1. Information about a `College` object includes its name, its tuition, and the region in which it is located.

   The following class declaration will be used to store information about a college.

```
class College
{
  public:
    apstring Name() const;
    // returns college name

    apstring Region() const;
    // returns region of college

    int Tuition() const;
    // returns college tuition

    void SetTuition(int newTuition);
    // set college's tuition to newTuition

  // ... constructors, other member functions and data not shown
};
```

   The following class declaration will be used to store information about a group of colleges.

```
class CollegeGroup
{
  public:

    void UpdateTuition(const apstring & collegeName,
                       int newTuition);
    // precondition:  collegeName exists in this CollegeGroup
    // postcondition: tuition for collegeName is changed to newTuition

    apvector<College> GetCollegeList(const apstring & region,
                                     int low, int high) const;
    // precondition:  low <= high
    // postcondition: returns array of colleges in region
    //                where low <= tuition <= high;
    //                the size of the array returned is equal to the
    //                number of colleges that meet the criteria


  private:

    apvector<College> myColleges;
       // myColleges.length() is the number of colleges

    // ... other private data members not shown
};
```

The following chart shows an example of colleges that could appear in an object of type `CollegeGroup`.

	Name	Region	Tuition
0	Colgate University	Northeast	$27,025
1	Duke University	Southeast	$26,000
2	Kalamazoo College	Midwest	$19,764
3	Stanford University	West	$25,917
4	Florida International University	Southeast	$10,800
5	Dartmouth College	Northeast	$27,764
6	Spelman College	Southeast	$11,455

(a) Write the `CollegeGroup` member function `UpdateTuition`, which is described as follows. `UpdateTuition` changes the tuition of the college whose name is passed as a parameter.

For example, if the object `colleges` is of type `CollegeGroup` and contains the entries shown in the chart above, the call `colleges.UpdateTuition("Colgate University", 27500)` would change the tuition of Colgate University to $27,500.

Complete function `UpdateTuition` below.

```
void CollegeGroup::UpdateTuition(const apstring & collegeName,
                                 int newTuition)
// precondition:  collegeName exists in this CollegeGroup
// postcondition: the tuition for collegeName is changed to newTuition
```

(b) The table below is repeated for your convenience.

	Name	Region	Tuition
0	Colgate University	Northeast	$27,025
1	Duke University	Southeast	$26,000
2	Kalamazoo College	Midwest	$19,764
3	Stanford University	West	$25,917
4	Florida International University	Southeast	$10,800
5	Dartmouth College	Northeast	$27,764
6	Spelman College	Southeast	$11,455

Write the `CollegeGroup` member function `GetCollegeList`, which is described as follows. `GetCollegeList` returns an array of colleges that are located in the specified region and whose tuition is in the range between `low` and `high`, inclusive. The size of the array should be equal to the number of colleges that meet the criteria of region and tuition range.

For example, if the object `colleges` is of type `CollegeGroup` and contains the entries shown in the chart above, the call `colleges.GetCollegeList("Southeast", 10000, 20000)` should return an array of size two containing Florida International University and Spelman College (note that Duke University is not included because its tuition is not in the specified range and Kalamazoo College is not included because it is not in the specified region).

Complete function `GetCollegeList` below.

```
apvector<College> CollegeGroup::GetCollegeList(const apstring & region,
                                               int low, int high) const
// precondition:  low <= high
// postcondition: returns array of colleges in region
//                where low <= tuition <= high;
//                the size of the array returned is equal to the number
//                of colleges that meet the criteria
```