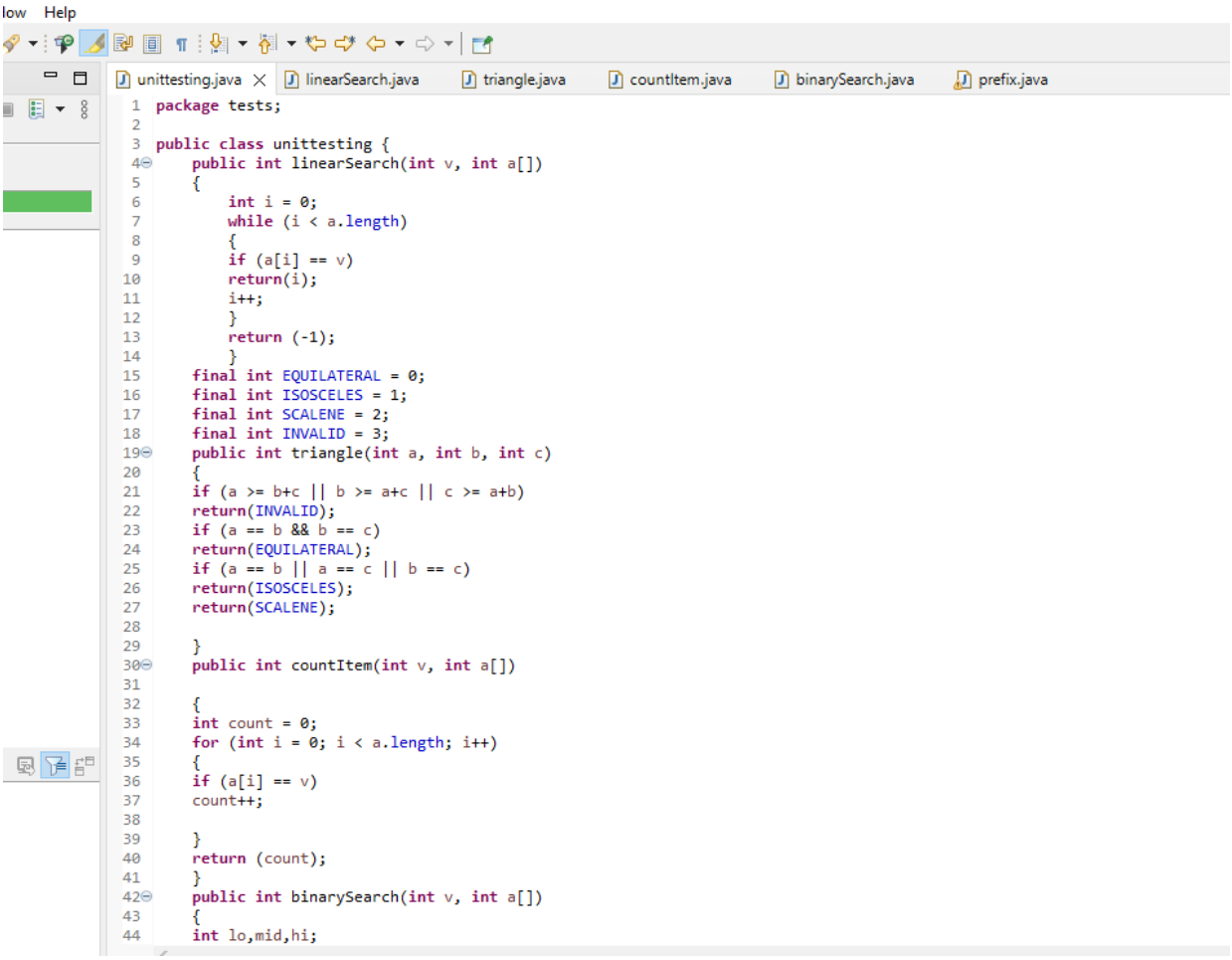
IT314 Software Engineering

Lab 7

Name: Noopur Chaudhary
ID: 202001091

Code:



