

Biohazard

Oleh: Malvin

Time Limit	1s
Memory Limit	256 MB



Leon S. Kennedy adalah seorang polisi elit yang ditugaskan menyelamatkan putri presiden sebuah negara fiktif. Untuk menjangkau tempat sang putri, ia harus melewati area yang sudah dikuasai koloni zombie. Area tersebut dapat direpresentasikan sebagai sebuah sel pada peta ber-grid berukuran $H \times W$. Pada peta itu, sel yang berisi karakter **+** menandakan zona terinfeksi, sedangkan **#** adalah jalur kosong yang aman.

Untuk merencanakan rute penyelamatan, Leon ingin mengetahui:

1. **C** = jumlah koloni zombie terpisah
2. **S** = ukuran koloni terbesar
3. **E** = jumlah koloni yang berukuran genap

Bantulah Leon menghitung ketiganya!

Format Masukan

- ❖ Baris pertama berisi dua bilangan bulat dipisah spasi:
 - **H** = jumlah baris peta (tinggi)

- **W** = jumlah kolom peta (lebar)
- ❖ Selanjutnya ada **H** baris, tiap baris terdiri dari **W** karakter:
 - **+** = sel terinfeksi (zona zombie)
 - **#** = sel aman (jalur kosong)

Format Keluaran

- ❖ Satu baris dengan tiga bilangan bulat dipisah spasi:
 - **C** = jumlah koloni zombie terpisah
 - **S** = ukuran koloni terbesar
 - **E** = jumlah koloni yang berukuran genap

Constraints

- ❖ $1 \leq H, W \leq 1000$

Sample Input 1

```
5 5
+####
#++##
##+##
###++
###++
```

Sample Output 1

```
3 4 1
```

Penjelasan Sample 1

- **C = 3**
Terdapat tiga koloni terpisah (koneksi 4-arah: atas, bawah, kanan, kiri) dari sel +

```

+ # # # #
# + + # #
# # + # #
# # # + +
# # # + +

```

Koloni 1: sel (0,0)

Koloni 2: sel (1,1),(1,2),(2,2)

Koloni 3: sel (3,3),(3,4),(4,3),(4,4)

- **S = 4**

Koloni terbesar adalah koloni 3 dengan 4 sel.

- **E = 1**

Hanya 1 koloni yang memiliki ukuran genap, yaitu koloni 3.

Sample Input 2

```

4 4
#++#
###
##+
#++#

```

Sample Output 2

```

2 3 1

```

Penjelasan Sample 2

- **C = 2**

Terdapat dua koloni terpisah (koneksi 4-arah: atas, bawah, kanan, kiri) dari sel +

```

# + + #
# # # #
# # + #
# + + #

```

Koloni 1: sel (0,1),(0,2)

Koloni 2: sel (2,2),(3,1),(3,2)

- **S = 3**

Koloni terbesar adalah koloni 2 dengan 3 sel.

- **E = 1**

Hanya 1 koloni yang memiliki ukuran genap, yaitu koloni 1.

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By: Malvin

Time Limit	1s
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Leon S. Kennedy is an elite police officer tasked with saving the daughter of the president of a fictional country. To reach the princess, he must pass through an area that has been overrun by a zombie colony. The area can be represented as a cell on an $H \times W$ grid map. On the map, a cell containing the **+** character indicates an infected zone, while **#** is an empty safe path.

To plan a rescue route, Leon wants to know:

1. **C** = number of separate zombie colonies
2. **S** = the size of the largest colony
3. **E** = number of even-sized colonies

Help Leon calculate all three!

Input Format

- ❖ The first line contains two space-separated integers:
 - **H** = number of map rows (height)
 - **W** = number of map columns (width)

- ❖ Next there are **H** rows, each row consists of **W** characters:
 - **+** = infected cell (zombie zone)
 - **#** = safe cell (empty path)

Output Format

- ❖ One line with three space-separated integers:
 - **C** = number of separate zombie colonies
 - **S** = the size of the largest colony
 - **E** = number of even-sized colonies

Constraints

- ❖ $1 \leq H, W \leq 1000$

Sample Input 1

```
5 5
+####
#++##
##+##
###++
###++
```

Sample Output 1

```
3 4 1
```

Sample 1 Explanation

- **C = 3**
There are three separate colonies (4-way connections: up, down, right, left) of **+** cells

```

+ # # # #
# + + # #
# # + # #
# # # + +
# # # + +

```

Colony 1: cell (0,0)

Colony 2: cells (1,1),(1,2),(2,2)

Colony 3: cells (3,3),(3,4),(4,3),(4,4)

- **S = 4**

The largest colony is colony 3 with 4 cells.

- **E = 1**

Only 1 colony has an even size, which is colony 3.

Sample Input 2

```

4 4
#++#
####
##+#
#++#

```

Sample Output 2

```

2 3 1

```

Sample 2 Explanation

- **C = 2**

There are two separate colonies (4-way connections: up, down, right, left) of + cells

```

# + + #
# # # #
# # + #
# + + #

```

Colony 1: cells (0,1),(0,2)

Colony 2: cells (2,2),(3,1),(3,2)

- **S = 3**

The largest colony is colony 2 with 3 cells.

- **E = 1**

Only 1 colony has an even size, which is colony 1.