

**Bicol University**

**Bicol University Polangui Campus**

**Polangui, Albay**

**Group:** Rod B. Rañola / Dazzly Moneda **Subject:** Data Structures and Algorithms

**Course/ Year/ Section:** BSIS/ 2/ A

**HEAPS GAME**

**TITLE:** Hex Wars

**THEME:** This game is based from the TV series Arcane and is about a general (you) preparing your men for battle.

**TASKS:**

1. Insert soldiers with their power levels into a Max-Heap and display the heap after each addition.
2. Convert the Max-Heap into a Min-Heap for easier handling of lower-power soldiers.
3. Heapify a random list of soldier power levels into a Max-Heap.

**LEARNING GOALS:**

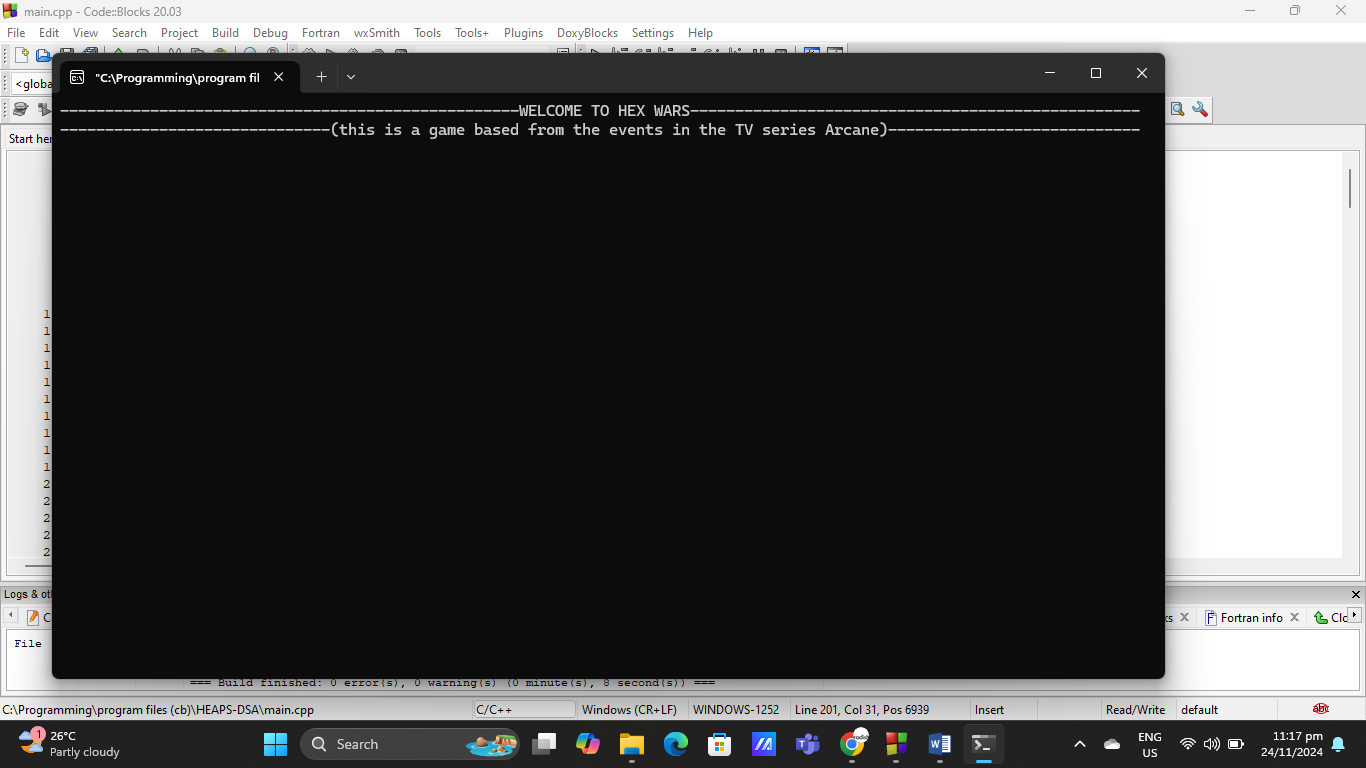
* **Technical concepts** like heaps, sorting, and priority queues.
* **Game mechanics design**, including battle systems and decision-making.
* **Strategic thinking** through army selection and battle outcomes.
* **Story integration** in games, enhancing engagement through narrative.
* **Soft skills** such as patience, focus, resilience, and the importance of reflection on decisions.

