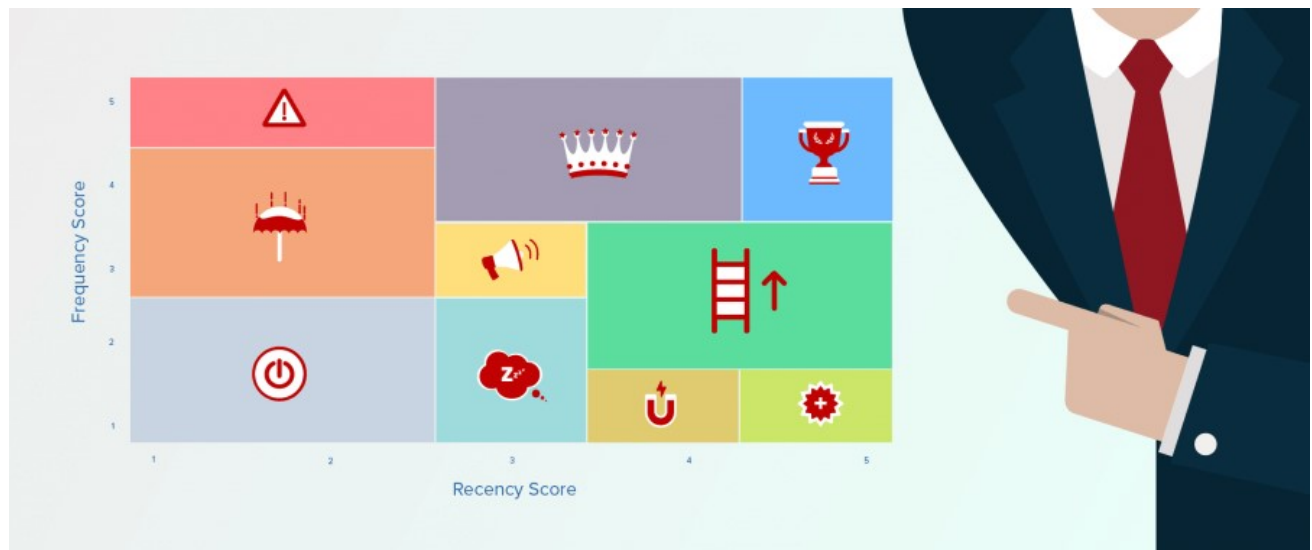


Customer Segmentation

Data set available:-

	InvoiceNo	StockCode	Description	Quantity	InvoiceDate	UnitPrice	CustomerID	Country
0	536627	22783	SET 3 WICKER OVAL BASKETS W LIDS	1	12/2/2010 10:53	19.95	15658.0	United Kingdom
1	536627	22941	CHRISTMAS LIGHTS 10 REINDEER	2	12/2/2010 10:53	8.50	15658.0	United Kingdom
2	536627	21756	BATH BUILDING BLOCK WORD	3	12/2/2010 10:53	5.95	15658.0	United Kingdom
3	536627	22961	JAM MAKING SET PRINTED	12	12/2/2010 10:53	1.45	15658.0	United Kingdom
4	536627	22423	REGENCY CAKESTAND 3 TIER	4	12/2/2010 10:53	12.75	15658.0	United Kingdom
...
95	536634	22094	RED RETROSPOT TISSUE BOX	6	12/2/2010 11:21	1.25	18041.0	United Kingdom
96	536634	21080	SET/20 RED RETROSPOT PAPER NAPKINS	52	12/2/2010 11:21	0.85	18041.0	United Kingdom
97	536635	21429	RED GINGHAM ROSE JEWELLERY BOX	16	12/2/2010 11:22	1.65	15955.0	United Kingdom
98	536635	21428	SET3 BOOK BOX GREEN GINGHAM FLOWER	8	12/2/2010 11:22	4.25	15955.0	United Kingdom
99	536635	22961	JAM MAKING SET PRINTED	12	12/2/2010 11:22	1.45	15955.0	United Kingdom