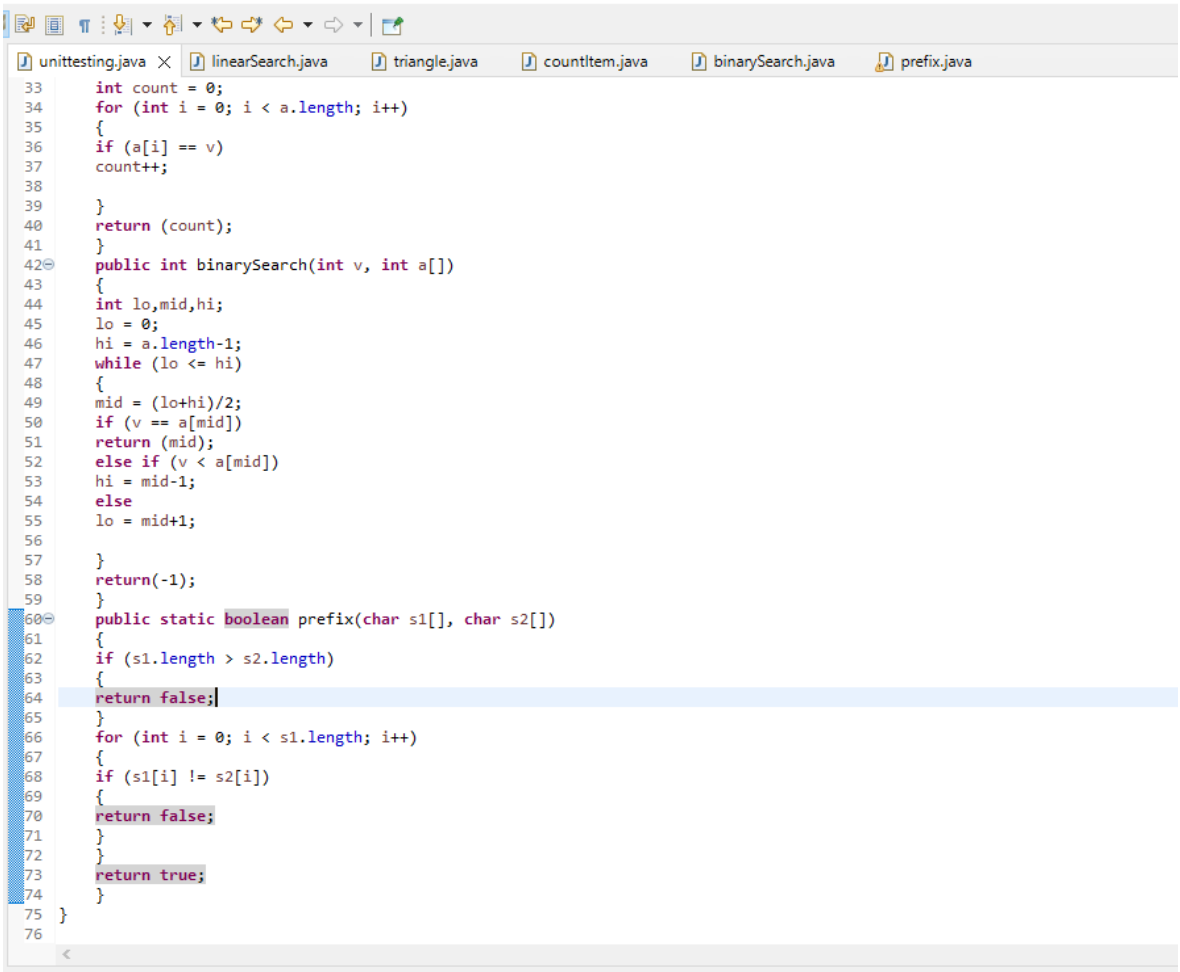
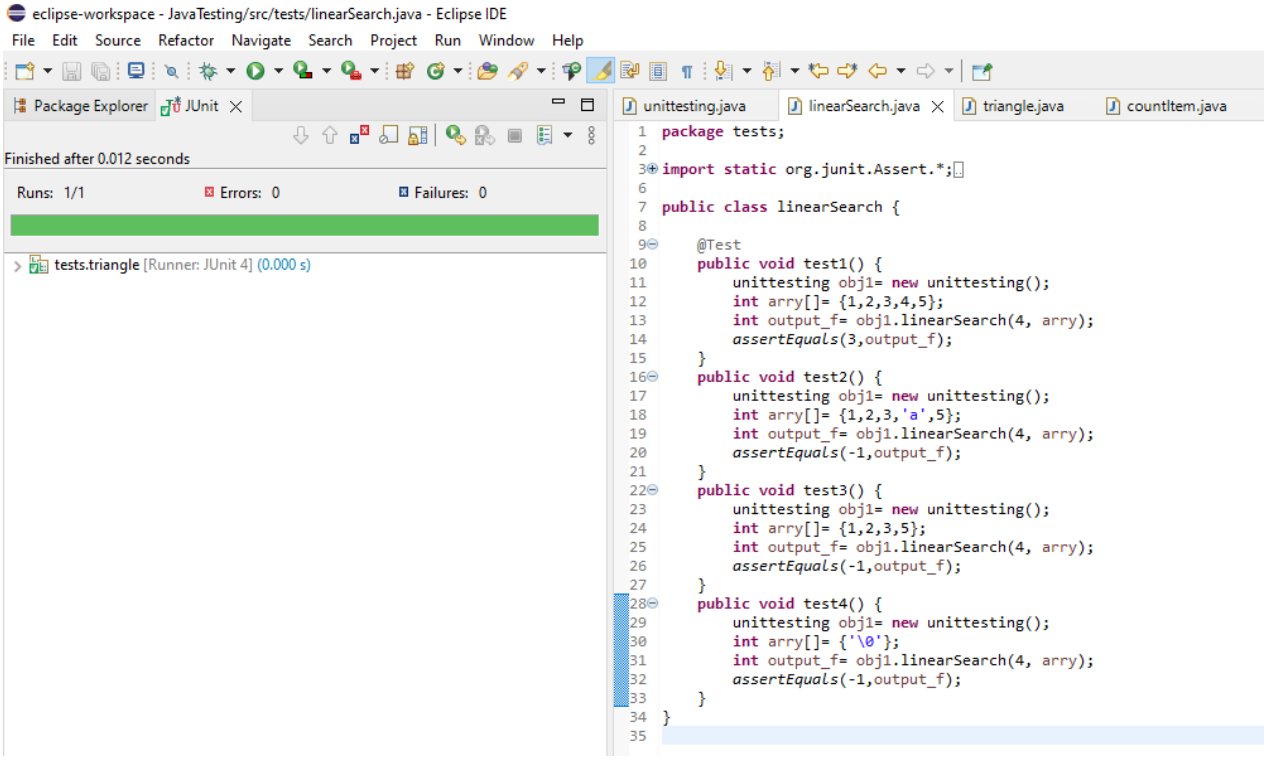