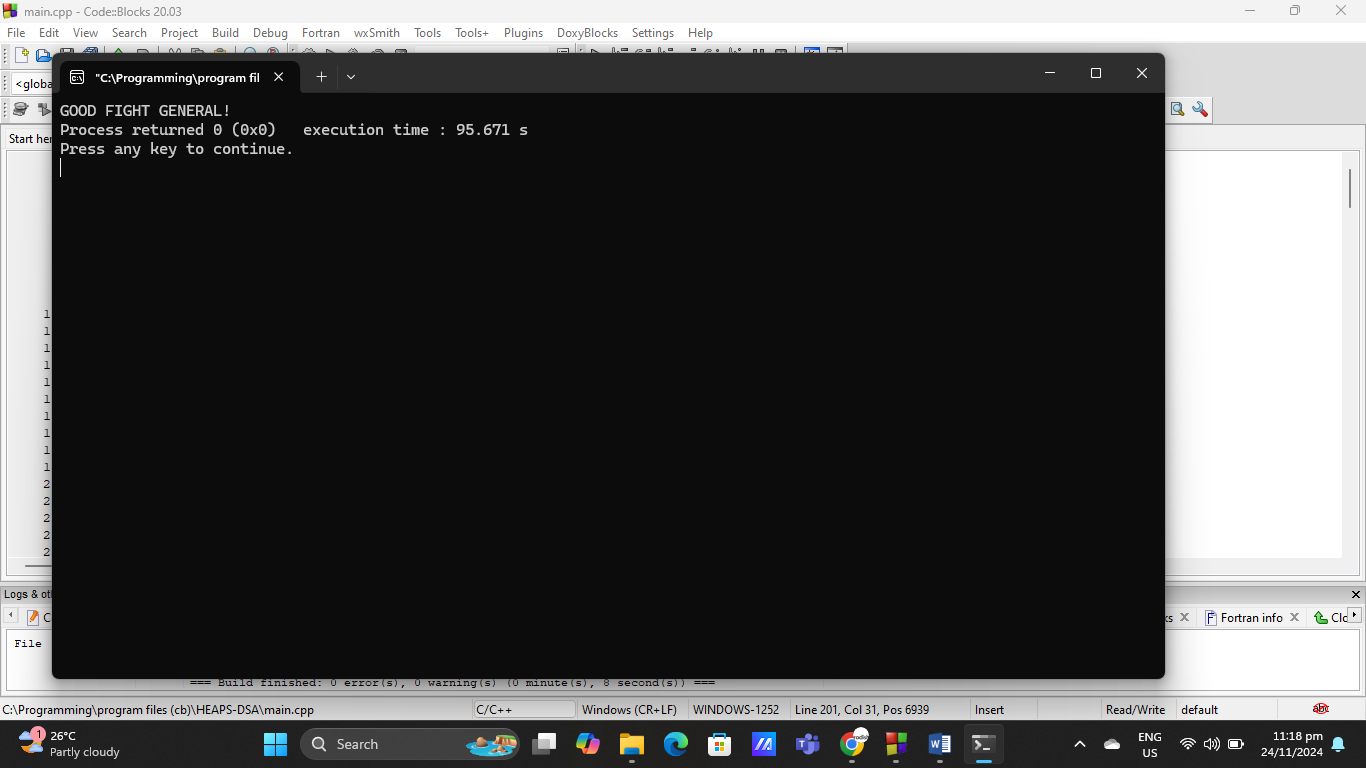
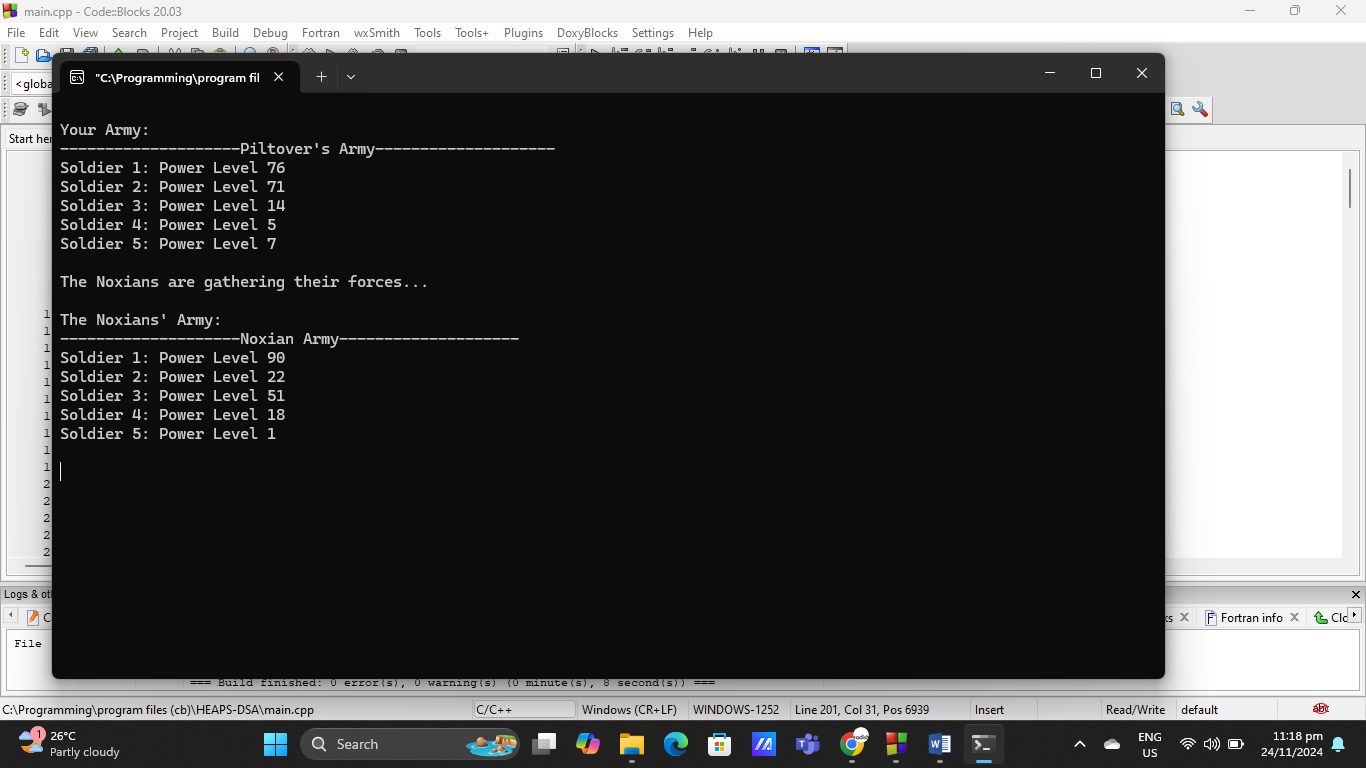
