Run 1: cap =8

```
clang++-7 -pthread -std=c++17 -o main BinarySearchTree.cpp NonSortedArray.cpp SortedArray.cp
./main
The content of the test case vector:
5 29 9 25 1 21 13 17
Adding 5
Sorted Array        0 comparisons       0 shifts
Adding 29
Sorted Array        0 comparisons       0 shifts
Adding 9
Sorted Array        1 comparisons       1 shifts
Adding 25
Sorted Array        1 comparisons       1 shifts
Adding 1
Sorted Array        4 comparisons       4 shifts
Adding 21
Sorted Array        2 comparisons       2 shifts
Adding 13
Sorted Array        3 comparisons       3 shifts
Adding 17
Sorted Array        3 comparisons       3 shifts


1
5
9
13
17
21
25
29
Values of the sorted array: 1 5 9 13 17 21 25 29
Values of the non sorted array: 5 29 9 25 1 21 13 17

Searching for 11
Sorted Array        4 comparisons   not found
Non Sorted Array    8 comparisons   not found
Searching for 4
Sorted Array        3 comparisons   not found
Non Sorted Array    8 comparisons   not found
Searching for 7
Sorted Array        3 comparisons   not found
Non Sorted Array    8 comparisons   not found
Searching for 5
Sorted Array        2 comparisons   found
Non Sorted Array    1 comparisons   found
```

```
Adding 35
Adding 18
Adding 14
Before operator =, bstCopy:
14
18
35
In operator=, first release the nodes in the invoking object:
Delete: 14
Delete: 18
Delete: 35

Now copy the nodes from the parameter object:
Created node:   5
Created node:   1
Created node:   29
Created node:   9
Created node:   25
Created node:   21
Created node:   13
Created node:   17

After =, adding 50 to the copy, Adding 85 to the original, After updating,
1
5
9
13
17
21
25
29
85
the copy:
1
5
9
13
17
21
25
29
50
```

```
End of the program is reached. The BSTs are to be destructed.
Releasing nodes in the order of:
Delete: 1
Delete: 17
Delete: 13
Delete: 21
Delete: 25
Delete: 9
Delete: 50
Delete: 29
Delete: 5

Releasing nodes in the order of:
Delete: 1
Delete: 17
Delete: 13
Delete: 21
Delete: 25
Delete: 9
Delete: 85
Delete: 29
Delete: 5
```

Run 2 cap = 9

```
The content of the test case vector:
25 1 17 9 5 21 29 13 33
Adding 25
Sorted Array        0 comparisons       0 shifts
Adding 1
Sorted Array        1 comparisons       1 shifts
Adding 17
Sorted Array        1 comparisons       1 shifts
Adding 9
Sorted Array        2 comparisons       2 shifts
Adding 5
Sorted Array        3 comparisons       3 shifts
Adding 21
Sorted Array        1 comparisons       1 shifts
Adding 29
Sorted Array        0 comparisons       0 shifts
Adding 13
Sorted Array        4 comparisons       4 shifts
Adding 33
Sorted Array        0 comparisons       0 shifts


1
5
9
13
17
21
25
29
33
Values of the sorted array: 1 5 9 13 17 21 25 29 33
Values of the non sorted array: 25 1 17 9 5 21 29 13 33

Searching for 8
Sorted Array        3 comparisons   not found
Non Sorted Array    9 comparisons   not found
Searching for 12
Sorted Array        4 comparisons   not found
Non Sorted Array    9 comparisons   not found
```

```
Adding 10
Adding 16
Adding 12
Before operator =, bstCopy:
10
12
16
In operator=, first release the nodes in the invoking object:
Delete: 12
Delete: 16
Delete: 10

Now copy the nodes from the parameter object:
Created node:   25
Created node:   1
Created node:   17
Created node:   9
Created node:   5
Created node:   13
Created node:   21
Created node:   29
Created node:   33

After =, adding 50 to the copy, Adding 85 to the original, After updating, the original:
1
5
9
13
17
21
25
29
33
85
the copy:
1
5
9
13
17
21
25
29
33
50
```

```
End of the program is reached. The BSTs are to be destructed.
Releasing nodes in the order of:
Delete: 5
Delete: 13
Delete: 9
Delete: 21
Delete: 17
Delete: 1
Delete: 50
Delete: 33
Delete: 29
Delete: 25

Releasing nodes in the order of:
Delete: 5
Delete: 13
Delete: 9
Delete: 21
Delete: 17
Delete: 1
Delete: 85
Delete: 33
Delete: 29
Delete: 25

❯
```

Run 3: cap =7

```
13 7 11 1 3 9 5
Adding 13
Sorted Array        0 comparisons       0 shifts
Adding 7
Sorted Array        1 comparisons       1 shifts
Adding 11
Sorted Array        1 comparisons       1 shifts
Adding 1
Sorted Array        3 comparisons       3 shifts
Adding 3
Sorted Array        3 comparisons       3 shifts
Adding 9
Sorted Array        2 comparisons       2 shifts
Adding 5
Sorted Array        4 comparisons       4 shifts


1
3
5
7
9
11
13
Values of the sorted array: 1 3 5 7 9 11 13
Values of the non sorted array: 13 7 11 1 3 9 5

Searching for 3
Sorted Array        2 comparisons   found
Non Sorted Array    5 comparisons   found
Searching for 12
Sorted Array        3 comparisons   not found
Non Sorted Array    7 comparisons   not found
Searching for 1
Sorted Array        3 comparisons   found
Non Sorted Array    4 comparisons   found
Searching for 1
Sorted Array        3 comparisons   found
Non Sorted Array    4 comparisons   found
Searching for 11
Sorted Array        2 comparisons   found
Non Sorted Array    3 comparisons   found
Searching for 11
Sorted Array        2 comparisons   found
Non Sorted Array    3 comparisons   found
```

```
Adding 18
Adding 12
Adding 15
Before operator =, bstCopy:
12
15
18
In operator=, first release the nodes in the invoking object:
Delete: 15
Delete: 12
Delete: 18

Now copy the nodes from the parameter object:
Created node:   13
Created node:   7
Created node:   1
Created node:   3
Created node:   5
Created node:   11
Created node:   9

After =, adding 50 to the copy, Adding 85 to the original, After updating, the original:
1
3
5
7
9
11
13
85
the copy:
1
3
5
7
9
11
13
50
```

```
End of the program is reached. The BSTs are to be destructed.
Releasing nodes in the order of:
Delete: 5
Delete: 3
Delete: 1
Delete: 9
Delete: 11
Delete: 7
Delete: 50
Delete: 13

Releasing nodes in the order of:
Delete: 5
Delete: 3
Delete: 1
Delete: 9
Delete: 11
Delete: 7
Delete: 85
Delete: 13
```