```
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
                           MENU:

    Find Index of Desired Integer in Array
    Modify Value of Integer in Array Using its Index

3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 4
The number at which Index would you like to remove?: 99
Number sucessfully removed.
                           MENU:
 1. Find Index of Desired Integer in Array

    Modify Value of Integer in Array Using its Index
    Add New Integer to End of Array
    Remove Integer from Array Using its Index

5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99
                           MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 3
 What integer would you like to add?: 100
 Sucessfully added the integer.
```

```
MENU:
1. Find Index of Desired Integer in Array

    Modify Value of Integer in Array Using its Index
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    Remove Integer from Array Using its Index

 5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
                              MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
 5. Print out Current Array
6. Quit
Select an Option: 3
What integer would you like to add?: 101
Doubled the array size!
Sucessfully added the integer.
```

^^ "Doubled the array size" means doubling the capacity; not the amount of elements in the array

```
MENU:

1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101

MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit

Select an Option: 3

What integer would you like to add?: 102

Successfully added the integer.
```

2. Modify Value of Integer in Array Using its Index 3. Add New Integer to End of Array 4. Remove Integer from Array Using its Index 5. Print out Current Array 6. Quit Select an Option: 5 Current Array: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 MENU: 1. Find Index of Desired Integer in Array 2. Modify Value of Integer in Array Using its Index 3. Add New Integer to End of Array 4. Remove Integer from Array Using its Index 5. Print out Current Array 6. Quit Select an Option: 1 Enter Desired Integer: 102 The Desired Integer is found at index: 101 MENU: 1. Find Index of Desired Integer in Array 2. Modify Value of Integer in Array Using its Index 3. Add New Integer to End of Array 4. Remove Integer from Array Using its Index 5. Print out Current Array 6. Quit Select an Option: 2 The number at which Index would you like to modify?: -1 Error: Index is out of bounds. Unable to complete operation. 1. Find Index of Desired Integer in Array 2. Modify Value of Integer in Array Using its Index 3. Add New Integer to End of Array 4. Remove Integer from Array Using its Index 5. Print out Current Array 6. Quit Select an Option: 2 The number at which Index would you like to modify?: 19 What Value do you want to replace it with?: 1001 The value at index 19 was originally 20 and is now 1001

MENU: 1. Find Index of Desired Integer in Array

```
MENU:
1. Find Index of Desired Integer in Array

    Modify Value of Integer in Array Using its Index
    Add New Integer to End of Array
    Remove Integer from Array Using its Index

5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 1001 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 4
3 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 8
3 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102
                         MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 6
C:\Users\13146\source\repos\assignment-1_data-structures\x64\Debug\assignment-1_data-structures.exe (process 38452) exit
ed with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
```

Run #2: Showcasing finding index and removing integer options more

```
MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
                         MENU:
1. Find Index of Desired Integer in Array

    Modify Value of Integer in Array Using its Index
    Add New Integer to End of Array

4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 4
The number at which Index would you like to remove?: 19
Number sucessfully removed.
```

```
MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 5
Current Array:
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84
85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
                            MENU:
1. Find Index of Desired Integer in Array
2. Modify Value of Integer in Array Using its Index
3. Add New Integer to End of Array
4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 1
Enter Desired Integer: 80
The Desired Integer is found at index: 78
```

^^Index is 78 instead of 79 because we removed an element before 80

```
MENU:
1. Find Index of Desired Integer in Array

    Modify Value of Integer in Array Using its Index
    Add New Integer to End of Array

4. Remove Integer from Array Using its Index
5. Print out Current Array
6. Quit
Select an Option: 1
Enter Desired Integer: 17
The Desired Integer is found at index: 16
                        MENU:
MENU:

1. Find Index of Desired Integer in Array

2. Modify Value of Integer in Array Using its Index

3. Add New Integer to End of Array

4. Remove Integer from Array Using its Index

5. Print out Current Array
6. Quit
Select an Option: 6
C:\Users\13146\source\repos\assignment-1_data-structures\x64\Debug\assignment-1_data-structures.exe (process 20228) exit
ed with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window
```