

E-Commerce Recommendation System

DHARMI, URVAJ, KEERTHANA, SHWETA, SUNVID



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GOAL

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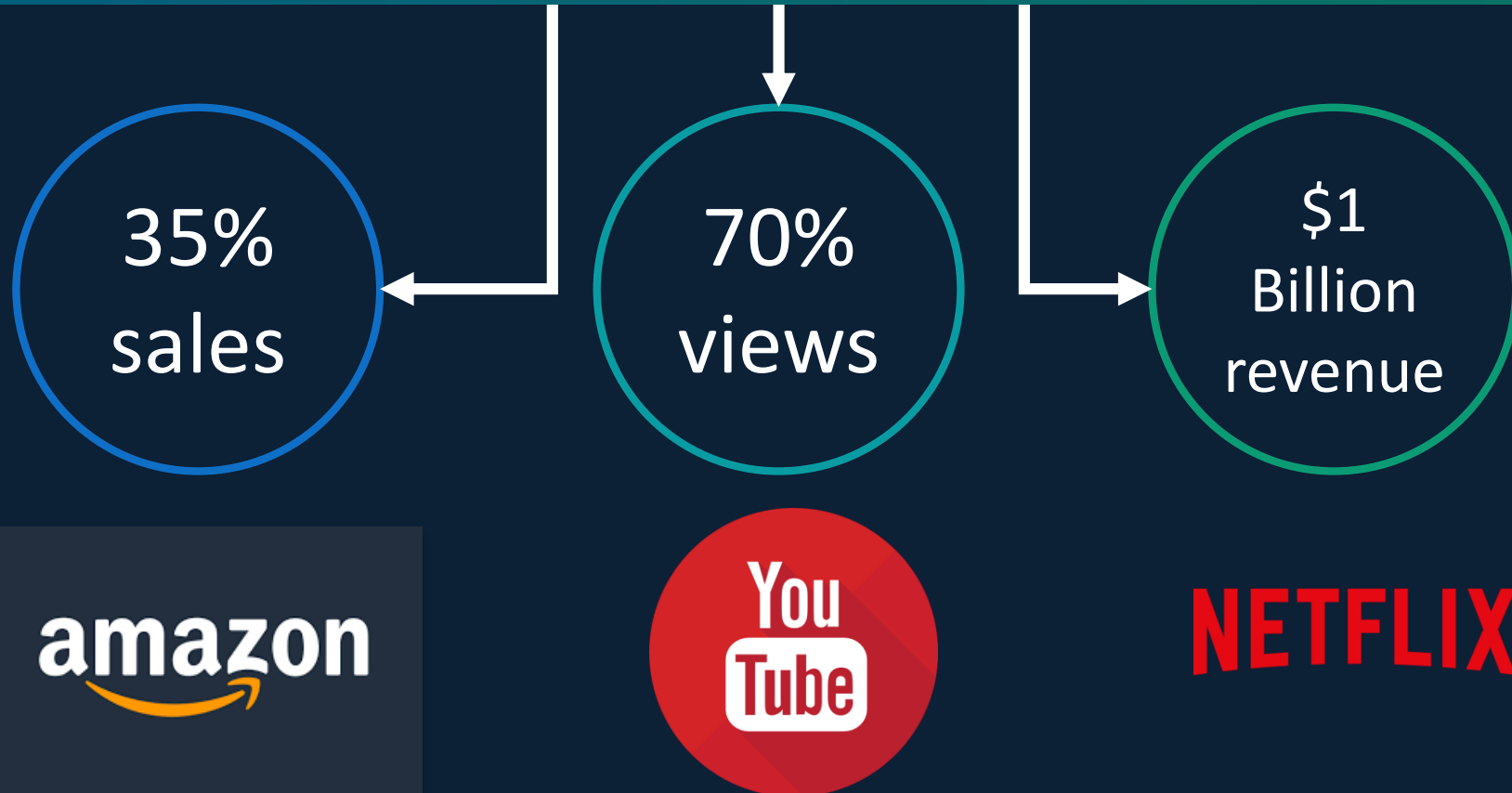
ROADMAP



INTRODUCTION

THE ERA OF PERSONAL SHOPPING EXPERIENCES

RECOMMENDATION ENGINES



BUSINESS PROBLEM & GOAL

BUSINESS PROBLEM

The e-commerce website lacks a personalized shopping experience for its customers which incurs opportunity cost with respect to higher sales within the relevant market.

GOAL
23%

Increase in Overall Sales
this year

SOLUTION

Build a recommendation system based on past customer shopping behavior to provide a personalized shopping experience to them.



BUSINESS PROBLEM & GOAL

BUSINESS PROBLEM

The e-commerce website lacks a personalized shopping experience for its customers which incurs opportunity cost with respect to higher sales within the relevant market.

GOAL

\$8.7M

Revenue by the end of
the year
from \$6M

SOLUTION

Build a recommendation system based on past customer shopping behavior to provide a personalized shopping experience to them.



