Customer Analytics
Problem ID: a15p05customeranalytics

Your stupendously awesome internet startup, *where-my-sock.is*, has come out of stealth-mode. For the past few months you have actual paying customers! You want to hire another software engineer but ~~your wife~~ the chairman of the board insists that you grow your customer base to 1000 monthly active users before hiring more people.

You decide to engage with your existing users in an attempt to meet that target. You put together the following plan:

1. Identify premium customers, the die-hard fans who come back each and every month. Offer them swag such as *where-my-sock.is* baseball caps, t-shirts, and fridge magnets in exchange for referrals and testimonials.

2. Identify new customers who signed up last month. Send them a personalized welcome email to improve odds of retaining them.

3. Identify dormant customers who have not used your service for the last 2 months. Send them a nudge email to try to get them back.

You generate a `.csv` file based on customer activity in your system. It looks something like this:

```
2020-07,Conrad Brown
2020-07,Leroy Simpson
2020-07,Eleanor Perkins
2020-08,Eleanor Perkins
2020-08,Conrad Brown
2020-09,Conrad Brown
2020-09,Gertrude Padilla
2020-09,Eleanor Perkins
2020-09,Gertrude Padilla
```

There are two columns in the file, the year and month in which the activity took place and the name of the customer.

In this example, we can see that:

- Conrad Brown and Eleanor Perkins are premium customers. They have used the product in each and every month.

- Gertrude Padilla is a new customer. She used the product twice last month.

- Leroy Simpson is a dormant customer. He has not used the product in the last two months.

You know that you can leverage your Python chops to read this file and print out the three customer segments. One for each category of customer, `Premium`, `New` and `Dormant`.

Input

Input consists of one line. The filename of the csv file you should read from containing the customer data.

Output

Output contains of three sections, one for each type of customer. Each section starts with the name of the section followed by 40 dashes "$-$", and then prints out each customers name who belongs to that category, each section then ends with one empty new line. Customer names should be in alphabetical order.

Sample Input 1	Sample Output 1
| `active_customers_by_month.csv` | ```
Premium customers
----------------------------------------
Alan Mitchell
Clifton Wheeler
Conrad Brown
Eleanor Perkins
Ken Graves
Sonya Pierce

New customers
----------------------------------------
Desiree Swanson
Elizabeth Rodriguez
Gertrude Padilla
Lillian Marshall
Louise Burns
Marilyn Parsons
Robert Montgomery
Wendell Lynch

Dormant customers
----------------------------------------
Alonzo Sutton
Arturo Walker
Barry Joseph
Cathy Adams
Claudia Sims
Karl Gardner
Kirk Smith
Leroy Simpson
Lindsey Terry
Lonnie Edwards
Marc Williamson
Noah Watts
Pat Henry
Richard Alexander
Ronald Thomas
Sammy Mcdonald
Winston Bates
``` |