

## Question:

### Dynamic Programming: Good Sequence

There are  $N$  towers. The height of the  $i^{\text{th}}$  tower is  $H_i$ . A sequence of towers is **Good** if there are not any two adjacent towers that have the same height.  $H_{i-1} \neq H_i$  condition must hold.  
You can increase the height of  $i^{\text{th}}$  tower but it will cost  $M_i$ , to increase the height by 1.  
**Find the minimum cost to make the sequence good.**

## Note

You can increase the height of a tower any number of times you want. You have to just minimize the cost to make the sequence of towers **Good**.

## Function Description

In the provided code snippet, implement the `minCost(...)` method and print the minimum cost to make the sequence good. You can write code inside the `minCost` method. The placeholder text **WRITE YOUR LOGIC HERE** should be replaced by your code.

There will be multiple test cases running so the Input and Output should match exactly as provided.

The base Output variable `result` is set to a default value of `-404` which can be modified. Additionally, you can add or remove these output variables as per your requirement.

## Input Format

The first line of input consists of an integer  $N$ .

The next  $N$  lines of input contain the description of towers. The  $i^{\text{th}}$  line contains  $H_i$  and  $M_i$  - the height of  $i^{\text{th}}$  tower and the cost to increase the height of  $i^{\text{th}}$  tower by 1 respectively.

## Sample Input

```
3          --denotes N.
2 4        --denotes two integers Hi and Mi
2 1        --denotes two integers Hi and Mi
3 5        --denotes two integers Hi and Mi
```

## Constraints

$$1 \leq N \leq 10^5$$

$$1 \leq H_i, M_i \leq 10^9$$

## Output Format

The output contains a single integer denoting the minimum cost to make a sequence Good.

## Sample Output

```
2
```

## Explanation

In the sample input, you have to increase the height of the second tower by 2.

$$\text{Cost} = M_2 + M_2 = 1 + 1 = 2.$$

Hence, the minimum cost to make the sequence Good is 2.

#### Test Case Input

```
5
2 3 7 9 10
```

#### Expected Output

```
2
```

#### Test Case Input

```
5
2 3 4 6 9
```

#### Expected Output

```
4
```

#### Test Case Input

4

1 2 4 6

#### Expected Output

3

#### Test Case Input

1  
1

#### Expected Output

1

#### Test Case Input

10

2 3 4 5 6 8 9 10 17 92

#### Expected Output

6

#### Test Case Input

```
10
2 3 45 67 89 101 234 567 890 1234
```

#### Expected Output

```
5
```