

Name: _____

UTK ID: _____

Question 1

Part A: Circle the answer: A B C D E F G H I J K L M N O P

Part B: Circle the answer: A B C D E F G H I J

Question 2

Reason for the segmentation violation:

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Question 3

Scenario 1: Circle the answer: a b c d e f g h i j k l m n o

Scenario 2: Circle the answer: a b c d e f g h i j k l m n o

Scenario 3: Circle the answer: a b c d e f g h i j k l m n o

Scenario 4: Circle the answer: a b c d e f g h i j k l m n o

Scenario 5: Circle the answer: a b c d e f g h i j k l m n o

Scenario 6: Circle the answer: a b c d e f g h i j k l m n o

Question 4: Circle the answer

Implementation 1: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 2: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 3: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 4: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 5: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 6: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 7: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Implementation 8: 10 seconds 11 seconds 20 seconds 22 seconds 40 seconds 44 seconds > 60 seconds

Question 5: Part 1: Describe, in words, what data structures you are using to solve the problem, and what each data structure contains.

Question 5: Part 2: Write the program. Here, I'll get you started:

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```
#include <cstdio>
#include <cstdlib>
#include <map>
#include <set>
#include <string>
#include <iostream>
using namespace std;
```

```
int main()
{
```

```
}
```