MEET OUR TEAM

DUKSS ANALYTICS



DHARMI

Customer Satisfaction
Manager



URVAJ

Customer Research
Analyst



KEERTHANA

Financial Analyst



SHWETA

Senior Data
Scientist



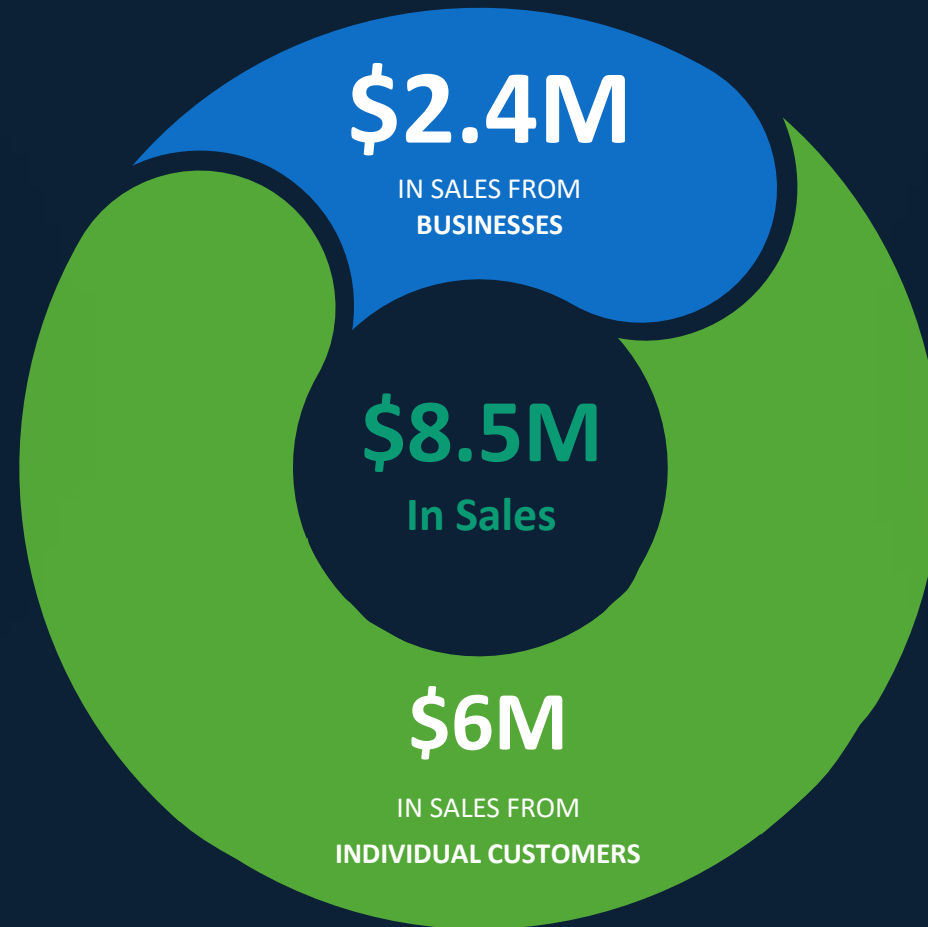
SUNVID

Marketing Analytics
