

DESIGN ANALYSIS AND ALGORITHMS

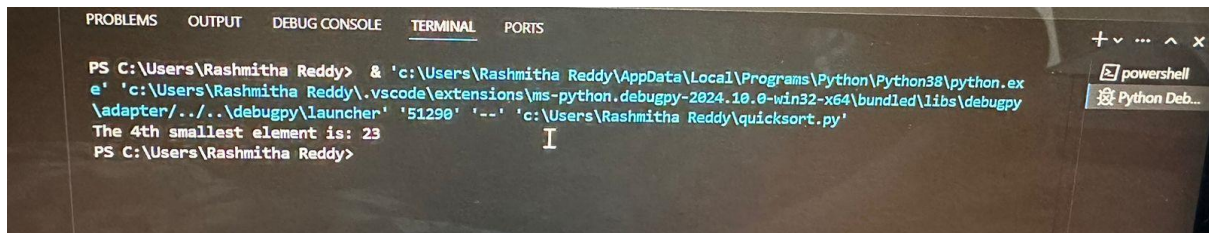
HANDS ON-8

RASHMITHA RAMASANI

ID:1002233393

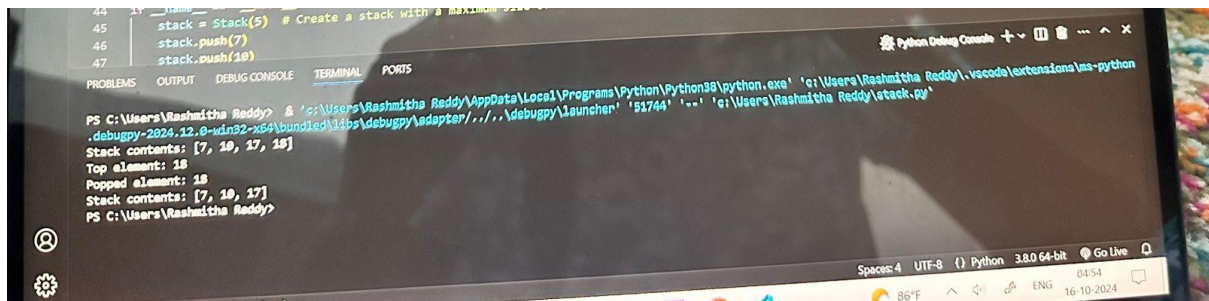
OUTPUTS:

A. QUICKSORT



```
PS C:\Users\Rashmitha Reddy> & 'c:\Users\Rashmitha Reddy\AppData\Local\Programs\Python\Python38\python.exe' 'c:\Users\Rashmitha Reddy\.vscode\extensions\ms-python.debugpy-2024.10.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '51290' '--' 'c:\Users\Rashmitha Reddy\quicksort.py'
The 4th smallest element is: 23
PS C:\Users\Rashmitha Reddy>
```

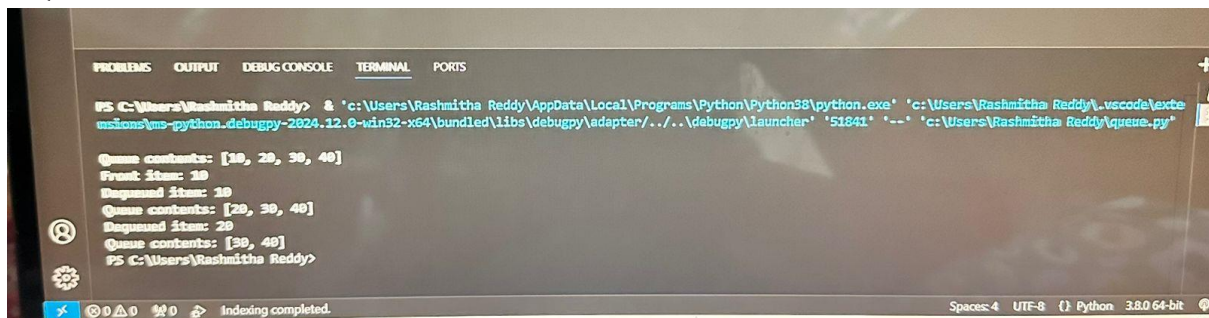
B. STACK



```
stack = Stack(5) # Create a stack with a maximum size of 5
stack.push(7)
stack.push(10)

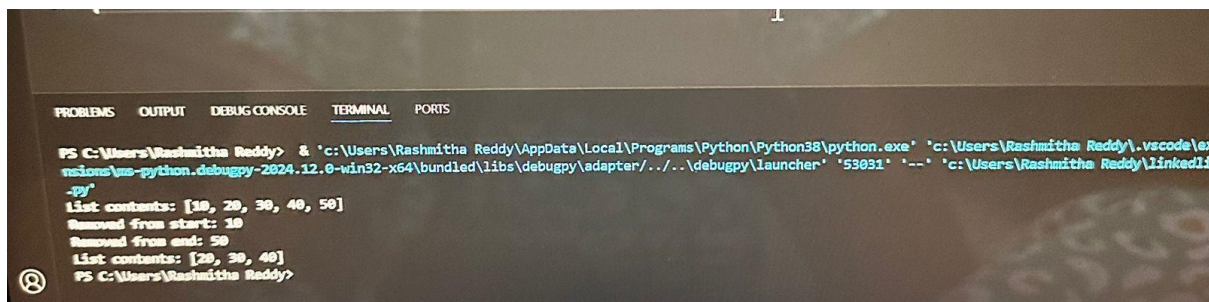
PS C:\Users\Rashmitha Reddy> & 'c:\Users\Rashmitha Reddy\AppData\Local\Programs\Python\Python38\python.exe' 'c:\Users\Rashmitha Reddy\.vscode\extensions\ms-python.debugpy-2024.12.0-win32-x64\bundled\libs\debugpy\adapter\...\debugpy\launcher' '51744' '--' 'c:\Users\Rashmitha Reddy\stack.py'
Stack contents: [7, 10, 17, 18]
Top element: 18
Popped element: 18
Stack contents: [7, 10, 17]
PS C:\Users\Rashmitha Reddy>
```

C. QUEUE



```
Queue contents: [10, 20, 30, 40]
Front item: 10
Rear item: 10
Queue contents: [20, 30, 40]
Rear item: 20
Queue contents: [30, 40]
PS C:\Users\Rashmitha Reddy>
```

D. LINKEDLIST



```
List contents: [10, 20, 30, 40, 50]
Removed from start: 10
Removed from end: 50
List contents: [20, 30, 40]
PS C:\Users\Rashmitha Reddy>
```