

# Mortgage Holders Analysis

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# Problem Statement

**Bank Customers  
Close to Mortgage  
Renewal in next 24  
months**

**Mortgages are the  
biggest revenue  
generator for the  
bank**

**Reaching out to  
customers and  
encourage them  
to stay**

**Goal:**

**Prioritising which customers to contact**

# Approach

**Understanding  
Customer  
Behaviour**

**Analyzing  
Historical  
Data**

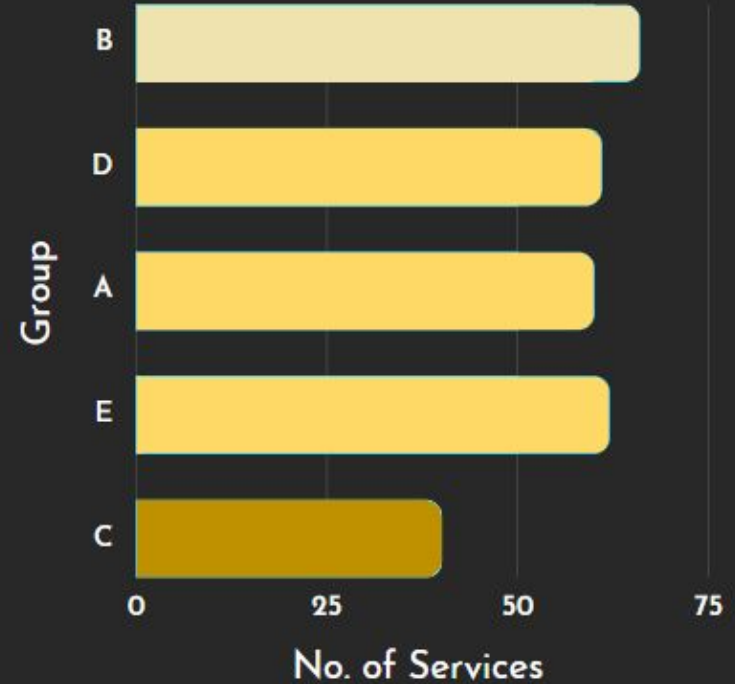
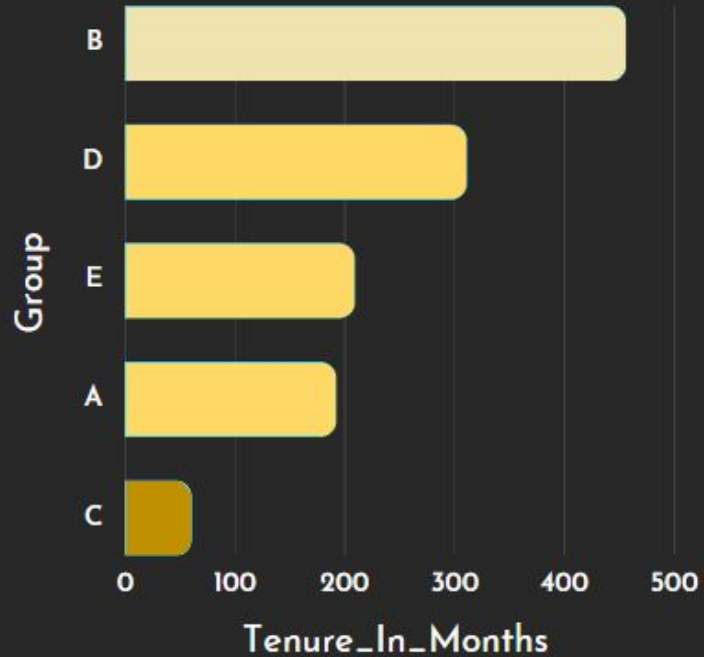
**Segmenting  
and  
prioritizing  
Customers**

**Calculating  
Financial  
benefit**

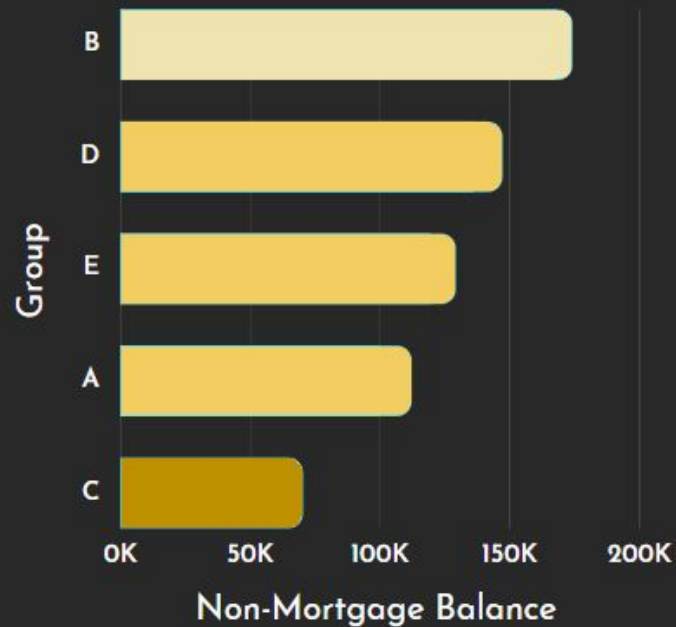
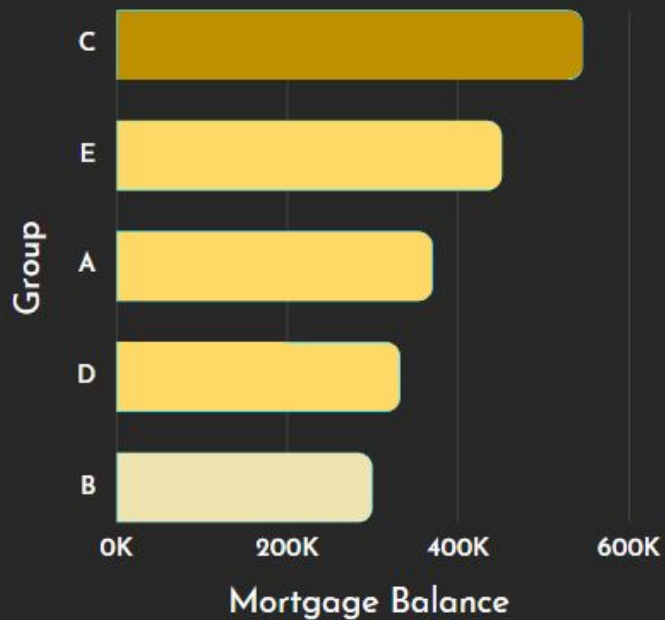
# Understanding Customer base

