Level 2

> Level 2

Surface area

We need to know which buildings are the biggest in order to calculate where we need to focus our security teams. Help us sort the buildings by their footprint surface area.

Task for Level 2:

Calculate the surface area of all the buildings present in the perimeter and sort them

> Level 2

- The world is a 2D cell grid
- A building spans one or more cells, having a certain, constant, height
- The ground height is zero
- If two cells of **same height** are **adjacent**, they belong to the same building
- Sort the buildings by their **footprint surface area** and print them in **ascending** order
- We guarantee that **no two buildings have the same surface area**
- This ordering will be further used in the next levels to uniquely identify buildings

> Level 2

Input format: same as Level 1

Output format:

<id0 surface_area0> <id1 surface_area1> <id2 surface_area2> ...

- **id** is the **0-based index** of the building in the sorted order

Example:

Input:
4 6
0 0 1 1 1 0
0 2 0 0 3 3
0 2 0 0 3 3
0 0 1 0 0 0

Output:
0 1 1 2 2 3 3 4