**Test Cases for assignment 2, problem 1 :**

1. File contains null entries.
2. File with no lines in it.
3. Purchase record per line is separated with underscore (\_) or comma (,).
4. Products in the shopping cart do not match with any of the products in the past purchase record file.
5. All the products in the past purchase record file appears only once.
6. All the products in the past purchase record file appears equal number of times.
7. All the products in the purchase record file are same, as it is in shopping cart.

For example: if the shopping cart contain products as eggs and bread. And in purchase record file each line contains products eggs and bread only (Contains only these two products and no other products in every line).

1. User added no products into shopping cart and then invokes recommend method.
2. Recommend() method returns more than 5 suggested products to add to the shopping cart.
3. All the products in purchase record file are in lower case and products in shopping cart are in upper case.
4. All the products in purchase record file are in upper case and products in shopping cart are in lower case.
5. Only one product is present in the shopping cart and then user invoke recommend() method.

For example: If there is one product i.e. bread and then user invoke recommend() method then how will recommend() method tally products from past records. In addition, what products will be suggested?

1. File contains alphanumeric data.
2. User adds the same product multiple times into the shopping cart.
3. The file extension is .pdf.