Problem Set 10

Note: Try to make the best use of appropriate C++ features.

To become familiar with the structure and properties of a Treap by implementing a function that visually represents its hierarchical form. This exercise aims to reinforce your understanding of the dual properties of Treaps:

- The **binary search tree (BST) property**: left children are less than the parent, right children are greater.
- The **heap property**: the priority of each node is higher than that of its children.

Objective:

In this task, you are required to implement a function named print_treap_2D based on the provided Treap class.

The goal of this function is to **visually print the structure of the Treap** in a human-readable, tree-like 2D format. The printed output should clearly represent the **hierarchical relationships between nodes**, showing how nodes are connected as parent and children in the binary structure.

The output format should resemble the following example: