**Approach Document Outline**

1. Team and Participant names

Team name – INFINITY CODERS

Team Member 1 – Piyush Garg

1. Challenge Topic

**Suggest relevant products for a store**

1. 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.*

1. 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.*

1. 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*

1. 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.*