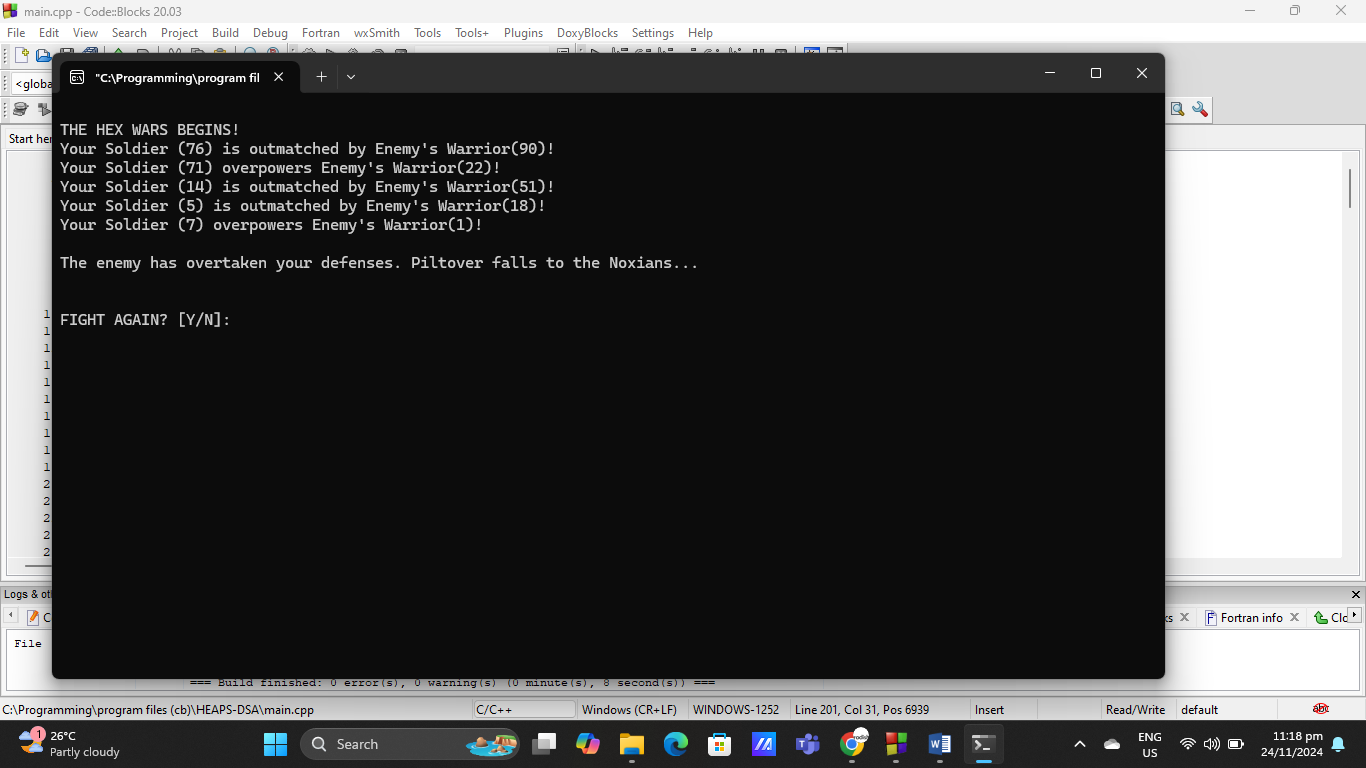
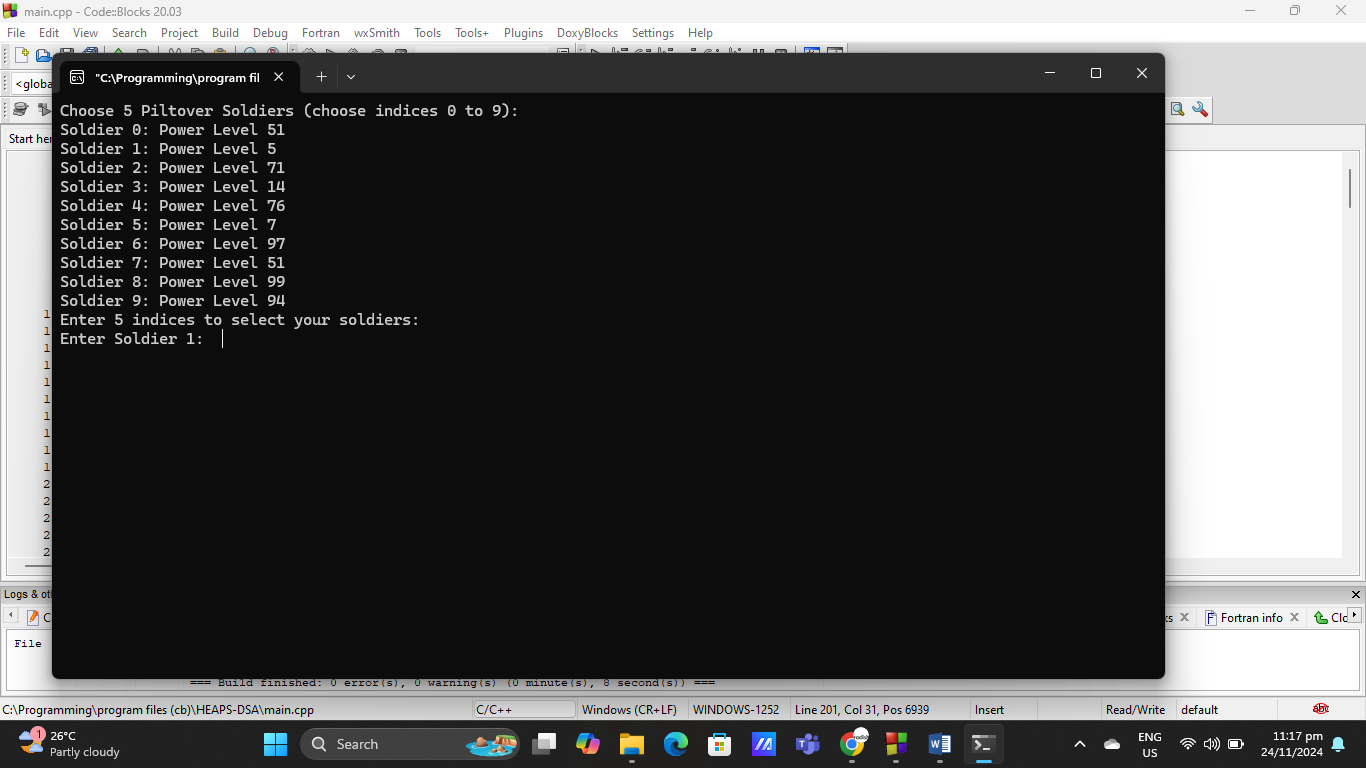