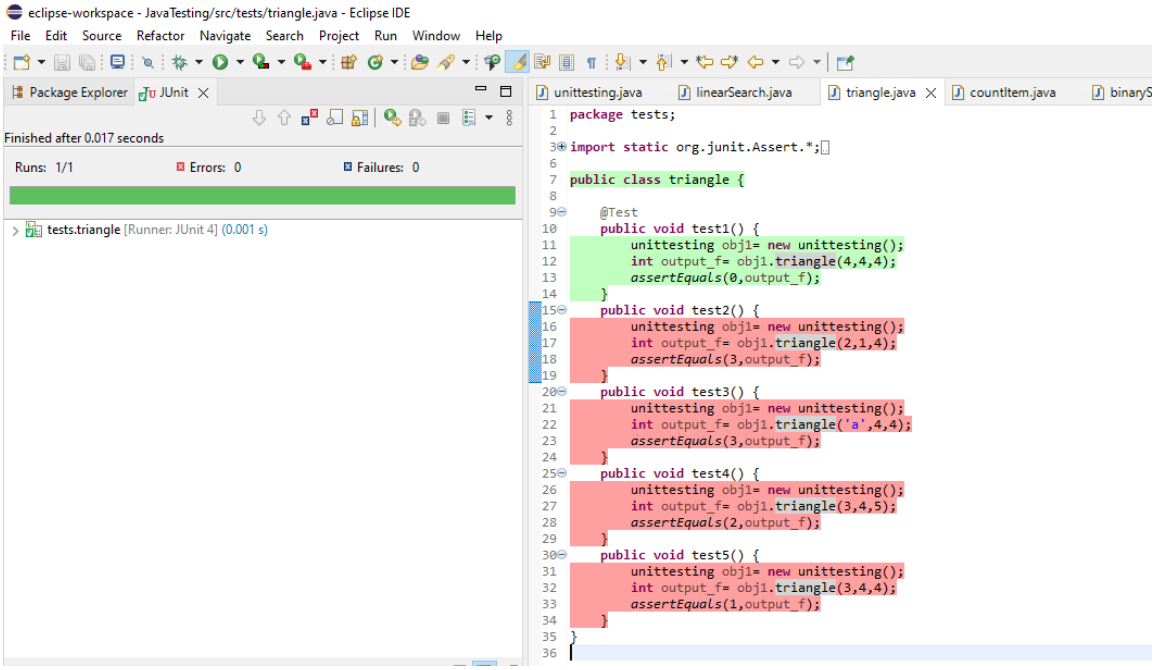

