1. **Applications of Linked List and Queue**

Coco owns a theme park called "Istana Boneka" which uses boats to explore the ethnic cultures throughout Indonesia. Each boat can accommodate 4 visitors. Coco sells 2 types of tickets, namely FAST\_TRACK and REGULER. The FAST\_TRACK ticket allows visitors to skip the REGULER queue and get priority. If visitors have the same type of ticket, the first one to register will be given priority (First In First Serve). To make it easier, Coco wants to create a queue program using the priority queue concept with a double linked list. The program has 3 main features:

REGISTER, used to add visitors. The REGISTER feature has the format REGISTER N1, where N1 is the number of visitors who want to play. In the next line, program will ask you to enter name visitor and ticket types according to the number of N1. After successfully adding, the queue list will be displayed in the format "No Name Ticket".

CALL, used to call the top 4 visitors in the queue. After successfully called, the list of visitors who board the boat will be show in the format "[list of visitors] got into the boat" and the remaining queue in the format "[total remaining queue] queues remaining". If there are less than 4 visitors in the queue, only those visitors in the queue will be called.

REMOVE, used to remove visitors who did not show up. The REMOVE feature has the format REMOVE N2, where N2 is the number of visitors who did not show up. In the next line, program will ask you enter names of visitors who did not show up according to the number of N2. After successfully removing, the queue list will be displayed in the format "No Name Ticket".

Contraints:

1 <= N1 <=1000

1 <= N2 <=1000

1 <= |name of visitor| <=10

1 <= |ticket types| <=10

|name of visitor| is the length of the string (1 word)

|ticket types| is the length of the string (1 word)

Sample:

|  |  |
| --- | --- |
| Input | Output |
| REGISTER 7  Ani FAST\_TRACK  Bani REGULER  Cani FAST\_TRACK  Dani REGULER  Eni FAST\_TRACK  Fani REGULER  Gani REGULER  REMOVE 2  Bani  Dani  REGISTER 2  Ani FAST\_TRACK  Bani REGULER  CALL  CALL | No Name Ticket  1 Ani FAST\_TRACK  2 Cani FAST\_TRACK  3 Eni FAST\_TRACK  4 Bani REGULER  5 Dani REGULER  6 Fani REGULER  7 Gani REGULER  No Name Ticket  1 Ani FAST\_TRACK  2 Cani FAST\_TRACK  3 Eni FAST\_TRACK  4 Fani REGULER  5 Gani REGULER  No Name Ticket  1 Ani FAST\_TRACK  2 Cani FAST\_TRACK  3 Eni FAST\_TRACK  4 Ani FAST\_TRACK  5 Fani REGULER  6 Gani REGULER  7 Bani REGULER  Ani Cani Eni Ani got into the boat.  3 queues remaining.  Fani Gani Bani got into the boat.  0 queues remaining. |
|  |  |

A screenshot of a computer

Description automatically generated with medium confidence

\*Answer the case on Dev C++. The file extension to be uploaded is .c

-- Selamat Mengerjakan --