Manager



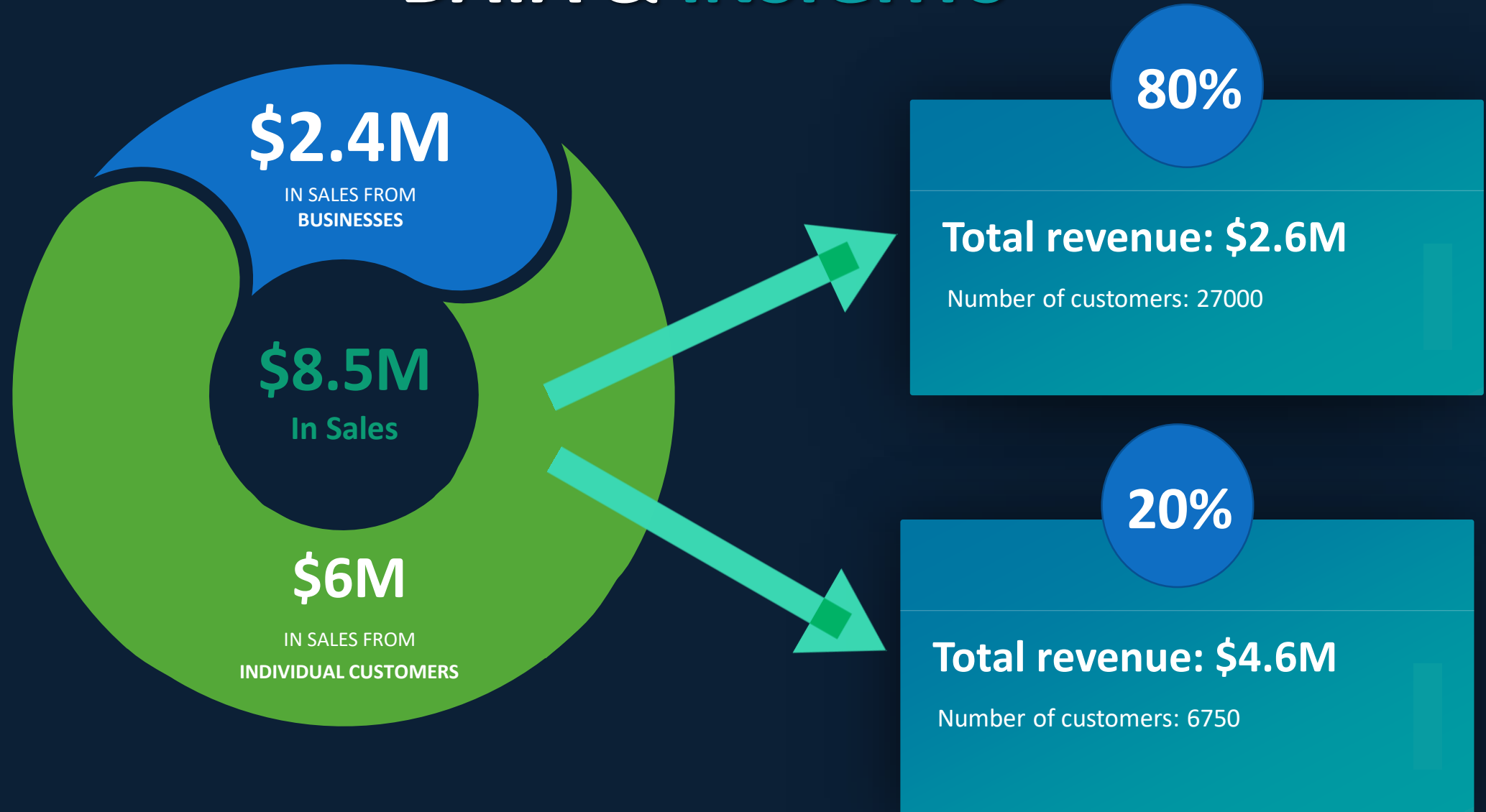
DATA & INSIGHTS

- 33,713 customer records.
- 30 book categories



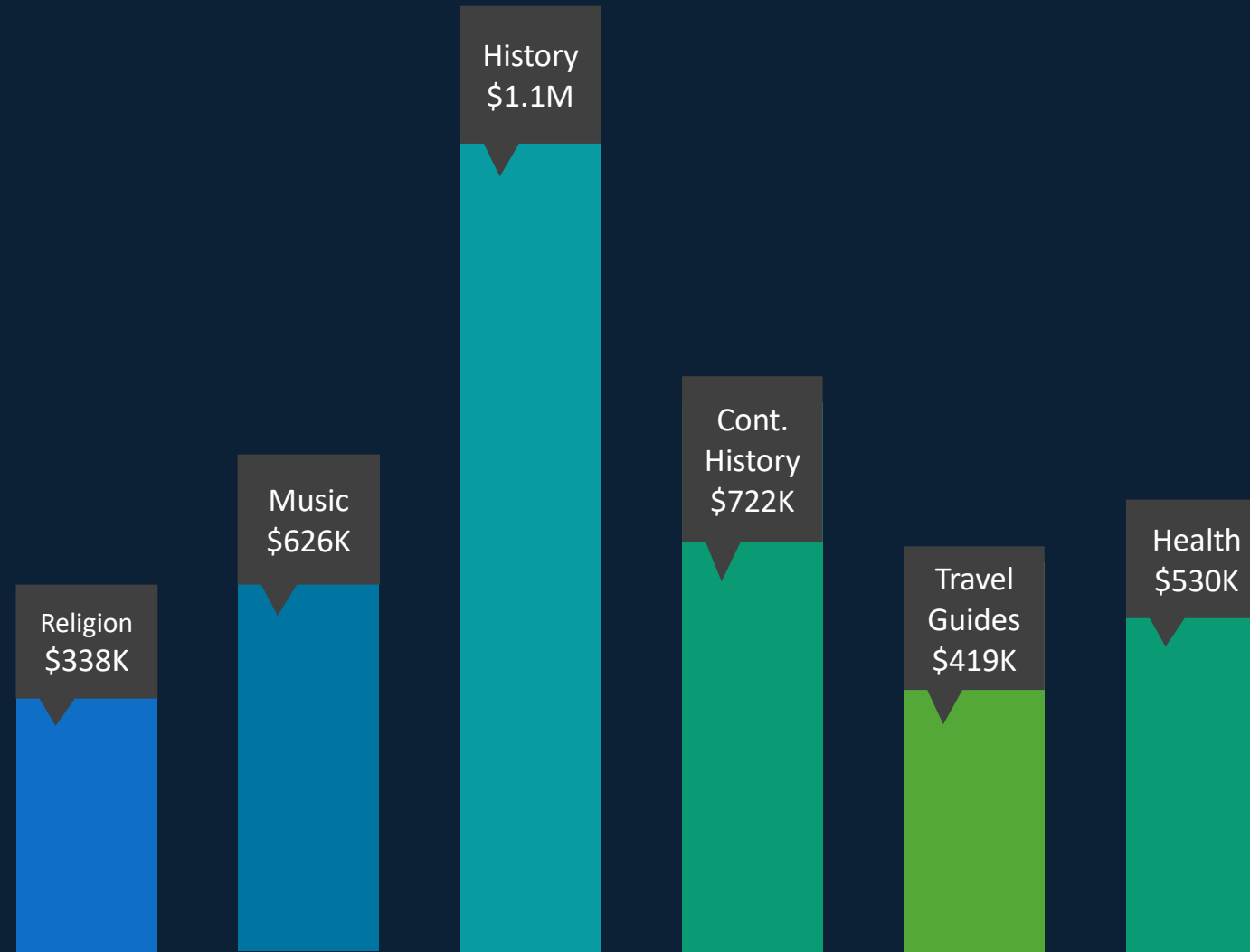
- Monetary values > 20K are institutes
- Focusing analysis on individual customers.

