

**2002/2003 SOUTHERN CALIFORNIA REGIONAL
ACM INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST**

**Problem 2
Personal Video Recorder (PVR) Recording Scheduler**

A Personal Video Recorder (PVR) is similar to a VCR in that that it records and plays back TV shows. However, the PVR records shows to disk rather than tape. You have been hired by the startup company, Potato++, to develop the show recording scheduler software module for their prototype PVR. One of the most useful features of a PVR is the ability to select shows and series to record by show title from an on-screen guide. You don't have to look up and keep track of show start/end date/time and channel. If a show moves to a different day, time or channel, you don't have to reprogram, because the PVR keeps track of the schedule updates.

The PVR receives data that allows it to maintain a guide database for all shows in the upcoming two weeks. The received data contains information such as title, description, start date/time, duration, and channel. From an on-screen guide, the user creates a prioritized want-list of show titles to record. The PVR, rather than the user, determines the channel and start/end times of the recordings based on the want-list and guide database. The prototype PVR has the following recording specifications:

- The PVR only records entire shows.
- The PVR can only record one show at a time.
- A lower priority show will not be recorded when its broadcast time overlaps the recording of a higher priority show.
- If the same episode of a show is broadcast multiple times, it is only recorded once.
- Shows will be recorded at the earliest opportunity given the above constraints even if doing so prevents a lower priority show from ever being recorded. (The marketing department believes people want to be able to watch a show soon after its first broadcast.)

Input

Given a prioritized want-list of shows and the program guide, your program will determine which shows to record. The want-list (in decreasing priority order) contains one show title per line. One blank line separates the want-list and program guide. The program guide data contains one show per line in increasing chronological order. Each line contains channel, start date/time, duration, episode number, and title. See *Ranges, Formatting, and Assumptions* for details regarding the fields.

Output

Output the list of shows to record, one per line, in increasing chronological order. For each show, print channel, start date and time, and show title, exactly as they occur in the program guide, separated by one space.

Ranges, Formatting, and Assumptions

All want-list and program guide inputs begin in column 1.
Program guide fields are separated by a single space.
The title includes all remaining characters until end-of-line, and may contain embedded spaces.
The title will never contain trailing spaces.
The channel is a decimal integer [2–69].
The start date/time is in JJHHMM format, where JJ=day of year [001–366], HH=hour [00–23], MM=minute [00–59].
The duration is a decimal number of minutes [1–1440].
The episode number [1–9999] uniquely identifies different episodes of the same series.
All shows in the program guide start and end within the same year.
The same show will not be broadcast on two different channels at the same time.
There is at least one and at most 100 titles in the want list.
There is at least one and at most 15000 shows in the program guide.
The input will produce at least one show to record.

Problem 2
Personal Video Recorder (PVR) Recording Scheduler (continued)

Sample Input

Enterprise
Buffy the Vampire Slayer
Stargate SG-1
Smallville
Gilmore Girls
Andromeda

13 0240000 60 1003 Buffy the Vampire Slayer
5 0242000 60 1601 Gilmore Girls
11 0242000 30 2021 That 70s Show
13 0242000 60 1004 Buffy the Vampire Slayer
11 0242030 30 9101 Grounded for Life
5 0242100 60 8003 Smallville
11 0242100 60 3218 Celebrity Daredevils
13 0242100 60 2376 Haunted
5 0252000 60 9101 Blade
11 0252000 60 3208 The Bernie Mac Show
13 0252000 60 2002 Enterprise
5 0291700 60 8003 Smallville
5 0291800 60 7652 Everwood
5 0291900 60 1601 Gilmore Girls
13 0292000 60 2002 Enterprise

Sample Output

13 0240000 Buffy the Vampire Slayer
13 0242000 Buffy the Vampire Slayer
5 0242100 Smallville
13 0252000 Enterprise
5 0291900 Gilmore Girls