Create a project called `lab7` (if using Visual Studio). Copy the source file that (one of) your team members completed for Lab 6 into `lab7.cpp` as your starting point.

Your group will add the following member function to your `BSTNode<T>` class definition:

```
void listify(list<T>&) const;
```

Your `listify` function may be invoked as follows:

```
BSTNode<int> iroot;
// ...insert data into iroot...
list<int> irootList;
iroot.listify(irootList);
```

The result of the `listify` member function invocation shown above is to perform an in-order traversal of the BST `iroot`, inserting the data of each BST node into the list `irootList` in the proper order.

Additionally, your team will modify the `main()` driver program by adding the following:

1. Create `irootList` from `iroot` as above;

2. List the elements of `irootList` using a forward iterator, a reverse iterator, and ranged `for` loop;

3. Repeat steps 1-2 for `sroot`;

4. Create `BSTNode<int> iroot4` containing the items 1000, 2000, 3000, 4000, and 5000;

5. Create `iroot4List` from `iroot4`;

6. Create a map instance `mi` with `string` as the "`first`" element type and `list<int>` as the "`second`" element type, i.e., `map<string, list<int>> mi;`

7. Assign two elements of `mi` as in the sample output below;

8. Display the contents of `mi` using ranged `for` loops; and

9. Display the contents of `mi` using the map index operator.

(*Continued on the next page*)

The output of your driver program should look like the following:

```
iroot == 10, 20, 100, 200, 300
sroot == Friday, Monday, Saturday, Sunday, Thursday, Tuesday,
Wednesday

Creating irootList via iroot.listify

irootList (forward iterator) == 10 20 100 200 300
irootList (reverse iterator) == 300 200 100 20 10
irootList (ranged for loop) == 10 20 100 200 300

Creating srootList via sroot.listify

srootList (forward iterator) == Friday Monday Saturday Sunday Thursday
Tuesday Wednesday
srootList (reverse iterator) == Wednesday Tuesday Thursday Sunday
Saturday Monday Friday
srootList (ranged for loop) == Friday Monday Saturday Sunday Thursday
Tuesday Wednesday

iroot4 == 1000, 2000, 3000, 4000, 5000

Creating iroot4List via iroot4.listify

Contents of map<string, list<int>> mi (using ranged for loops):
iroot4List: 1000 2000 3000 4000 5000
irootList: 10 20 100 200 300

Using map index operator:
mi["irootList"] == 10 20 100 200 300
mi["iroot4List"] == 1000 2000 3000 4000 5000
```

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