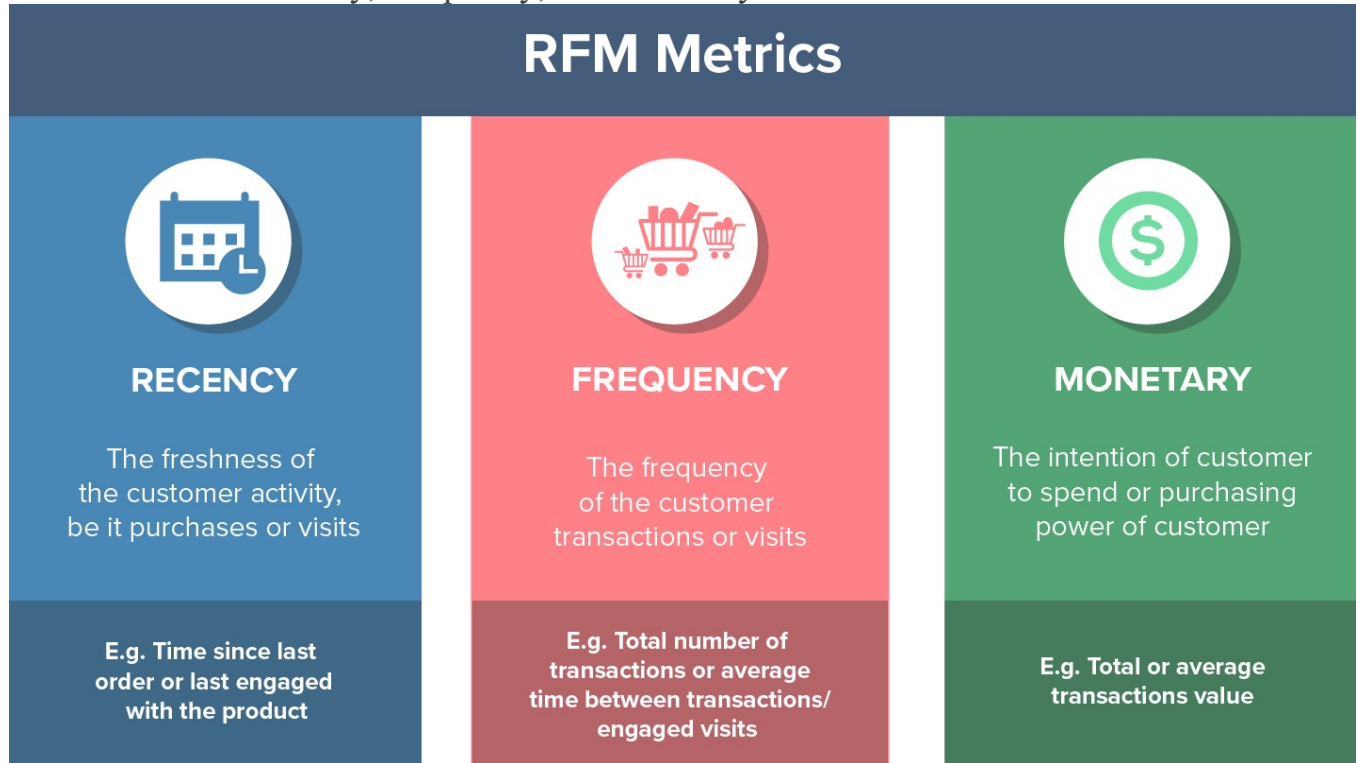
Interpret to understand the behaviors of customers.

Customer Segmentation Examples: -

- **Champions** are your best customers, who bought most recently, most often, and are heavy spenders.
- **Potential Loyalists** are your recent customers with average frequency and who spent a good amount.
- **New Customers** are your customers are not frequent shoppers. Start building relationships with these customers .
- **At Risk Customers** are your customers who purchased often and spent big amounts, but haven't purchased recently.
- **Can't Lose Them** are customers who used to visit and purchase quite often, but haven't been visiting recently. Need to Bring them back.

