Application Overload

Problem #5	
Novice / Advanced	
5 points	

C programmers: your program name must be: prob05.exe
JAVA programmers: your program name must be: Prob05.class

Task Description

Can I run all of these applications on one HP ProLiant Server? Based on application requirements, determine whether a given set of applications can be simultaneously executed on a single HP ProLiant Server.

Program Input

Sample data is contained in Prob05.in. Read this data using one of the methods described on your "Contest Instructions" sheet, under "Program Input/Output". Determine whether or not the given hardware platform can support the target workload. The first line of input contains server specifications including model number, CPU speed (in MHz) and available memory (in MB) (separated by commas). The next line contains the number of applications. The rest of the lines contain the data for each application. The data for each application contains the application name, CPU and memory requirements for the work targeted to run on the server (separated by commas).

```
HP ProLiant DL385,3600,1600
3
Microsoft IIS,250,500
Payroll,2000,750
Microsoft Exchange,1000,350
```

Program Output

Calculate the total CPU and memory requirements for the entire workload and compare the results to the server specifications which were included in the information file. Your program should determine whether the workload can be executed on the given server and output a yes/no answer. Additionally, calculate and display the percentage of CPU and memory to be used compared to the total available. Percentages should be rounded to 2 decimal places.

```
Yes
90.28% CPU
100.00% memory
```