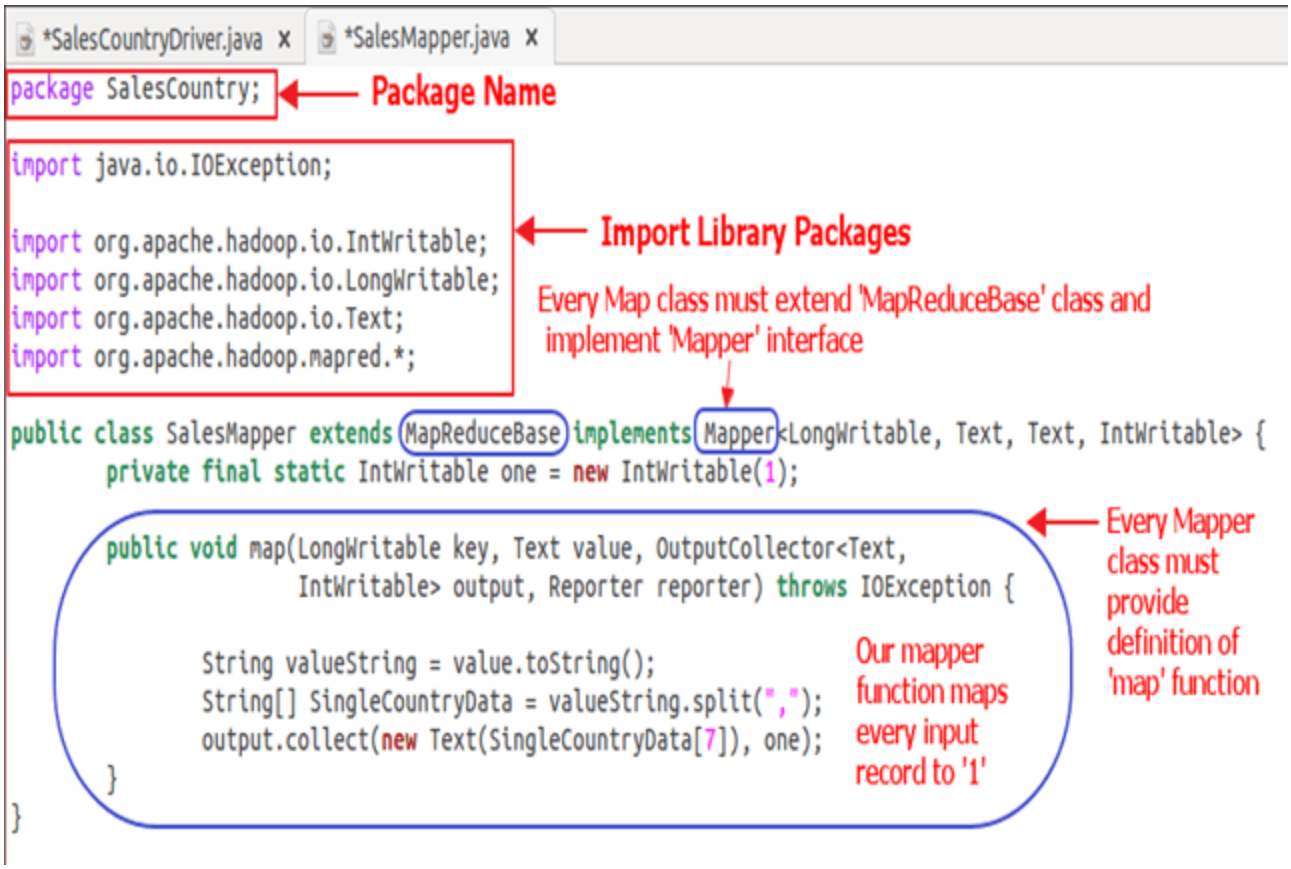
Explanation of SalesMapper Class

In this section, we will understand the implementation of **SalesMapper** class.

1. We begin by specifying a name of package for our class. **SalesCountry** is a name of our package. Please note that output of compilation, **SalesMapper.class** will go into a directory named by this package name: **SalesCountry**.

Followed by this, we import library packages.

Below snapshot shows an implementation of **SalesMapper** class-



Sample Code Explanation:

1. SalesMapper Class Definition-

public class SalesMapper extends MapReduceBase implements Mapper<LongWritable, Text, Text, IntWritable> {

Every mapper class must be extended from **MapReduceBase** class and it must implement **Mapper** interface.

2. Defining 'map' function-

```
public void map(LongWritable key,
         Text value,
OutputCollector<Text, IntWritable> output,
Reporter reporter) throws IOException
```

The main part of Mapper class is a **'map()'** method which accepts four arguments.

At every call to **'map()'** method, a **key-value** pair (**'key'** and **'value'** in this code) is passed.

'map()' method begins by splitting input text which is received as an argument. It uses the tokenizer to split these lines into words.

```
String valueString = value.toString();
String[] SingleCountryData = valueString.split(",");
```

Here, **','** is used as a delimiter.

After this, a pair is formed using a record at 7th index of array **'SingleCountryData'** and a value **'1'**.

```
output.collect(new Text(SingleCountryData[7]), one);
```

We are choosing record at 7th index because we need **Country** data and it is located at 7th index in array **'SingleCountryData'**.

Please note that our input data is in the below format (where **Country** is at 7^{th} index, with 0 as a starting index)-

Transaction_date,Product,Price,Payment_Type,Name,City,State,**Country**,Account_Created,Last_Login,Latitude,Longitude

An output of mapper is again a **key-value** pair which is outputted using **'collect()'** method of **'OutputCollector'**.

Explanation of SalesCountryReducer Class

In this section, we will understand the implementation of **SalesCountryReducer** class.

1. We begin by specifying a name of the package for our class. **SalesCountry** is a name of out package. Please note that output of compilation, **SalesCountryReducer.class** will go into a directory named by this package name: **SalesCountry**.

Followed by this, we import library packages.

Below snapshot shows an implementation of **SalesCountryReducer** class-