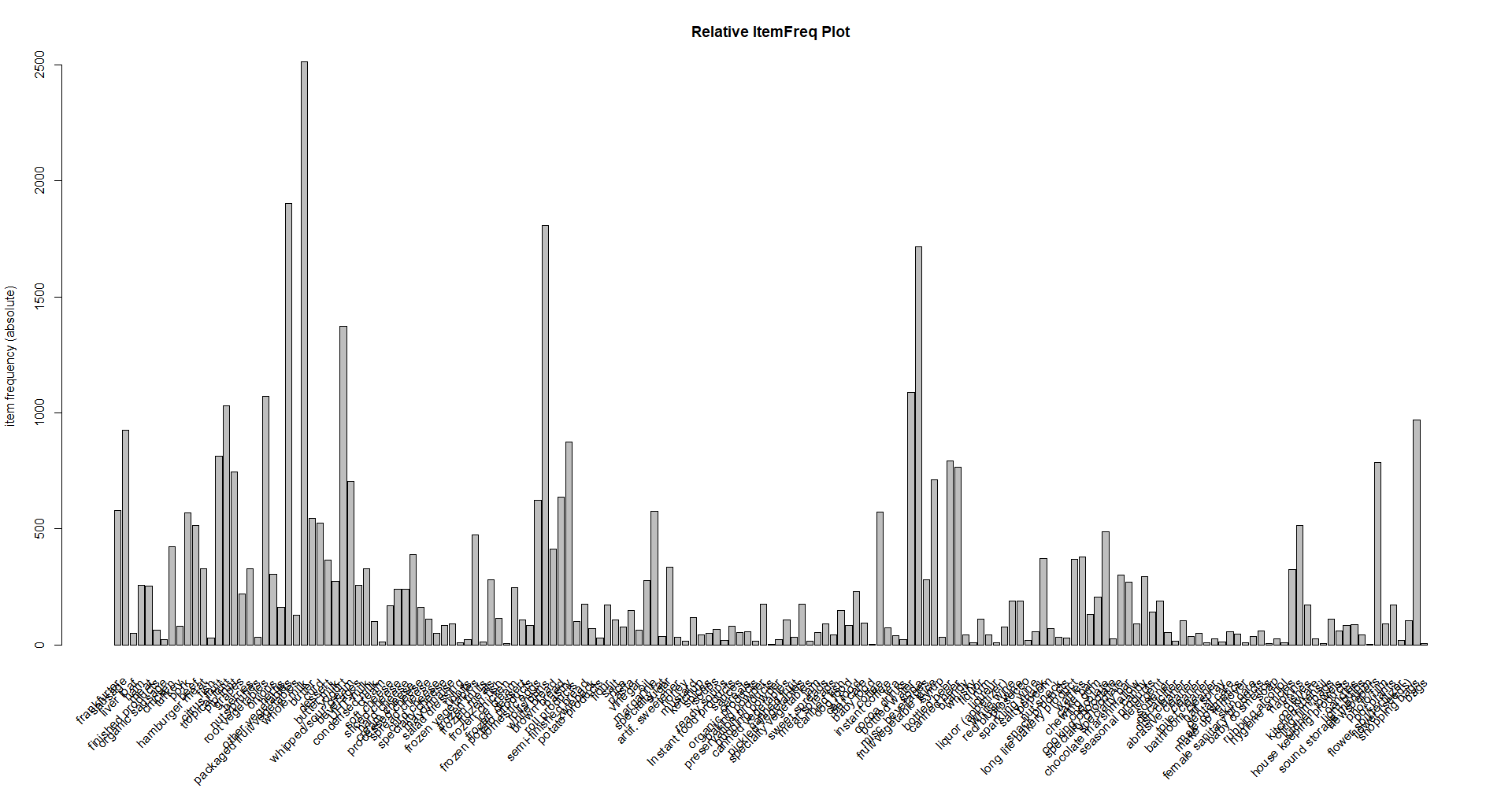
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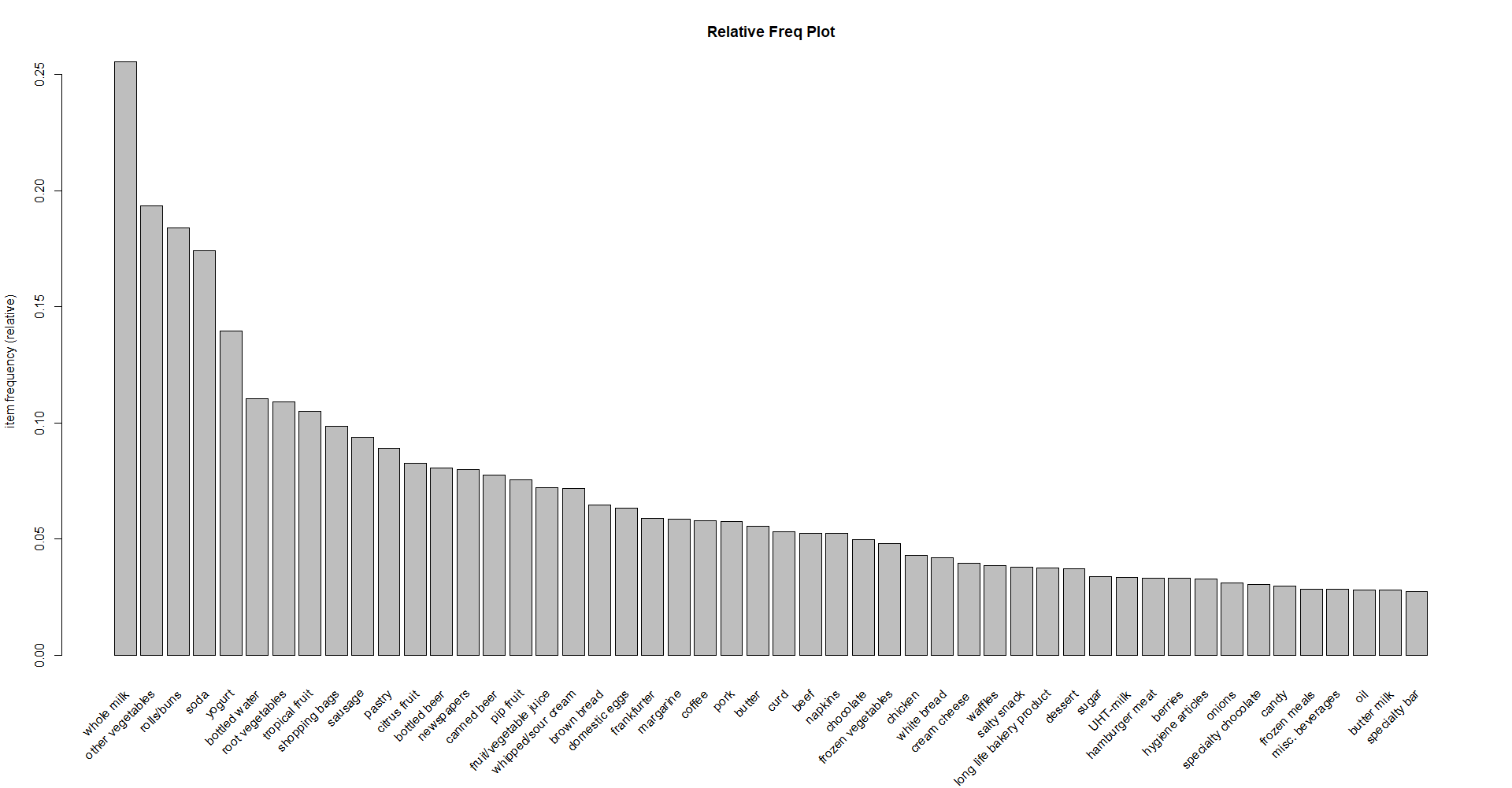
**2. Perform the below given activities:**

**a. Apply PCA to the dataset and show proportion of variance**

**b. Perform PCA using SVD approach**

**c. Show the graphs of PCA components**





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**DataSet**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
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**2. Perform the below given activities:**

**a. apply K-means clustering to identify similar recipies**

**b. apply K-means clustering to identify similar attributes**

**c. how many unique recipies that people order often**

**d. what are their typical profiles**