

B - Frog 2

Time Limit: 2 sec / Memory Limit: 1024 MB

Score : 100 points

Problem Statement

There are N stones, numbered $1, 2, \dots, N$. For each i ($1 \leq i \leq N$), the height of Stone i is h_i .

There is a frog who is initially on Stone 1. He will repeat the following action some number of times to reach Stone N :

- If the frog is currently on Stone i , jump to one of the following: Stone $i + 1, i + 2, \dots, i + K$. Here, a cost of $|h_i - h_j|$ is incurred, where j is the stone to land on.

Find the minimum possible total cost incurred before the frog reaches Stone N .

Constraints

- All values in input are integers.
- $2 \leq N \leq 10^5$
- $1 \leq K \leq 100$
- $1 \leq h_i \leq 10^4$

Input

Input is given from Standard Input in the following format:

```
N K
h1 h2 ... hN
```

Output

Print the minimum possible total cost incurred.

Sample Input 1

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```
5 3
10 30 40 50 20
```

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Sample Output 1

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```
30
```

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If we follow the path $1 \rightarrow 2 \rightarrow 5$, the total cost incurred would be $|10 - 30| + |30 - 20| = 30$.

Sample Input 2

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```
3 1
10 20 10
```

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Sample Output 2

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```
20
```

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If we follow the path $1 \rightarrow 2 \rightarrow 3$, the total cost incurred would be $|10 - 20| + |20 - 10| = 20$.

Sample Input 3

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```
2 100
10 10
```

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Sample Output 3

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```
0
```

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If we follow the path $1 \rightarrow 2$, the total cost incurred would be $|10 - 10| = 0$.

Sample Input 4

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```
10 4
40 10 20 70 80 10 20 70 80 60
```

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Sample Output 4

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```
40
```

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If we follow the path $1 \rightarrow 4 \rightarrow 8 \rightarrow 10$, the total cost incurred would be $|40 - 70| + |70 - 70| + |70 - 60| = 40$.