unittesting.java
linearSearch.java
triangle.java
countItem.java
binarySearch.java
prefix.java
33 int count = 0;
34 for (int i = 0; i < a.length; i++)
35 {
36 if (a[i] == v)
37 count++;
38
39 }
40 return (count);
41 }
42 public int binarySearch(int v, int a[])
43 {
44 int lo,mid,hi;
45 lo = 0;
46 hi = a.length-1;
47 while (lo <= hi)
48 {
49 mid = (lo+hi)/2;
50 if (v == a[mid])
51 return (mid);
52 else if (v < a[mid])
53 hi = mid-1;
54 else
55 lo = mid+1;
56
57 }
58 return(-1);
59 }
60 public static boolean prefix(char s1[], char s2[])
61 {
62 if (s1.length > s2.length)
63 {
64 return false;
65 }
66 for (int i = 0; i < s1.length; i++)
67 {
68 if (s1[i] != s2[i])
69 {
70 return false;
71 }
72 }
73 return true;
74 }
75 }
76

Table for P1:



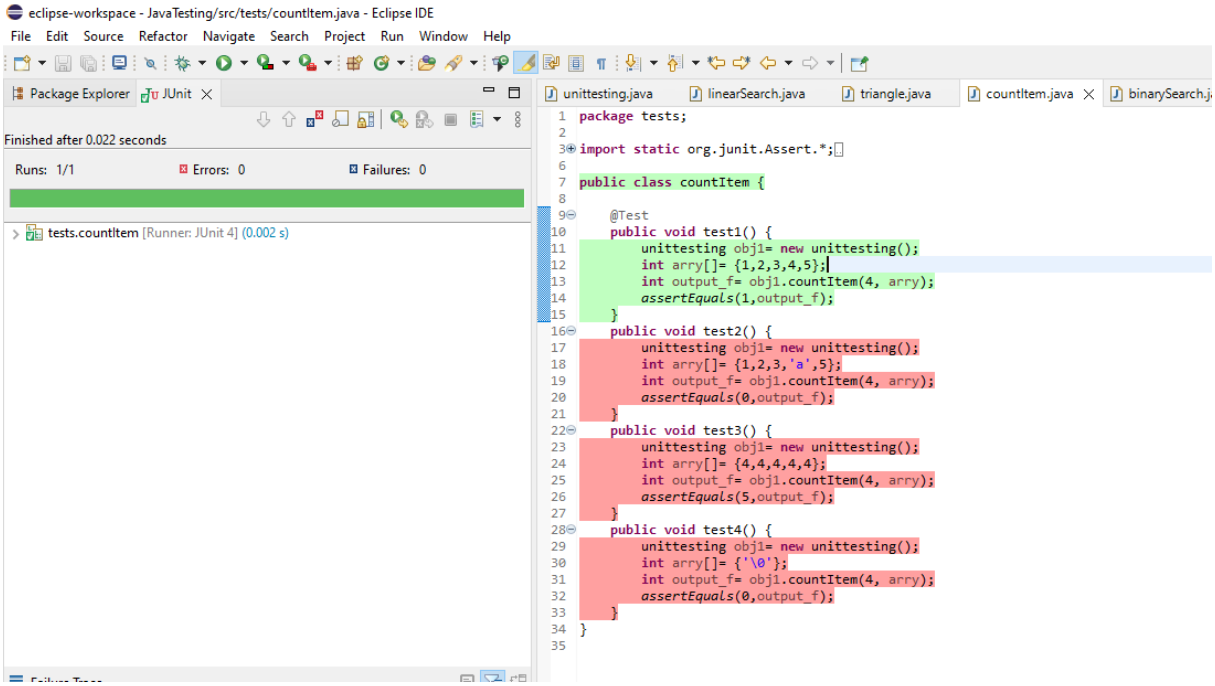
Values	Equivalent Output	Expected Output
4,{1,2,3,4}	3	3
4,{1,2,3,'a',5}	-1	-1
4, {1,2,3,5}	-1	-1
4, {'\0'}	-1	-1

Table for P2:



