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3C05 Advanced Software Engineering

Problem Class 3

You are the test manager of a small software firm and you decide to introduce coverage analysis to determine the quality of test data produced in your project. To test a number of coverage tools you use the following class:

```
package search;

public class BinarySearch implements ISortedArraySearch
{
  public BinarySearch () {}

  public int find (final int[] data, final int key)
    {
        int low = 0, high = data.length - 1;

        while (low <= high)
        {
            final int i = (low + high) >> 1;
            final int v = data [i];

            if (v == key)
                return i;
            else if (v < key)
                low = i + 1;
            else // v > key
                high = i - 1;
        }
        return -1;
    }
}
```

In order to test the coverage packages you also need to have some test case of which you know that they will yield 100% statement coverage. Find such a test case for this class.