Approach is to investigate he profit on each machine if CVCM has enough money to buy it.

First step is to make a machine vector sorted by “the Day on which the machine is for sale”.

Second step is to lookup machine by vector order and update maximum profit.

For example , the vector sequence as following

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Machine Name | the Day on which the machine is for sale | The dollar price for which is may be bought | The dollar price for which is may be sold | The profit generated by operating machine |
| M\_1 | 1 | 9 | 1 | 2 |
| M\_5 | 2 | 10 | 9 | 1 |
| M\_2 | 3 | 2 | 1 | 2 |
| M\_4 | 4 | 11 | 7 | 4 |
| M\_0 | 6 | 12 | 1 | 3 |
| M\_3 | 8 | 20 | 5 | 4 |

While investigate M\_1 at Day\_1 , list all the possible case.

- No more new machine will be bought . The profit will be 40.

- infeasible solution when buy M\_5 at Dau2 due to not enough money.

- feasible solution when buy M\_2 and lookup more case when M2 → M4 or M2→M\_0, M\_3

and update maximum profit when it reach last machine .

At the end , choose the max profit.