

# CSE 202 Midterm 2 Part (a)

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## I. QUESTION (QUEUE) (20 POINTS)

Write a function that adds a new element after the  $K$ 'th ( $K \geq 0$ ) element of the queue. Write the function for both array and linked list implementations. You can safely assume that, there are at least  $K$  elements in the queue.

```
void insertAfterKth()
```

## II. QUESTION (BINARY SEARCH TREE) (20 POINTS)

Write a recursive function that

- puts the left child to the right if it has only left child
- puts the right child to the left if it has only right child
- does nothing if it has two children

for all nodes in a binary search tree.

```
void changeChildOfSingleton()
```

## III. QUESTION (HASHING) (20 POINTS)

Write a function that finds the minimum element in an hash table with linear probing.

```
Element<T> minimum()
```