**Probe Scheduling**

Probe is a program that can acquire/analyze network data at a predetermined frequency and generate an alarm message when the analysis result meets certain conditions.

Suppose we have N Probes (P1...Pi...Pn). For any Probe Pi, the number of times it can be executed in a day is Fi, and once it is executed, it must be executed Fi times. The expected alarm contribution value of Pi within a day is Vi.

In a day, the maximum load of our system can support Probes being run T times. Write a program to find out how to select Probes to be executed so that the total expected alarm contribution value of the day is the largest.

Inputs:

Maximum system load: 13

|  |  |  |
| --- | --- | --- |
| **P** | **F** | **V** |
| p1 | 3 | 8 |
| p2 | 4 | 7 |
| p3 | 5 | 9 |
| p4 | 7 | 5 |
| p5 | 6 | 6 |
| p6 | 5 | 6 |

Outputs:

Probes to be executed: p1, p2, p3

Total execution times: 12

Total expected alarm contribution value: 24