CSE 1320.002 **Name: _____**

Exam 3 Date: 11-22-2013 **Student ID: _____**

1.
```
void search_linked_list(struct node* head, int data) {
  struct node* temp;
  int pos = 0;
  temp = head;
  while(temp!=NULL) {
        if(temp->data==data)
          printf("Found %d at position: %d\n", data, pos);
    temp = temp->next;
        pos ++;
  }
}
```

2.
```
struct node * push(struct node *head, char b[], int* count)
{
    struct node *temp = malloc( sizeof(struct node) );
    strcpy(temp->s, b);
    temp->next = head;
    *count += 1;

    return temp;
}
```

3.
```
NODE * enq(char b[])
{
    NODE *temp = malloc( sizeof(NODE) );
    strcpy(temp->s, b);
    temp->next = NULL;

    return temp;
}


NODE * deq(NODE *head)
{
    NODE *temp = head->next;
    printf("  freeing %s", head->s);
    free(head);

    return temp;
```

```
}
```

4.

```
Node* insert_iterative(Node* root, int key) {

  // create new node
  Node* temp = (Node*) malloc(sizeof(Node));
  temp->key = key;
  temp->left = NULL;
  temp->right = NULL;

  if (root==NULL) { root = temp; return root; } // trivial case

  Node* cur = root;
  Node* p = NULL;
  while(cur!=NULL) {
        p = cur;
        if(cur->key>key)
          cur = cur->left;
        else
          cur = cur->right;
  }

  if(p->key>key)
        p->left = temp;
  else
        p->right = temp;

  return root;
}
```