Page 1

**Capstone Project**

**Preliminary Stage Assignment 2**

**Course code:** CSA1643

**Course :** Data warehousing and Data Mining for Data Science

**S.No**: 39

**Name** : V.SAI KRISHNA

**Reg. No**: 192210464

**Slot** : c

**Title :** E-COMMERCE PRODUCT RECOMMENDATION SYSTEM USING COLLABORATIVE FILTERING USING DATA MINING

**Assignment Release Date** : 14/02/2024

**Assignment Preliminary Stage ( Assignment 2 ) submission Date** : 16/02/2024  
**Mentor Name :** Dr.J.SANTOSH KUMAR

**Department** : Department of ENVIRONMENTAL BIOTECHNOLOGY

**R PROGRAMMING :**# Load the required library

library(recommenderlab)

# Create random data

set.seed(123)

n\_users <- 100

n\_items <- 50

ratings <- matrix(sample(1:5, n\_users \* n\_items, replace = TRUE), nrow = n\_users)

# Convert the ratings matrix into a realRatingMatrix object

ratings <- as(ratings, "realRatingMatrix")

# Split the data into training and testing sets

data\_split <- sample(1:3, nrow(ratings), replace = TRUE, prob = c(0.6, 0.2, 0.2))

train\_data <- ratings[data\_split == 1, ]

test\_data <- ratings[data\_split == 2, ]

# Build a recommender model using collaborative filtering

recommender\_model <- Recommender(train\_data, method = "UBCF")

# Generate recommendations for a user

user\_id <- 1

n\_recommendations <- 5

user\_recommendations <- predict(recommender\_model, newdata = train\_data[user\_id, ], n = n\_recommendations)

# Print the recommended items

print(user\_recommendations)  
  
  
 **OUTPUT :**







