PRODUCT RECOMMENDATION

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OVERVIEW

- **DATA :** purchases from retail stores

- **TASK :** create recommendations for someone who has just bought a product, based on which items are often bought together with the product.

DATASETS

- **PRODUCT INFORMATION**   Product Data

- **RECORDS OF CUSTOMER PURCHASES OF PRODUCTS**   Purchase Data

PROCESS

- **STEP 1 : FUNCTION** fillPeopleProducts()

The function should create and return a new data frame, which will summarize which products were bought by which customer.

	bowl	broom	curtain	fork	hairdryer	plate	shampoo	spoon	tablecloth	teacup	teapot
Amy	0	0	0	0	1	0	1	0	0	1	1

PROCESS

- ## STEP 2 : FUNCTION fillProductCoPurchase ()

The function should create a data frame representing the co-purchasing matrix.

	bowl	broom	curtain	fork	hairdryer	plate	shampoo	spoon	tablecloth	teacup	teapot
bowl	0	0	1	0	1	1	1	1	1	0	0
broom	0	0	0	0	0	0	0	0	0	0	0
curtain	1	0	0	0	0	1	0	0	1	0	0
fork	0	0	0	0	0	1	0	0	0	1	1
hairdryer	1	0	0	0	0	0	2	1	0	1	1
plate	1	0	1	1	0	0	0	0	1	1	1
shampoo	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**1**	**1**
spoon	1	0	0	0	1	0	1	0	0	1	0
tablecloth	1	0	1	0	0	1	0	0	0	0	0
teacup	0	0	0	1	1	1	1	1	0	0	2
teapot	0	0	0	1	1	1	1	0	0	2	0

PROCESS

- **STEP 3 : FUNCTION** findMostBought()

Function findMostBought(), return a list of items that have been purchased by more customers than any other item.

PROCESS

- **STEP 4 : FUNCTION** reformatProdData()

```
IN DINNERWARE -- French Garden Fleurence Teacup, $25.00
IN HAIR CARE   -- Amino Acid Shampoo, $43.00
```

PROCESS

- **STEP 5 : FUNCTION** printRecProducts()

```
Which product was bought? Enter product id or press enter to quit. bowl
[Maximum co-purchasing score 1]
Recommend with BOWL: ['curtain', 'hairdryer', 'plate', 'shampoo', 'spoon',
'tablecloth']
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
People who bought it were most likely to buy:

IN DINNERWARE           -- White Elements Plates
IN HAIR CARE            -- Compact Folding Hair Dryer, $123.00
                        -- Amino Acid Shampoo, $43.00
IN SILVERWARE           -- Steel Spoon
IN TABLE LINENS         -- La Classica Luxury Tablecloth
IN WINDOW TREATMENTS -- Sheer Voile Rod Pocket Curtain Panel, $120.00
```

PROCESS

- **STEP 6 : FUNCTION** main()

Function main(), which will be called to start the program.

SAMPLE INTERACTION

- pdata-tiny

- broom

- shampoo

THANKS!