DATA & INSIGHTS



DATA & INSIGHTS

TOP BOOK CATEGORIES FOR INDIVIDUAL CUSTOMERS



METHODOLOGY – RFM ANALYSIS

KEY METRICS



RECENCY

How recently a customer has transacted with a brand



FREQUENCY

How frequently they've engaged with a brand



MONETARY

How much money they've spent on a brand's products and services

METHODOLOGY – RFM ANALYSIS

KEY METRICS & ALGORITHM



RECENCY

How recently a customer has transacted with a brand



FREQUENCY

How frequently they've engaged with a brand



MONETARY

How much money they've spent on a brand's products and services

Assign every customer a rank on a scale of 4 for each metric using quartiles

4 – Best

3 – Good

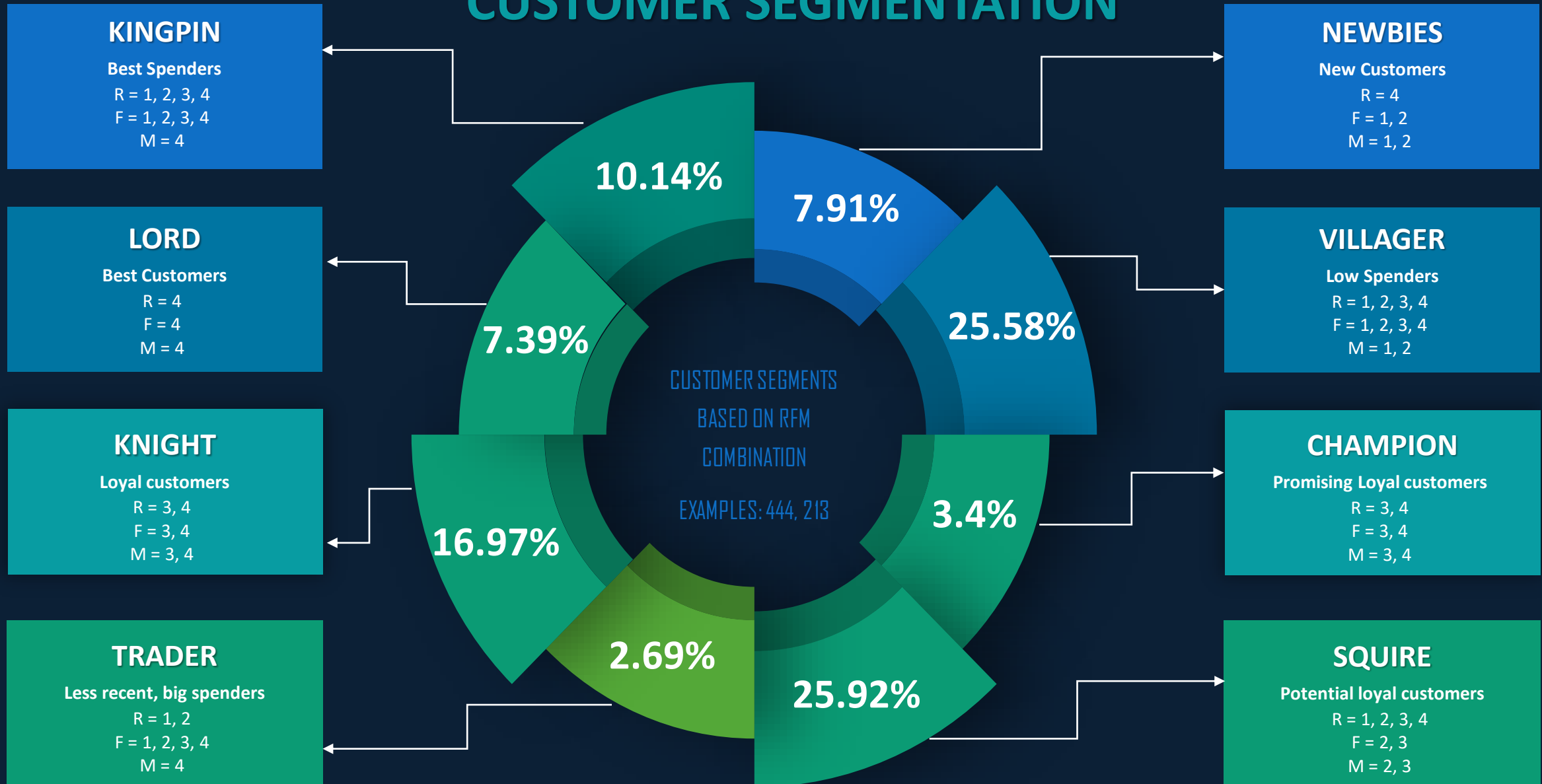
2 – Not Good

1 - Worst



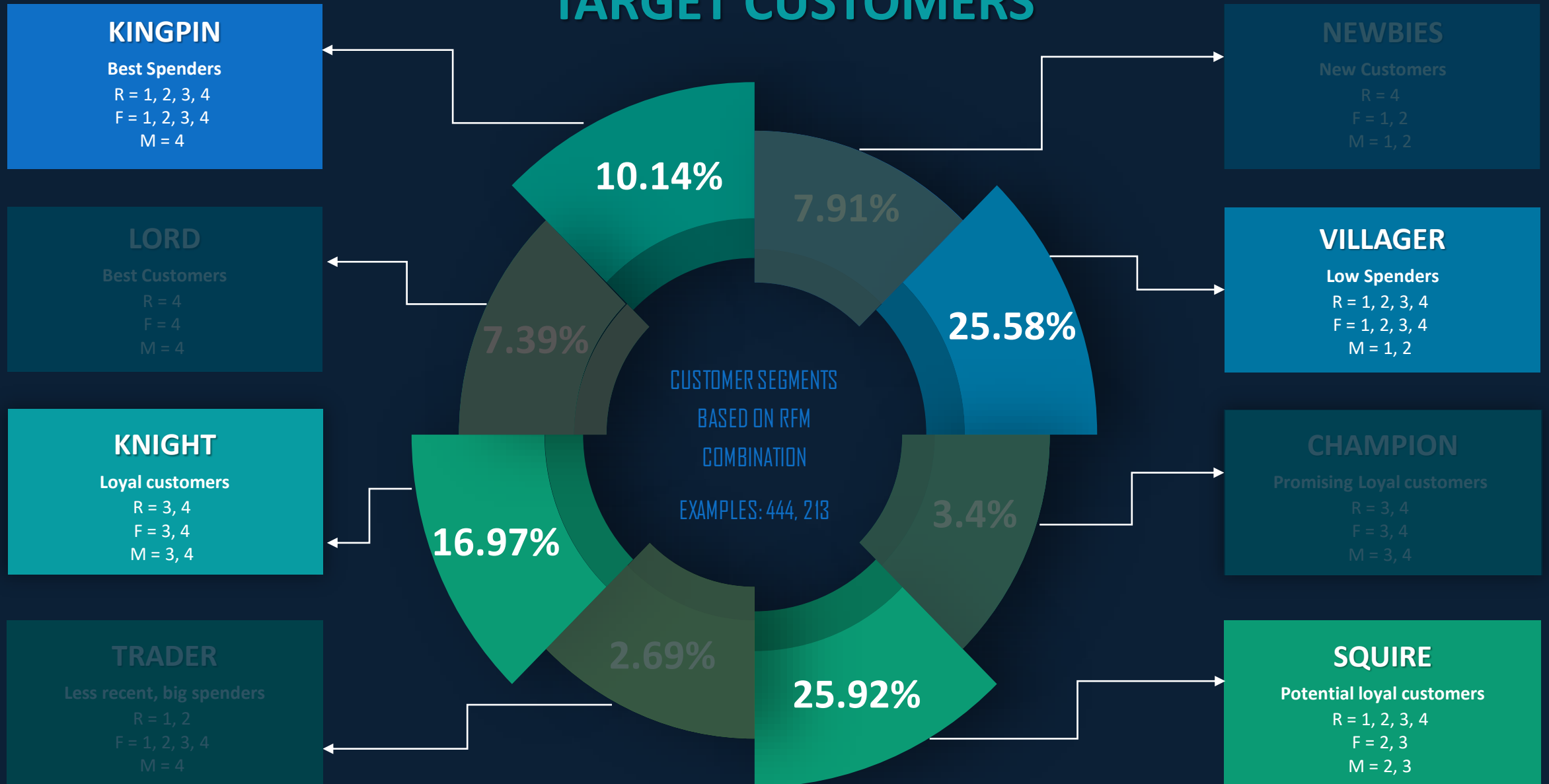
METHODOLOGY – RFM ANALYSIS

CUSTOMER SEGMENTATION



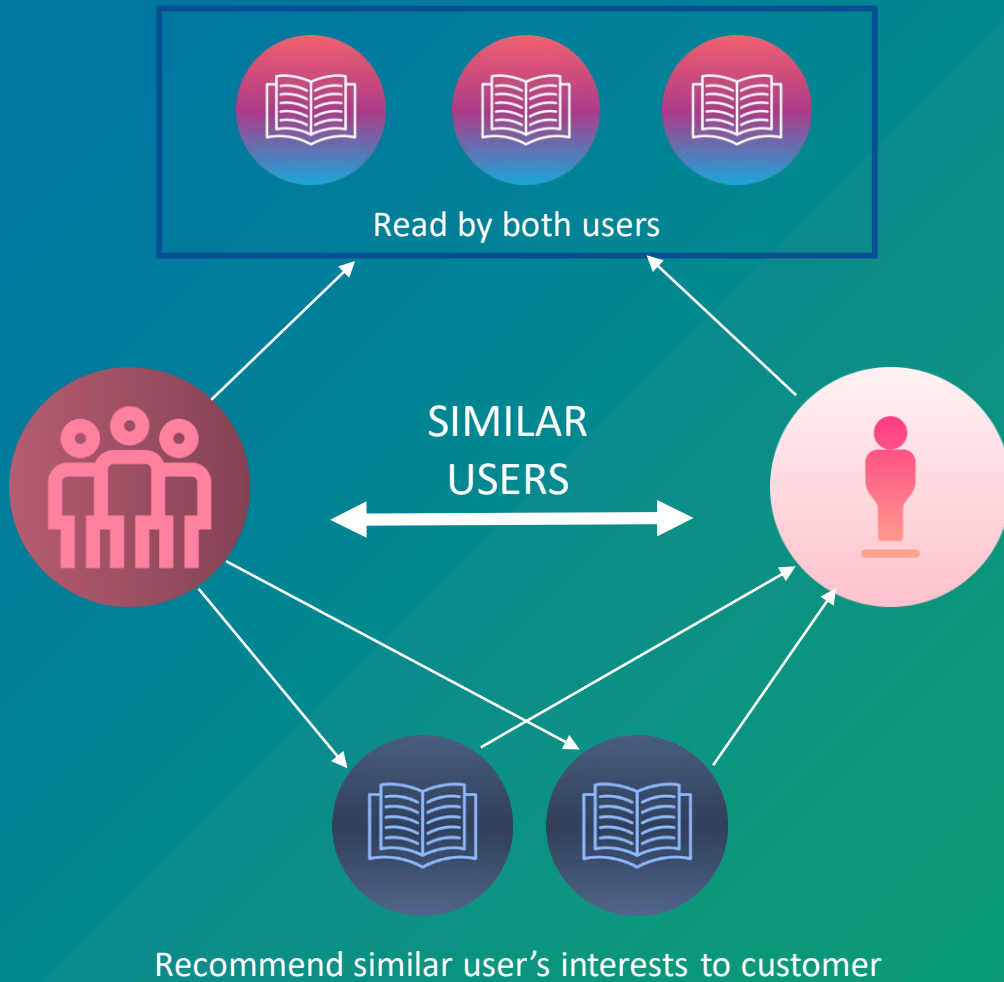
METHODOLOGY – RFM ANALYSIS

TARGET CUSTOMERS

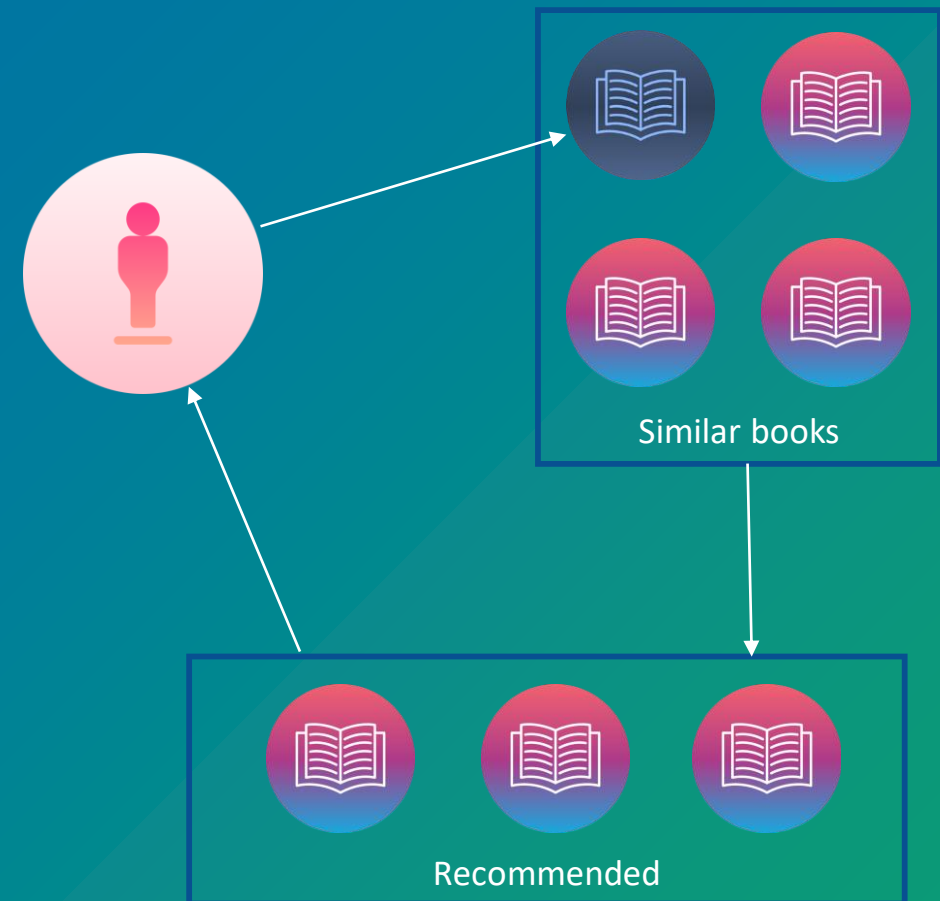


MODELS USED WITH RFM ANALYSIS

COLLABORATIVE FILTERING



CONTENT BASED FILTERING



