

**Printable View of: Exam Practice Questions****Print****Save to File****File: Sample Solutions to Practice Questions, Set 2**

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# **Computer Science 221**

## **Practice Questions - Set 2**

### **Solutions**

**Question 1**

```
int length( node* head)
{
    int count=0;
    while ( head != NULL )
    {
        count++;
        head = head->next;
    }
    return count;
}
```

**Question 2**

```
node* concat( node* list1, node* list2 )
{
    if (list1 == NULL)
        return list2;

    node* curNode = list1;
    while( curNode->next != NULL )
    {
        curNode = curNode->next;
    }

    curNode->next = list2;
    if (list2 != NULL)
    {
        list2->prev = curNode;
    }

    return list1;
}
```

**Question 3**

```
void add_ordered( node* & head, int it)
{
    node* cur = head;
    node* prev = NULL;
    while ( cur && cur->item <= it ) // find the right position
    {
        prev = cur;
        cur = cur->next;
    }
    node* p = make_node(item, NULL); // function to create/initialize new node
    if ( prev != NULL ) // insertion in the middle
```

```
{
    prev->next = p;
    p->next = cur;
}
else    // insertion at the front
{
    p->next = head;
    head = p;
}
}
```

#### Question 4

```
int count( node* root )
{
    if ( root == NULL )
        return 0;
    else
        return ( count(root->left) +
                  count(root->right) + 1 );
}
```

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