

## Installing the best smart phone games

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Smart phones are distributed all over the world and there are many applications available on online app markets. The number of games available is continually growing.

We want to install lots of game applications onto our own devices but we are limited by device storage. We need to only select good games that will fit within our device storage limits.

Generally, applications receive review scores which can indicate whether the application is good or not. You can select good games using their review score.

Create a program that selects the best combination of interesting games. The total review score of all installed applications should be the highest possible without exceeding the storage size of the smart phone.

The first line of input data represents your device storage limit and total number of game applications.

All subsequent lines of input display application data. Application data includes the application ID ( $0 \leq \text{ID}$ ), application size ( $0.0 < \text{SIZE}$ ), and a review score ( $0 \leq \text{score} \leq 100$ ).

The output of your program should display the total review score on the first line. The second line of output should display the selected application ID list sorted in ascending order and separated by a single space character.

### Sample Input/Output

For the following input:

```
80.0 5
0 100.0 80
1 25.0 100
2 50.0 50
3 40.0 70
4 10.0 40
```

The output should be:

```
210
1 3 4
```