Question 5: Holiday Rush

Description

Each holiday season you travel back home and help by working in your family's restaurant. This holiday you think you can make a permanent change to the restaurant that should help all year long. By using the skills you've learned at school and the knowledge you have about food service you plan to make an order scheduler. Hopefully this will be enough to convince them that you don't need to help during the holiday rush anymore.

To schedule things correctly you know you'll need a couple pieces of information. Each ticket should include the time of the order, the number of appetizers, main dishes, and desserts ordered per table, and the table number. Then, using what you've learned in school you should be able to tell the kitchen the best order for dishes to go out to the tables. From experience you know that dishes should be timed such that appetizers are first out, then main dishes, and finally the desserts. The timing for these should each be based on the relative intervals of 10 minutes for appetizers, 15 minutes for main dishes, and 10 mins for dessert. Where each time is based on when the table had their order taken or from when they last had a dish brought to them. Also, you know that all appetizers, main dishes, and desserts for a table must go out together.

Input Description

To test your program you will be giving it a set number of orders with their time stamps, table numbers, and the dishes ordered. To make things simpler you format this information such that the first line tells you how many orders you will be handling. Then each following line starts with a time stamp in the 00:00 AM/PM format, table number, number of appetizers, number of main dishes, and number of desserts all space separated and followed by a newline character ('\n').

Output Description

To make sure that you can track multiple orders at once you need to verify that you can tell the kitchen the time for each order to go out, the table it goes to, the type of dish(es), the number of them. To do this you will list the time for each outgoing order, the table number, the number of dishes, and dish type. Multiple outgoing orders will be listed in order of table number and comma separated. All spaces are a single space character ' ' and there will be one time slot per line of output.

Input Example

4

12:15 PM 1 1 3 2

09:00 AM 13 3 3 0

09:15 AM 13 1 0 0

12:00 PM 4 0 5 4

Output example

09:10 AM Table 13: 3 app

09:25 AM Table 13: 1 app 3 main

12:15 PM Table 4: 5 main

12:25 PM Table 1: 1 app, Table 4: 4 dessert

12:40 PM Table 1: 3 main

12:50 PM Table 1: 2 dessert