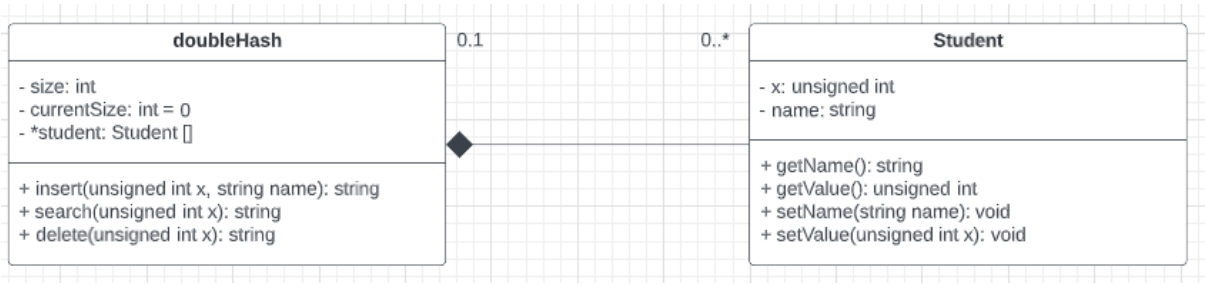
the student already filling the spot is the same student number. If it is, failure. Otherwise, loop through the vector and check for when x is greater than the next index. Insert at this position and return success.

- String search(unsigned int x) - Loop through the vector in the position of the array from the first hash function. If x is equal to the student number, return found last name in position. If you reach the end of the vector and the number is not found, return not found.
- String deleteHash(unsigned int x) - Loop through the vector in the position of the array from the first hash function. If x is equal to the student number, erase the student and return success. If you reach the end of the vector and the number is not found, return failure.
- Void print(int x) - If the vector's size at position x in the array is 0, print chain is empty. Otherwise, loop through the vector at position x in the array, printing each student number at each index.

UML Class Diagrams

Class: doubleHash



Class: chainingHash

Design Decisions

Student Class: I have a default constructor, and a constructor that takes a name and student number and sets name and value respectively. The destructor is empty.

doubleHash Class: I have a constructor that takes in an integer x. It then creates a new dynamically allocated array of student objects and sets max size of the array to x. The destructor deletes the array of student objects.

chainingHash Class: I have a constructor that takes in an integer x. It then creates a new dynamically allocated array of vectors that hold student objects and sets max size of the array to x. The destructor deletes the array of vectors holding the student objects.

***** I did not override any operators and I did not have to pass each parameter by reference or use of the keyword "const".