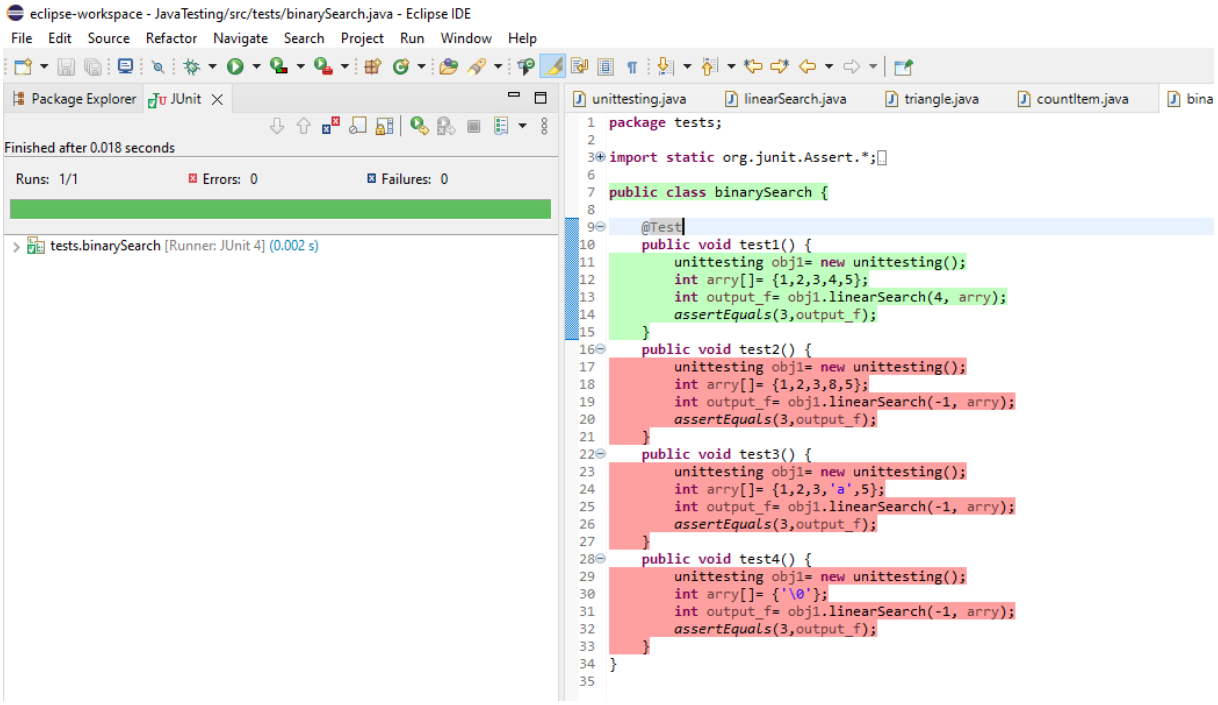
Values	Equivalent Output	Expected Output
4, 4, 4	0	0
2, 1, 4	3	3
‘a’, 4, 4	3	3
3, 4, 5	2	2
3, 4, 4	1	1

Table for P3:



