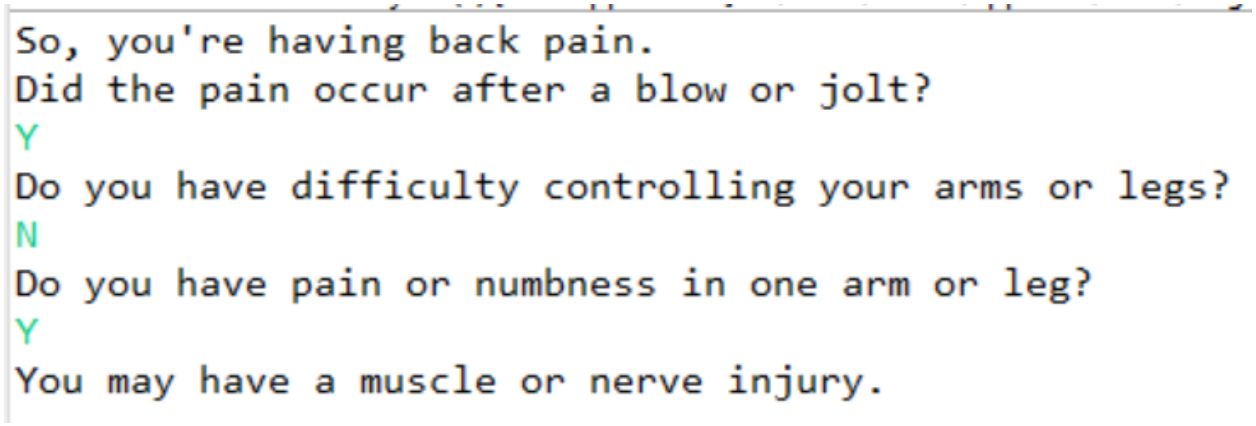
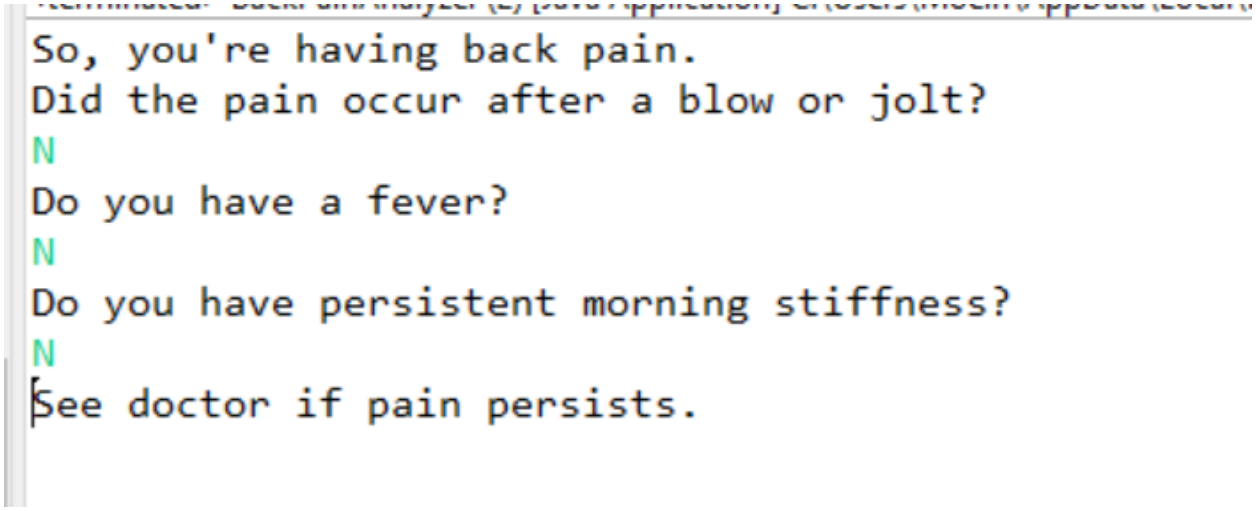
PART A

Back Pain Analyzer Test Case

Default test case on 19.6 Listing of Textbook



Test Case 2



Test Case 3

```
So, you're having back pain.
Did the pain occur after a blow or jolt?
Y
Do you have difficulty controlling your arms or legs?
Y
Emergency! You may have damaged your spinal cord.
```

Customer Service ChatBot Test Cases

Test Case 1

```
Welcome to Customer Support
Are you a current customer?
N
Would you like to sign up?
N
Are you interested to sign up in the future?
Y
Looking forward to hear back from you soon
```

Test Case 2

```
Welcome to Customer Support
Are you a current customer?
N
Would you like to sign up?
Y
Would you like annual subsription special offer?
Y
Perfect You are registered for special annual promotional subscripiton
```

Test Case 3

```
Welcome to Customer Support
Are you a current customer?
Y
Would you like to update your account information?
Y
Are you updating your payment information?
N
Someone from Customer Account Services contact you soon
```

PART B

Testing Linked Binary Search Tree Missing Method

```
The Search Tree is Empty: true
Search Binary Tree:
------------------
1
2
4
7
9
15
15
23
28
36

Height of Tree: 6
The Maximum Element Value: 36
The Minimum Element Value: 1
Left Subtree:
------------------

Right Subtree:
------------------
2
4
7
9
15
15
23
28
36

Search Binary Tree After Removals (All Occurance of 15, Max, Man and Value 4):
---------------------------
2
7
9
23
28
```

Test Case 1 Degenerate Tree

```
DEGENERATE TREE TEST CASE 1
---------------------------
The Hight of the Degenerate Tree: 4
The Hight of the Degenerate Tree After BruteForceBalance: 2
Left Subtree:
------------------
6
7
12

Right Subtree:
------------------
21
30
31

Root of Tree:
------------------
13
```

Test Case 2 Degenerate Tree

```
DEGENERATE TREE TEST CASE 2
---------------------------
The Hight of the Degenerate Tree: 4
The Hight of the Degenerate Tree After BruteForceBalance: 2
Left Subtree:
------------------
15
22
38

Right Subtree:
------------------
54
65
66

Root of Tree:
------------------
39
```

Test Case 2 Height Before and After adding 5 Element to Case 2 after Being Balanced

```
The Hight of Balance Tree after adding Five Elemens: 5
The Hight of Tree Again After BruteForceBalance: 3
```