Instructions to run the code

- In Eclipse, place the java files within the default package.
- Place the data.txt file in the local desktop location.
- Run the code.
- Please enter the below details when requested in the console:
  - Enter the input file (data.txt) location
  - Enter the number of inputs present in the file
  - Choose one of the simple sorting methods i.e. selection sort, insertion sort, bubble sort
  - Choose one of the O(Nlog2N) sorts (Quick sort, Merge Sort, Heap sort).
  - Enter the number to be searched within the array.

Results

i. Selection sort and merge sorting is selected in the first run by the user

```
<terminated> ProjectMain (3) [Java Application] C:\Users\vaish\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220805-1047\jre\bi
Project for comparing complexities of sorting and searching alogrithms

Enter the path where file is placed
C:\Users\vaish\Downloads\data.txt
Please enter the number of inputs present in the file to be uploaded
124

Printing the data provided in the file
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]
 [ 108 ]  [ 109 ]  [ 110 ]  [ 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 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the simple sorting techniques for sorting the data provided
1. Selection sorting
2. Insertion sorting
3. Bubble sorting
1
selection sorting compare count is 7626


Printing the sorted data for the values provided in the file
Selection sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the better sorting techniques for sorting the data provided
1. Merge sorting
2. Quick sorting
3. Heap sorting
1

Merge sorting compare count is 740

Printing the sorted data for the values provided in the file
Merge sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]

Please enter the number to be searched within the array
999
dataCheck is present in 123 index of the array
target is present at location 123
Hashfunction Value for the 999 is 123
```

ii. Insertion sort and quick sort are selected in the second run by the user

```
Console × ProjectMain.java
<terminated> ProjectMain (3) [Java Application] C:\Users\vaish\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220805-1047\jre\bin
Project for comparing complexities of sorting and searching alogrithms

Enter the path where file is placed
C:\Users\vaish\Downloads\data.txt
Please enter the number of inputs present in the file to be uploaded
124

Printing the data provided in the file
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]
 [ 108 ]  [ 109 ]  [ 110 ]  [ 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 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the simple sorting techniques for sorting the data provided
1. Selection sorting
2. Insertion sorting
3. Bubble sorting
2

insertion sorting compare count is 4551


Printing the sorted data for the values provided in the file
Insertion sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the better sorting techniques for sorting the data provided
1. Merge sorting
2. Quick sorting
3. Heap sorting
2

Quick sorting compare count is 7626

Printing the sorted data for the values provided in the file
Quick sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]

Please enter the number to be searched within the array
999
dataCheck is present in 123 index of the array
target is present at location 123
Hashfunction Value for the 999 is 123
```

iii. Bubble sort and Heap sort are selected in the second run by the user

```
Console × ProjectMain.java
<terminated> ProjectMain (3) [Java Application] C:\Users\vaish\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v2022
Project for comparing complexities of sorting and searching alogrithms

Enter the path where file is placed
C:\Users\vaish\Downloads\data.txt
Please enter the number of inputs present in the file to be uploaded
124

Printing the data provided in the file
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]
 [ 108 ]  [ 109 ]  [ 110 ]  [ 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 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the simple sorting techniques for sorting the data provided
1. Selection sorting
2. Insertion sorting
3. Bubble sorting
3

Bubble sorting compare count is 7626


Printing the sorted data for the values provided in the file
Bubble sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]
```

```
Please choose the one of corresponding number of the better sorting techniques for sorting the data provided
1. Merge sorting
2. Quick sorting
3. Heap sorting
3

Heap sorting compare count is 1053

Printing the sorted data for the values provided in the file
Heap sorting
 [ 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 ]  [ 103 ]  [ 104 ]  [ 105 ]  [ 106 ]  [ 107 ]  [ 108 ]  [ 109 ]  [ 110 ]
 [ 111 ]  [ 112 ]  [ 113 ]  [ 114 ]  [ 115 ]  [ 116 ]  [ 117 ]  [ 118 ]  [ 119 ]  [ 120 ]
 [ 121 ]  [ 122 ]  [ 123 ]  [ 999 ]

Please enter the number to be searched within the array
999
dataCheck is present in 123 index of the array
target is present at location 123
Hashfunction Value for the 999 is 123
```