MARKETING STRATEGIES



THE BOOK PALACE

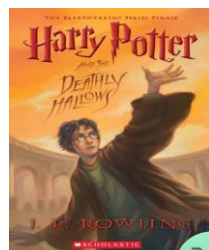
HOME

CATEGORIES

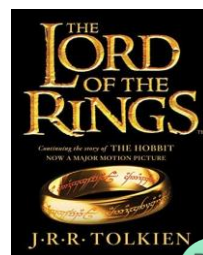
CART

HI BRYAN

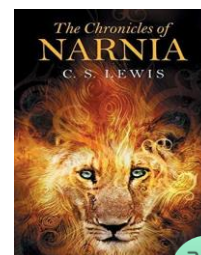
ITEMS FOR YOU



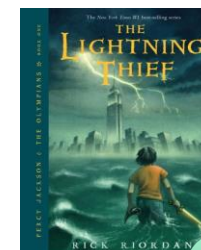
\$9.99



\$9.99



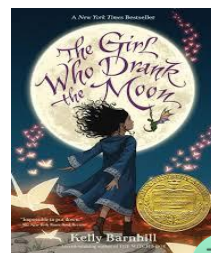
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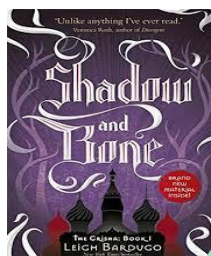
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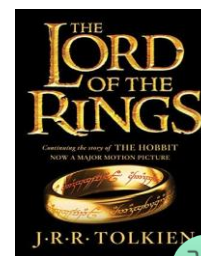
CUSTOMERS LIKE YOU BOUGHT



