**Assignment- Recommendation System**

1. Recommend a best book based on the ratings.

head(book)

summary(book)

Summary(book)

X User.ID Book.Title

Min. : 1 Min. : 8 Fahrenheit 451 : 5

1st Qu.: 2501 1st Qu.: 2103 Charlie and the Chocolate Factory : 4

Median : 5000 Median : 3757 Ender's Game (Ender Wiggins Saga (Paperback)) : 4

Mean : 5000 Mean : 95321 Stardust : 4

3rd Qu.: 7500 3rd Qu.:162052 The Amber Spyglass (His Dark Materials, Book 3): 4

Max. :10000 Max. :278854 The Subtle Knife (His Dark Materials, Book 2) : 4

(Other) :9975

Book.Rating

Min. : 1.000

1st Qu.: 7.000

Median : 8.000

Mean : 7.566

3rd Qu.: 9.000

Max. :10.000

str(book\_rate)

'data.frame': 10000 obs. of 4 variables:

$ X : int 1 2 3 4 5 6 7 8 9 10 ...

$ User.ID : int 276726 276729 276729 276736 276737 276744 276745 276747 276747 276747 ...

$ Book.Title : Factor w/ 9659 levels "'48","'O Au No Keia: Voices from Hawai'I's Mahu and Transgender Communities",..: 1436 1433 1882 2726 7983 7768 9333 5440 9087 9390 ...

$ Book.Rating: int 5 3 6 8 6 7 10 9 9 8 ...

library("recommenderlab")

library(caTools)

#Book Rating

book\_rate <-book

#metadata about the variable

str(book\_rate)

#rating distribution

hist(book\_rate$Book.Rating)

book\_rate\_matrix <- as(book\_rate, 'realRatingMatrix')

#Popularity based

book\_recomm\_model1 <- Recommender(book\_rate\_matrix, method="POPULAR")

#Predictions for two users

recommended\_items1 <- predict(book\_recomm\_model1, book\_rate\_matrix[216:217], n=7)

as(recommended\_items1, "list")

$`216`

[1] "8" "9" "10" "12" "14" "16" "17" "19" "22" "26"

$`217`

[1] "8" "9" "10" "12" "14" "16" "17" "19" "22" "26"

> #Predictions for two users

> recommended\_items1 <- predict(book\_recomm\_model1, book\_rate\_matrix[216:217], n=7)

> as(recommended\_items1, "list")

$`216`

[1] "8" "9" "10" "12" "14" "16" "17"

$`217`

[1] "8" "9" "10" "12" "14" "16" "17"

Conclusion: Book with rating 8 is most recommended.