Thank you for downloading and using CS 303 Assignemt 1 Arrays

After including the header file to your main program file, make sure when creating the array you include the headspace “HW1::”. Ex. HW1::arrays<int> intArray;

When using the **operator[]** functions, make sure you are using a try-catch block if you are worried about indexing an item out of range. If you do not, the code will throw an **Unhandled Exception Error**. The error for this function is **out\_of\_range**.

The **create\_space** function will double the capacity of the array when more space is needed. It requires a **size\_t** value when called.

The **addValue** function will add a value at the last spot in your array.

The **checkValue** function will find the index value of any item entered in the function parameters. This should be used in a try-catch block to ensure the value is found in the array. This function throws an **out\_of\_range** error when an item cannot be found.

The **removeValue** function will remove a value at any given index in the array. A try-catch block should be used if you are worried about indexing an item out of range. The error for this function is **out\_of\_range**.

The **printArray** function will print out all the values in the array to the console.

The **readDataFromFile** function will put all the values in the input file into your array. If the file cannot be found or opened, the function will print an error message. Enter the name of the file into the function parameters as a string and make sure the file is in the folder with the following folder path: CS 303 Assignemt 1 Arrays\CS 303 Assignemt 1 Arrays\*filename*

The functions **user\_modifyValue** and **user\_addValue** both take all inputs from users. Both functions ensure that the value entered by the user can be placed in your current array. The **user\_modifyValue** function will ask the user for the value to change and a value to change it to. It will then find the index of the value they want to modify and replace it. The **user\_modifyValue** function will return an error if the item they wish to change is not in the function. The **user\_addValue** function will just ask the user for a value to end at the end of the array.

# Screenshots of Outputs

Create the array, read the array values from a file, and then print the array.

A screen shot of a computer code

AI-generated content may be incorrect.

A screenshot of a computer screen

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Check for the number 50, in the array, and then 101, not in the array.

A screenshot of a computer

AI-generated content may be incorrect.



A black screen with white text

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Store the value at index 3, then change the value to 100. Print the old and new value to the console.

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Add the value 5050 to the end of the array, then print the array to the console.

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A number on a black background

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Remove the number at index 42 from the array. (Removes the number 43)

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User function: Ask the user to add a number to the end of the array.

A screen shot of a computer program

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A screenshot of a computer screen

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User function: Ask the user what value they want to change and what to change it to.

A screen shot of a computer program

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A screenshot of a computer screen

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