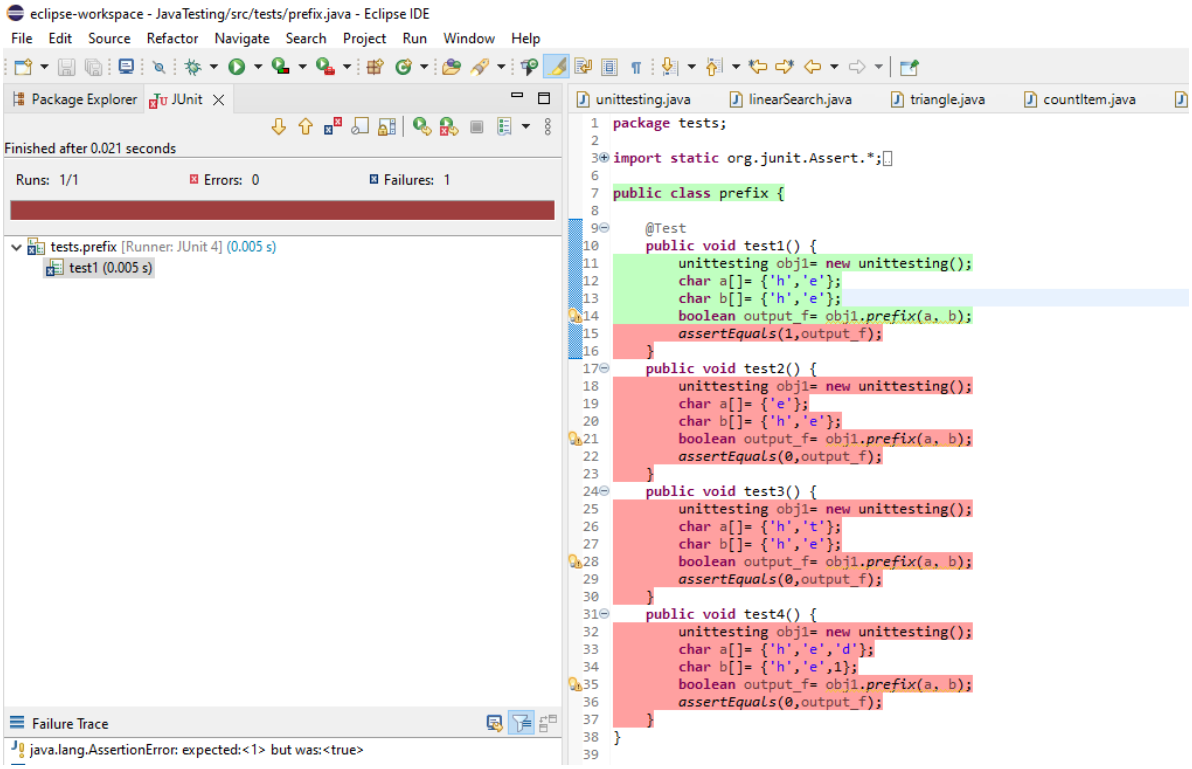
Values	Equivalent Output	Expected Output
4, {1, 2, 3, 4, 5}	1	1
4, {1, 2, 3, ‘a’, 5}	0	0
4, {4, 4, 4, 4, 4}	5	5
4, {‘\0’}	0	0

Table for P4:



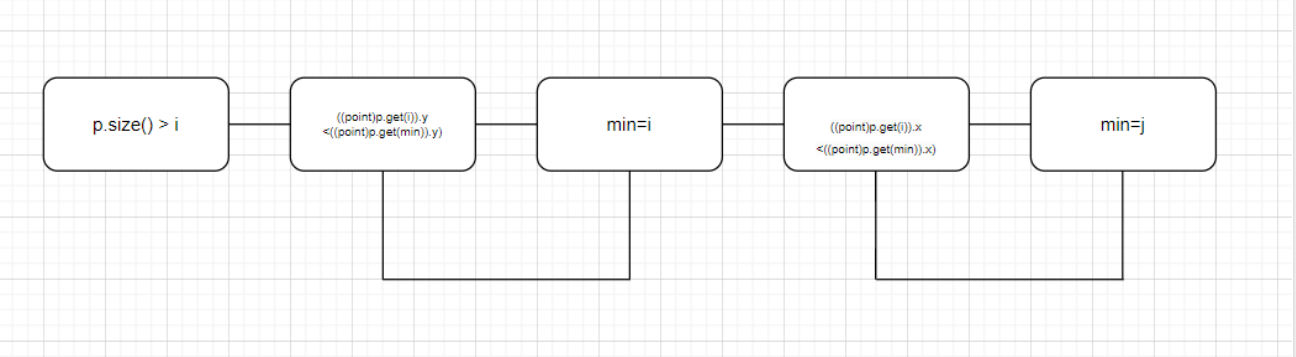
Values	Equivalent Output	Expected Output
4, {1, 2, 3, 4, 5}	3	1
-1, {1, 2, 3, 8, 5}	3	2
-1, {1, 2, 3, ‘a’, 5}	3	0
-1, {‘\0’}	3	3

Table for P5:



Values	Equivalent Output	Expected Output
{h, e}, {h, e}	1	1
{e}, {h, e}	0	0
{h, t}, {h, e}	0	0
{h, e, d}, {h, e, 1}	0	0

Section B



2. a.Statement Coverage test set:
Test Case 1: p.size() > point i.e. 2 is false
Test Case 2: p.size() > 2 is true

b. Branch Coverage Test Set:
Test Case 1: p.size() > point i.e. 2 is false
Test Case 2: p.size() > 2 is true and loop is executed
Test Case 3: p.size() > 2 is true and loop is not executed

c. Basic Condition Coverage Test Set:
Test Case 1: p.size() > point i.e. 2 is false
Test Case 2: p.size() > 2 is true and loop is executed
Test Case 3: p.size() > 2 is true and loop is not executed
Test Case 4: p.size() > 2 is true and loop is executed twice