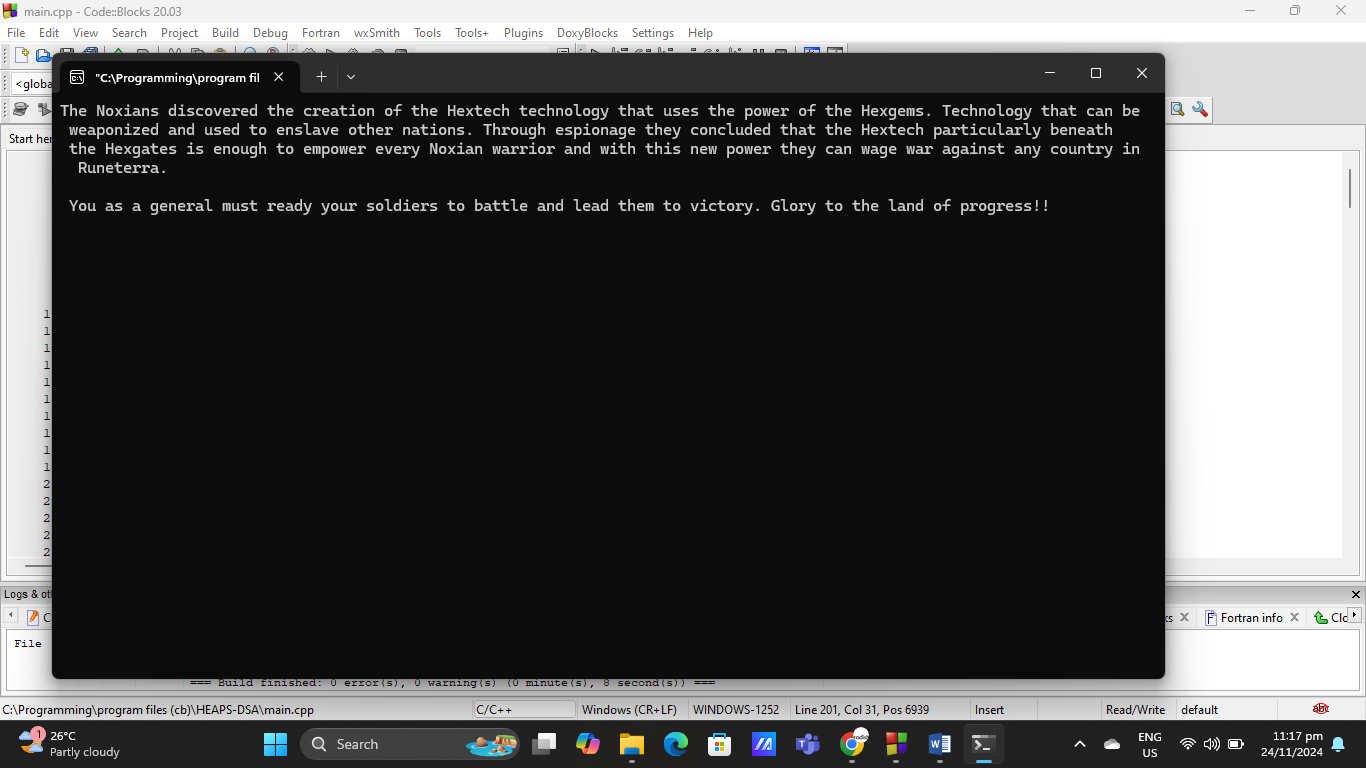
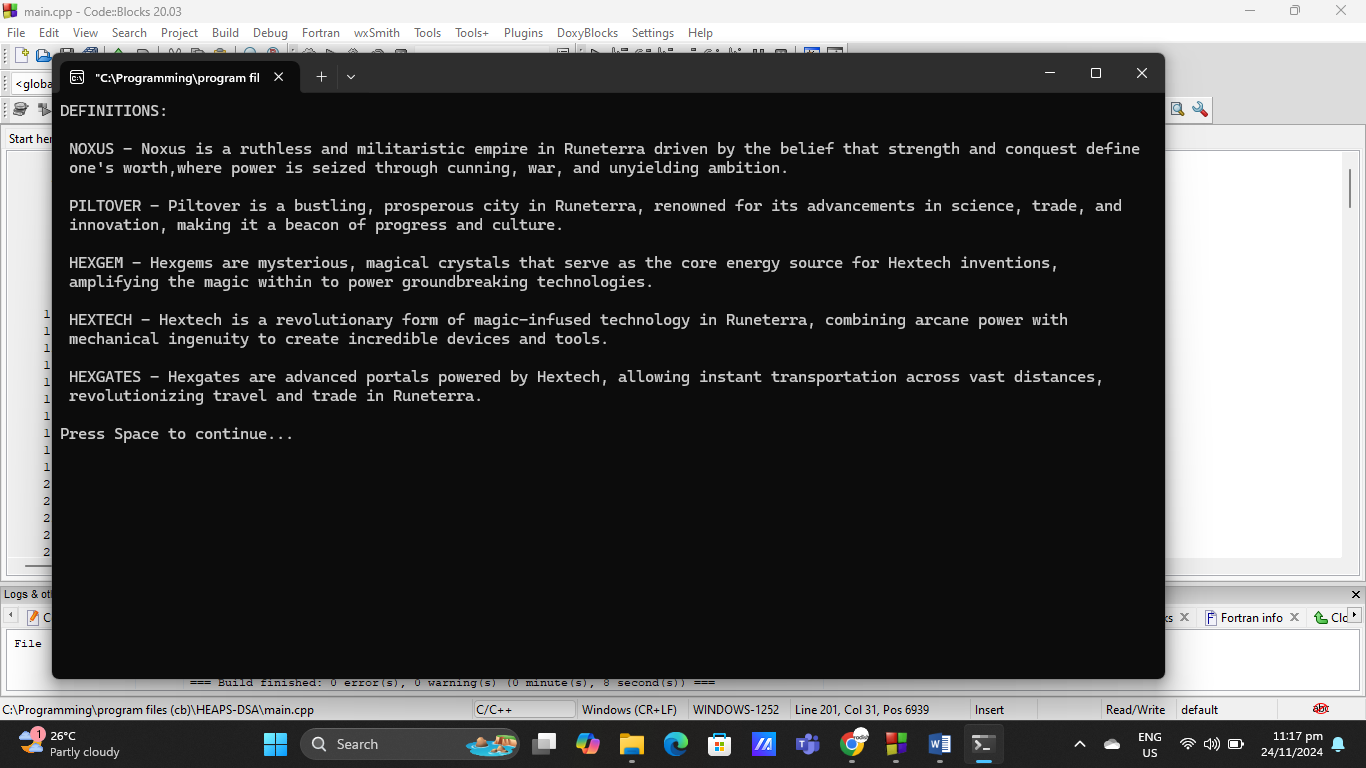
