

This program has a menu loop that works with the chosen data structure. Here is the “stack” options and some of its functions:

```
Choose your data structure:
Stack: S
Linked List: L
Enter choice: s

You chose stack.

Check if stack is empty: E
Push values onto stack: P
Remove element from stack: R
Find top of stack: T
Find average of values in stack: A
Print stack: S
Enter choice: p

Enter value to push onto stack: 1

Check if stack is empty: E
Push values onto stack: P
Remove element from stack: R
Find top of stack: T
Find average of values in stack: A
Print stack: S
Enter choice: p

Enter value to push onto stack: 2

Check if stack is empty: E
Push values onto stack: P
Remove element from stack: R
Find top of stack: T
Find average of values in stack: A
Print stack: S
Enter choice: s

2
1

Check if stack is empty: E
Push values onto stack: P
Remove element from stack: R
Find top of stack: T
Find average of values in stack: A
Print stack: S
Enter choice: t

Top of stack: 2
```

Here is the “linked list” option and some of its functions being used:

```
Choose your data structure:
Stack: S
Linked List: L
Enter choice: l

You chose linked list.

Print the list: P
Push value to the back of the list: B
Push value to the front of the list: F
Pop value from the front of the list: O
Pop value from the back of the list: K
Get the front value of the list: T
Get the back value of the list: A
Check if the list is empty: E
Insert value at index in the list: I
Remove value at index from the list: R
Find index of value in the list: N
Enter choice: b

Enter value to push to the back: 1

Print the list: P
Push value to the back of the list: B
Push value to the front of the list: F
Pop value from the front of the list: O
Pop value from the back of the list: K
Get the front value of the list: T
Get the back value of the list: A
Check if the list is empty: E
Insert value at index in the list: I
Remove value at index from the list: R
Find index of value in the list: N
Enter choice: b

Enter value to push to the back: 1

Print the list: P
Push value to the back of the list: B
Push value to the front of the list: F
Pop value from the front of the list: O
Pop value from the back of the list: K
Get the front value of the list: T
Get the back value of the list: A
Check if the list is empty: E
Insert value at index in the list: I
Remove value at index from the list: R
Find index of value in the list: N
Enter choice: p

Printing the list:
1 1
```