RFM Analysis.

RFM stands for Recency, Frequency, and Monetary value.



sample dataset of customer transactions:

CUSTOMER ID	RECENCY (DAY)	FREQUENCY (NUMBER)	MONETARY (TOTAL)
1	4	6	540
2	6	11	940
3	46	1	35
4	23	3	65
5	15	4	179
6	32	2	56
7	7	3	140
8	50	1	950
9	34	15	2630
10	10	5	191
11	3	8	845
12	1	10	1510
13	27	3	54
14	18	2	40
15	5	1	25

Ranking customers on recency:-

CUSTOMER ID	RECENCY	RANK	R SCORE
12	1	1	5
11	3	2	5
1	4	3	5
15	5	5	4
2	6	5	4
7	7	6	4
10	10	7	3
5	15	8	3
14	18	9	3
4	23	10	2
13	27	11	2
6	32	12	2
9	34	13	1
3	46	14	1
8	50	15	1

CUSTOMER ID	FREQUENCY	F SCORE
9	15	5
2	11	5
12	10	5
11	8	4
1	6	4
10	5	4
5	4	3
13	3	3
7	3	3
4	3	2
14	2	2
6	2	2
15	1	1
8	1	1
3	1	1

CUSTOMER ID	MONETARY	M SCORE
9	2630	5
12	1510	5
8	950	5
2	940	4
11	845	4
1	540	4
10	191	3
5	179	3
7	140	3
4	65	2
6	56	2
13	54	2
14	40	1
3	35	1
15	25	1

RFM Score

Finally, we can rank these customers by combining their individual R, F, and M rankings to arrive at an aggregated RFM score.

This RFM score is simply the average of the individual R, F, and M scores, obtained by giving equal weights to each RFM attribute.

CUSTOMER ID	RFM CELL	RFM SCORE
1	5,4,4	4.3
2	4,5,4	4.3
3	1,1,1	1.0
4	2,2,2	2.0
5	3,3,3	3.0
6	2,2,2	2.0
7	4,3,3	3.3
8	1,1,5	2.3
9	1,5,5	3.7
10	3,4,3	3.3
11	5,4,4	4.3
12	5,5,5	5.0
13	2,3,2	2.3
14	3,2,1	2.0
15	4,1,1	2.0

Segment	RFM	Description	Marketing
Best Customers	444	Bought most recently and most often, and spend the most	No price incentives, new products, and loyalty programs
Loyal Customers	x4x	Buy most frequently	Use R and M to further segment
Big Spenders	xx4	Spend the most	Market your most expensive products
Almost Lost	244	Haven't purchased for some time, but purchased frequently and spend the most	Aggressive price incentives
Lost Customers	144	Haven't purchased for some time, but purchased frequently and spend the most	Aggressive price incentives
Lost Cheap Customers	111	Last purchased long ago, purchased few, and spent little	Don't spend too much trying to re-acquire

RFM Model

Interpret the RFM segments to understand the behaviors of those users, and recommend some effective marketing strategies.

Analyzing RFM Segmentation

Let's delve into few interesting segments:

- **Champions** are your best customers, who bought most recently, most often, and are heavy spenders. Reward these customers. They can become early adopters for new products and will help promote your brand.
- **Potential Loyalists** are your recent customers with average frequency and who spent a good amount. Offer membership or loyalty programs or recommend related products to upsell them and help them become your Loyalists or Champions.
- **New Customers** are your customers who have a high overall RFM score but are not frequent shoppers. Start building relationships with these customers by providing onboarding support and special offers to increase their visits.
- **At Risk Customers** are your customers who purchased often and spent big amounts, but haven't purchased recently. Send them personalized reactivation campaigns to reconnect, and offer renewals and helpful products to encourage another purchase.
- **Can't Lose Them** are customers who used to visit and purchase quite often, but haven't been visiting recently. Bring them back with relevant promotions, and run surveys to find out what went wrong and avoid losing them to a competitor.