Insert Delete GetRandom O(1)

For this problem we must implement insert, remove and getRandom in average O(1) time.

Key Idea:

To achieve O(1) for all operations:

- Use a vector to store elements (for O(1) random access).
- Use an unordered_map to map element → index (for O(1) lookup/removal).

Insert:

- If element exists in map → return false.
- Else push to vector and store index in map → return true.

Remove:

- If element doesn't exist in map → return false
- Else swap the element with the last element in vector, update map, and pop back → return true.

getRandom:

- Pick random index using rand() % vector.size() and return element.

Complexity:

- Insert: O(1)
- Remove: O(1)
- getRandom: O(1)