Part 4:

A.

|  |  |  |
| --- | --- | --- |
| **Output** | **User Input** | **Expected Result** |
| The string is “This is a string”. Ask the user for the letters they wanted to be counted after the user inputting 4 | tia | t) 2  i) 3  a) 1 |

B. All test cases worked

C. No memory leak, but when I tried to break it:

==7922== Memcheck, a memory error detector

==7922== Copyright (C) 2002-2017, and GNU GPL'd, by Julian Seward et al.

==7922== Using Valgrind-3.14.0 and LibVEX; rerun with -h for copyright info

==7922== Command: a.out

==7922==

Please input a sentence or a paragraph:This is going to have a memory leak.

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

4

Please input a string of characters:mig

m) 2

i) 3

g) 2

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

6

==7922==

==7922== HEAP SUMMARY:

==7922== in use at exit: 12 bytes in 1 blocks

==7922== total heap usage: 1 allocs, 0 frees, 12 bytes allocated

==7922==

==7922== LEAK SUMMARY:

==7922== definitely lost: 12 bytes in 1 blocks

==7922== indirectly lost: 0 bytes in 0 blocks

==7922== possibly lost: 0 bytes in 0 blocks

==7922== still reachable: 0 bytes in 0 blocks

==7922== suppressed: 0 bytes in 0 blocks

==7922== Rerun with --leak-check=full to see details of leaked memory

==7922==

==7922== For counts of detected and suppressed errors, rerun with: -v

==7922== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)

D. I deleted the line that says “delete [] frequency”

E. Coming up with the fifth thing that I can do for the string.

Part 5:

Please input a sentence or a paragraph:this is a random string

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

1

# vowels != # consonants

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

2

Please enter a letter in the string:t

Please enter a letter you want to swap (t) with:a

ahis is a random saring

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

3

gniras modnar a si siha

ahis is a random saring

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

4

Please input a string of characters:aom

a) 4

o) 1

m) 1

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

5

a i s a r n o a i g

h s i a d m s r n

1. Check if vowels = consonants

2. Letter swap

3. Reverse the string

4. Compute character frequency distribution

5. Split the string into 2 different strings by dicing it.

6. Quit

6

One improvement I would make is to make the instructions more clear when asking for input.