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Daniel Regan
CSC6013
Week 4 Project Output
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1)

- dregan17@Danny-Mac Week 4 % /opt/homebrew/bin/python3
  "/Users/dregan17/Desktop/MC Code/6013 Algorithms and Discrete
  Structures/Week 4/Regan_Week4_Project/binarySearch.py"

```
Subarray: [99, 67, 56, 51, 44, 39, 38, 23, 21, 17, 11, 2]. Mid = 39
Subarray: [99, 67, 56, 51, 44]. Mid = 56
Subarray: [51, 44]. Mid = 51
Subarray: [44]. Mid = 44
```
4

```
Subarray: [99, 67, 56, 51, 44, 39, 38, 23, 21, 17, 11, 2]. Mid = 39
Subarray: [99, 67, 56, 51, 44]. Mid = 56
```
2

```
Subarray: [99, 67, 56, 51, 44, 39, 38, 23, 21, 17, 11, 2]. Mid = 39
Subarray: [99, 67, 56, 51, 44]. Mid = 56
Subarray: [51, 44]. Mid = 51
Subarray: [44]. Mid = 44
Subarray: []. Mid = 44
```
None

```
Subarray: [9, 7, 6, 4, 2, 0, -1, -3, -5, -8, -9]. Mid = 0
Subarray: [-1, -3, -5, -8, -9]. Mid = -5
Subarray: [-1, -3]. Mid = -1
```
6

```
Subarray: [9, 7, 6, 4, 2, 0, -1, -3, -5, -8, -9]. Mid = 0
Subarray: [-1, -3, -5, -8, -9]. Mid = -5
Subarray: [-8, -9]. Mid = -9
Subarray: [-8]. Mid = -8
Subarray: []. Mid = -5
```
None

2)

- dregan17@Danny-Mac Week 4 % /opt/homebrew/bin/python3
  "/Users/dregan17/Desktop/MC Code/6013 Algorithms and Discrete
  Structures/Week 4/Regan_Week4_Project/minElement.py"

```
START = 44, END = 52
START = 44, END = 20
START = 44, END = 77
START = 44, END = 63
START = 44, END = 44
START = 63, END = 63
Returning 44
START = 77, END = 77
Returning 44
START = 17, END = 20
START = 17, END = 17
START = 20, END = 20
Returning 17
Returning 17
START = 99, END = 52
START = 99, END = 6
START = 99, END = 84
START = 99, END = 99
START = 84, END = 84
Returning 84
START = 6, END = 6
Returning 6
START = 39, END = 52
START = 39, END = 39
START = 52, END = 52
Returning 39
Returning 6
Returning 6
7

START = 52, END = 63
START = 52, END = 20
START = 52, END = 6
START = 52, END = 84
START = 52, END = 52
START = 84, END = 84
Returning 52
START = 6, END = 6
Returning 6
START = 39, END = 20
START = 39, END = 39
```

```
START = 20, END = 20
Returning 20
Returning 6
START = 77, END = 63
START = 77, END = 99
START = 77, END = 17
START = 77, END = 77
START = 17, END = 17
Returning 17
START = 99, END = 99
Returning 17
START = 44, END = 63
START = 44, END = 44
START = 63, END = 63
Returning 44
Returning 17
Returning 6
```
2

```
START = 6, END = 99
START = 6, END = 44
START = 6, END = 20
START = 6, END = 17
START = 6, END = 6
START = 17, END = 17
Returning 6
START = 20, END = 20
Returning 6
START = 39, END = 44
START = 39, END = 39
START = 44, END = 44
Returning 39
Returning 6
START = 52, END = 99
START = 52, END = 77
START = 52, END = 63
START = 52, END = 52
START = 63, END = 63
Returning 52
START = 77, END = 77
Returning 52
START = 84, END = 99
START = 84, END = 84
START = 99, END = 99
Returning 84
```

```
Returning 52
Returning 6
0
```