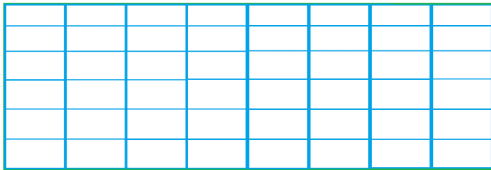
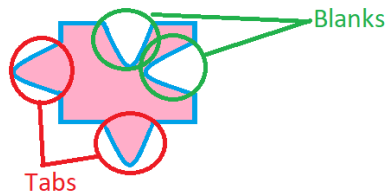


You are a puzzle company. The purpose of the application is to generate the information needed to cut the parts so that the resulting parts can be joined by buyers. To simplify the exercise, we consider that each part is based on a rectangle (the edges are not wavy), as in the figure:



The program must specify for each side whether it is a **tab** or a **blank**:



Rules:

- The user will select one starting part in the middle. This starting part will have always 4 **tabs**
- The starting part will **propagate** its **tabs** both horizontally and vertically, forming the 2 main lines (see the green arrows)
- The horizontal main line will **propagate tabs** up and down, and the vertical main line will propagate **tabs** left and right (see the purple arrows)

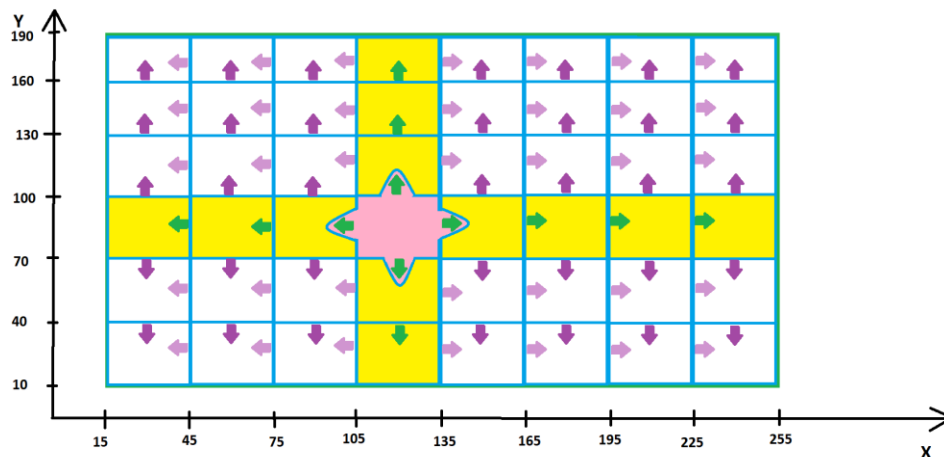


Fig3: Tabs propagation: the part that hosts an arrow will have a **blank** (for that place) and the adjacent part from which the arrow comes will have a **tab**

Final notes:

- the cutting machine works in a single plane, so the program will use **X** and **Y** coordinates to identify the parts. Landmark point (X=0, Y=0) is in the bottom left corner.
- Make sure the application is decoupled, cod reusable and scalable.