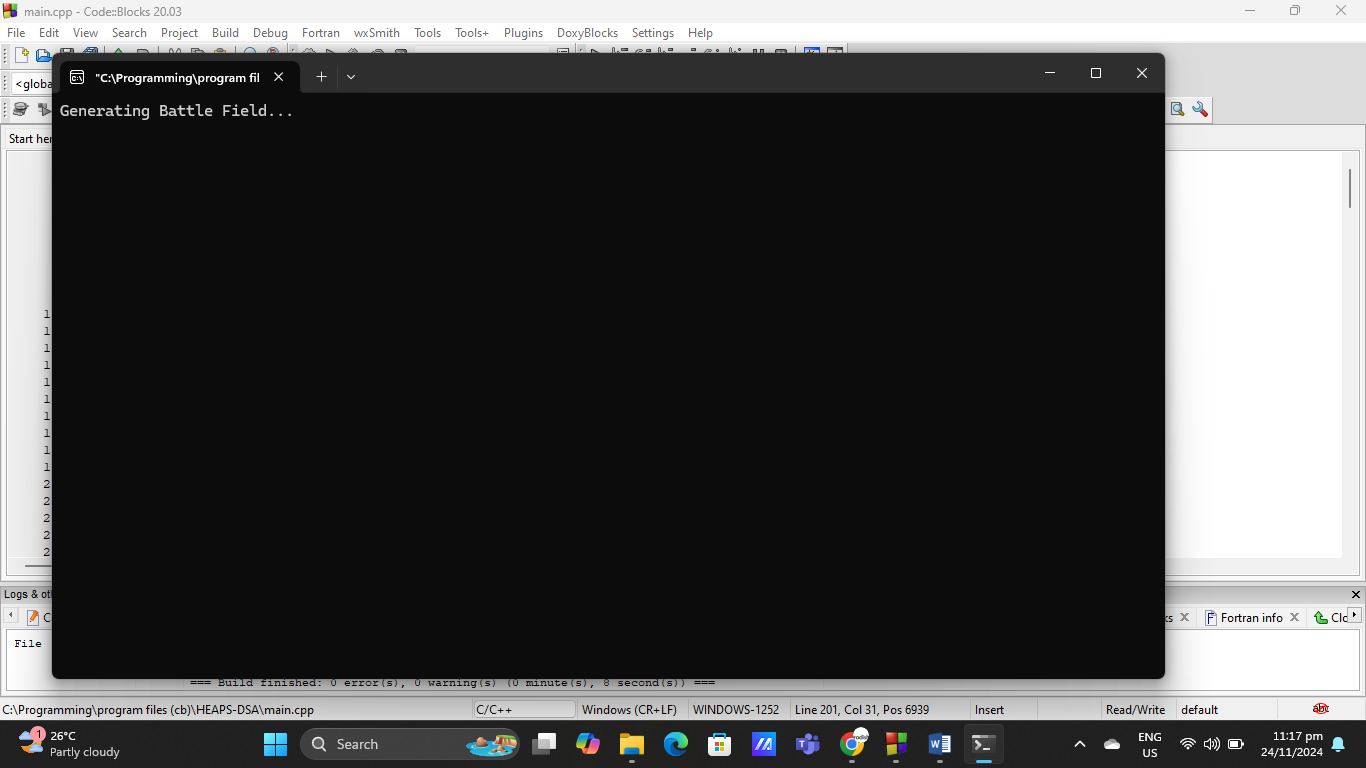
**INSTRUCTIONS:**

**Input:** Power levels of soldiers (e.g., [10, 25, 15, 40, 5]).

**Output:** Heap at each step (e.g., [40, 25, 15, 10, 5]).

**SCREENSHOTS:**

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