- Examine the **customer database** and different **attributes**
- Cleaning the data: **Filter** bank staff & customers with beacon score less than 640
- Identify the most important **attributes closely related to mortgages**
- **Group customers** by their behaviour (K-means Clustering)
- **Label** the groups by behaviour patterns

# Customer Engagement



# Customer Value



# Customer Profiling

## GROUP: B

Least Recent  
Customers, Low  
Rewards

## GROUP: C

Most recent  
Customers, High  
Rewards

## GROUP: A

Recent Customers,  
Average rewards, Low  
Risk

## GROUP: D

Recent Customers,  
Average Rewards,  
Average Risk,

## GROUP: E

Recent, Customers,  
Average Rewards, High  
Risk

# Financial Historical Data

Customer  
Historical Data:  
**ran-off/renewed**  
in the last 6  
months



**Characteristics**  
of two groups



# Insights



Runoff  
customers



Renewed  
customers



Beacon score

700



724



Non-mortgage  
balance

\$59,775.61



\$77,580.06



Mortgage  
balance

\$581,103.44



\$552,516.18



Services

3.5



4



Tenure

122.47



156.74

# Comparing the Findings

## GROUP: C

Most recent  
Customers, High  
Rewards



Run off 

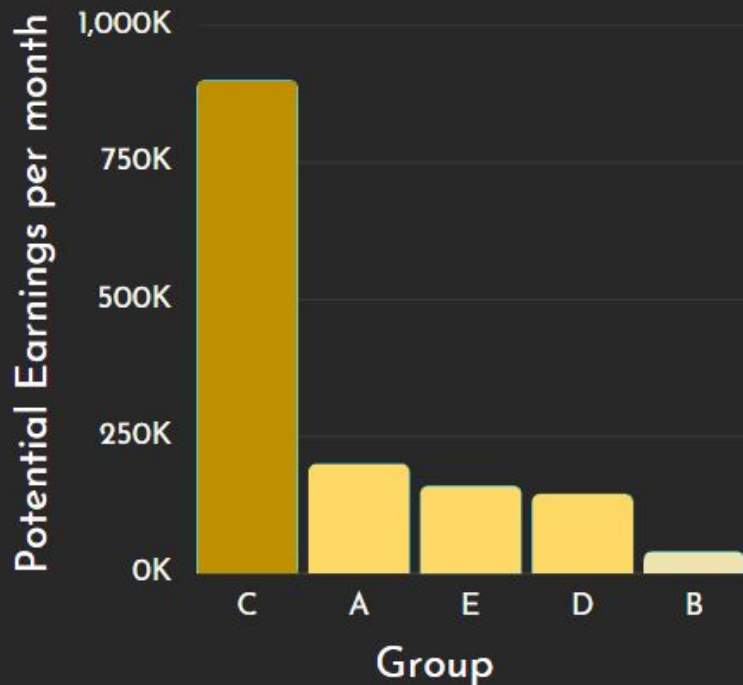
## GROUP: B

Least Recent  
Customers, Low  
Rewards



Renewed 

# Target Group



**GROUP C**

**3676**

Customers

**\$900K**

Interest Reward  
per month

# Recommendations

## Not contacting the Old Customers

With High Non-Mortgage Balance and Number of Services and Low Mortgage Balance

## Reaching out to the New Customers

With High Mortgage Balance and Low Number of Services and Low Non-Mortgage Balance

Based on the recommendation:

**\$11M**  
Interest Reward  
per annum

**Thank You!**  
**Any Questions?**

# Contributions

Neha: Coordination and Planning, EDA, drawing findings and conclusions, creating slides and graphs

Luisa: Solution Design, Clustering, Analysis of results. Slides

Kishan: Analysing data. Planning approach. Clustering the data. Interpreting Inference

Nawshaad: Coordination, Discussion, EDA, Slides

Parnian:  
EDA, Slides, Discussion, drawing conclusion of second dataset