Approach Document Outline

1. Team and Participant names
   Team name – INFINITY CODERS
   Team Member 1 – Piyush Garg

2. Challenge Topic
   Suggest relevant products for a store

3. Your understanding of the problem
   Finding out which items to buy in stock and which item not to buy is difficult for humans and more error prone. If we use AI/ML to predict the items which are likely to be bought withing next few days, It will help the businesses with their planning, marketing, & many other ways. In short, it will help businesses grow faster.

4. High level solution approach.
   1. Data to be visualized to find the relation between probability of item to be purchased and factors affecting it.
   2. Find out the frequency of use of item by a customer and buy time of the customer for that item.
   3. How much customer spends repeatedly? We need to find that.
   4. After finding these details, we can train a model to recognize these patterns/trends in buying by the customers.
   5. This model can be used to predict the probability of each item each customer being bought.
   6. From these probabilities, we can draw inferences to determine which items have to be bought by the store owners for maximum profit and minimum losses in stock.

5. Technology Choices (Language, libraries, tools, platforms et al)
   Python – It is one of the mostly used language for ML systems.
   Sklearn – It is one of the best of its own kind. It provides built-in algorithms to implement the model.
   Pandas – It is a python library which is a very popular library for data wrangling.
   Seaborn & matplotlib – Visualizing data is equally important to find the pattern among the data.
   Numpy – for manipulation of data

6. Description of end demonstrable output (MVP).
   - *A python application that takes previous/past data of the invoices and prints the items that will be required within next few days.*