### **Question 1 [15 Points]**

Brac University’s course rating system needs to prioritize courses based on **difficulty** and **student satisfaction**. Two arrays are provided:

* **arr1**: Difficulty levels (1 to 10, higher values = more difficult).
* **arr2**: Student satisfaction scores (1 to 10, higher values = more satisfied).

Courses with **lower overall ratings** should be **prioritized first** for improvement. The **overall rating** for each course is calculated as:

overall\_rating = difficulty level × satisfaction score

**Your task is to:**

1. Create the **overall ratings array** using the above formula.
2. Determine the **appropriate type of heap** needed to prioritize courses based on the task description.
3. **Construct the heap** using the overall ratings.
4. Extract the **top 3 courses for improvement** based on their overall ratings.

| **Sample Input:** | **Expected Output:** |
| --- | --- |
| arr1 = [7, 6, 5, 9, 8]  arr2 = [6, 8, 7, 5, 4] | Overall Ratings: [42, 48, 35, 45, 32]  Top Courses: 32, 35, 42 |

**Note:** Assume the **insert()** and **swim()** methods are already implemented and can be used directly. You need to **implement other required methods** and **make the necessary method calls** to complete the task. You are not allowed to use any built-in functions except **len()**.