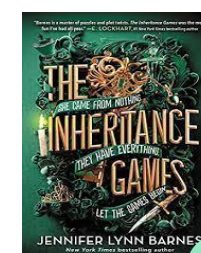
\$9.99



\$5.99



\$9.99



\$8.99



MARKETING STRATEGIES



THE BOOK PALACE

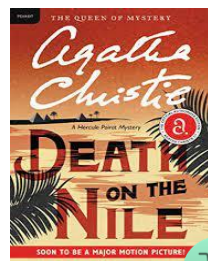
HOME

CATEGORIES

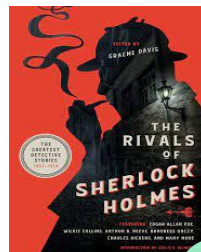
CART

HI BRYAN

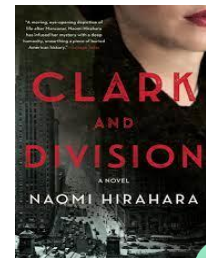
PRODUCTS RELATED TO THIS ITEM



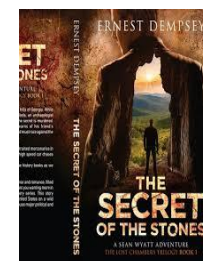
\$9.99



\$9.99



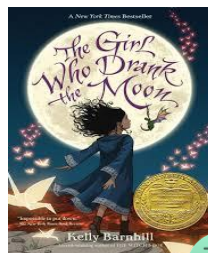
\$5.99



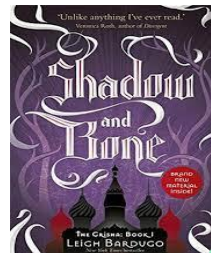
\$7.99



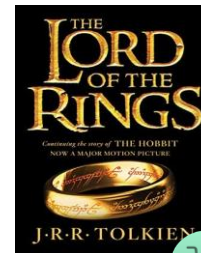
FREQUENTLY BOUGHT TOGETHER



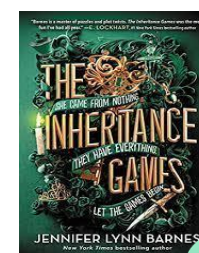
\$9.99



\$5.99



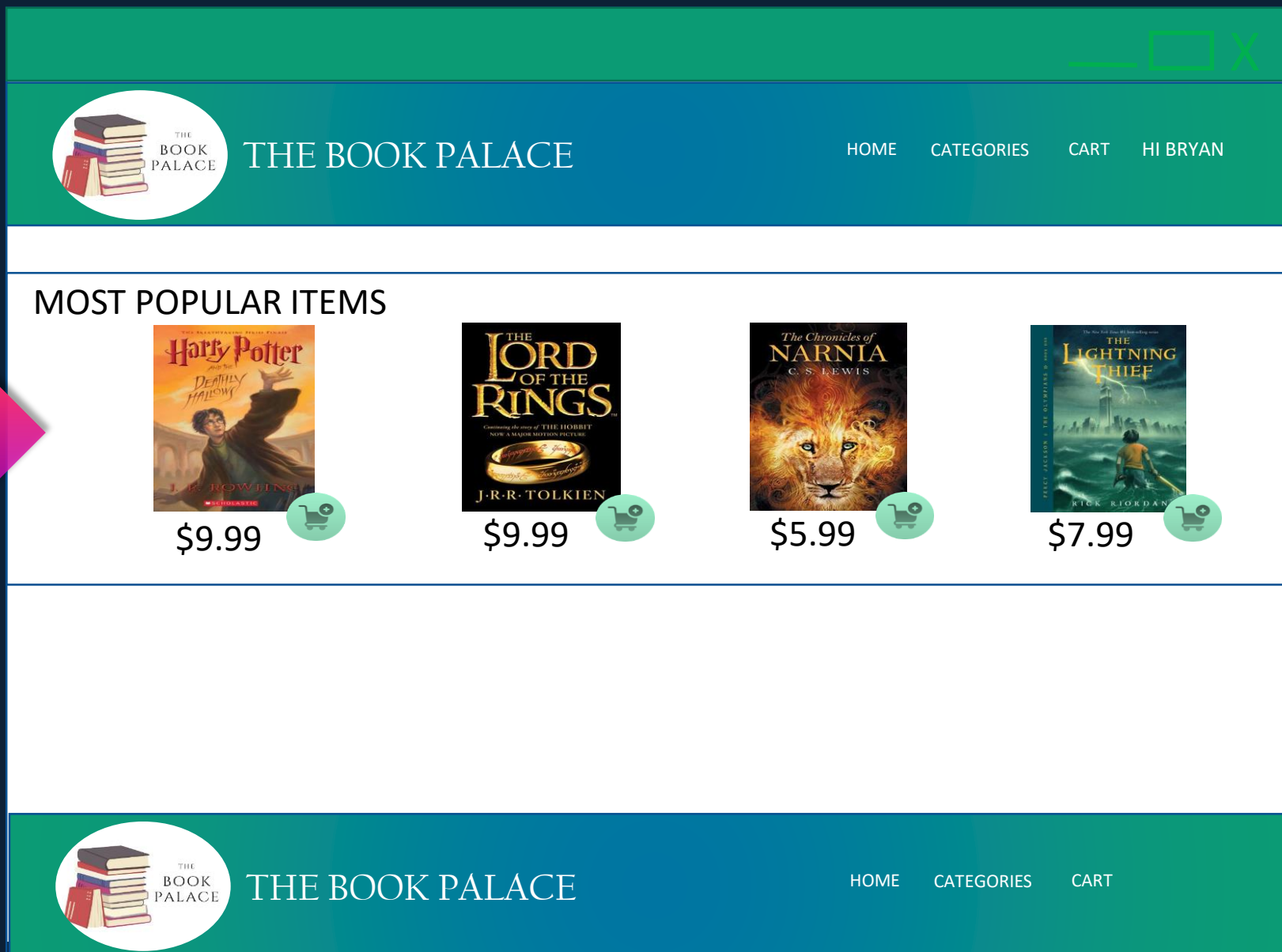
\$9.99



\$8.99



MARKETING STRATEGIES





- ## KINGPIN – BEST SPENDERS

- ## SQUIRE – POTENTIAL LOYAL CUSTOMERS

- ## VILLAGER – LOW SPENDERS

- Discounts, Promotions
- Rewards programs, loyalty programs
- Referral programs



- Email Marketing – personalized offers/programs based on customer segment





ECONOMIC VALUE

SEGMENT	Current Revenue	New Revenue	Increase in Revenue		Total Revenue	
			INCREASED BY	% INCREASE	% INCREASE	TOTAL
WITHOUT RECOMMENDATION SYSTEM						
Top 20% customers	\$3.6M		\$0.6M	10%	10%	\$6.6M
Remaining 80% customers	\$2.4M					
WITH RECOMMENDATION SYSTEM – 1 st YEAR						
Top 20% customers	\$3.6M	\$5.98M	\$2.38M	30%	22.7%	\$8.71M
Remaining 80% customers	\$2.4M	\$2.73M	\$0.33M	5%		
WITH RECOMMENDATION SYSTEM – 2 nd YEAR						
Top 20% customers	\$5.98M	\$7.18M	\$1.2M	20%	17%	\$10.18M
Remaining 80% customers	\$2.73M	\$3.1M	\$0.37M	10%		

ROADMAP



Suggest personalized recommendations via email, text messages to customers



Use geographical data to further make recommendations based on location



To increase revenue, provide targeted ad space for some products



Implement promotional offers to attract new customers



Implement the recommendation model with User Acceptance tests



**THANK
YOU!**