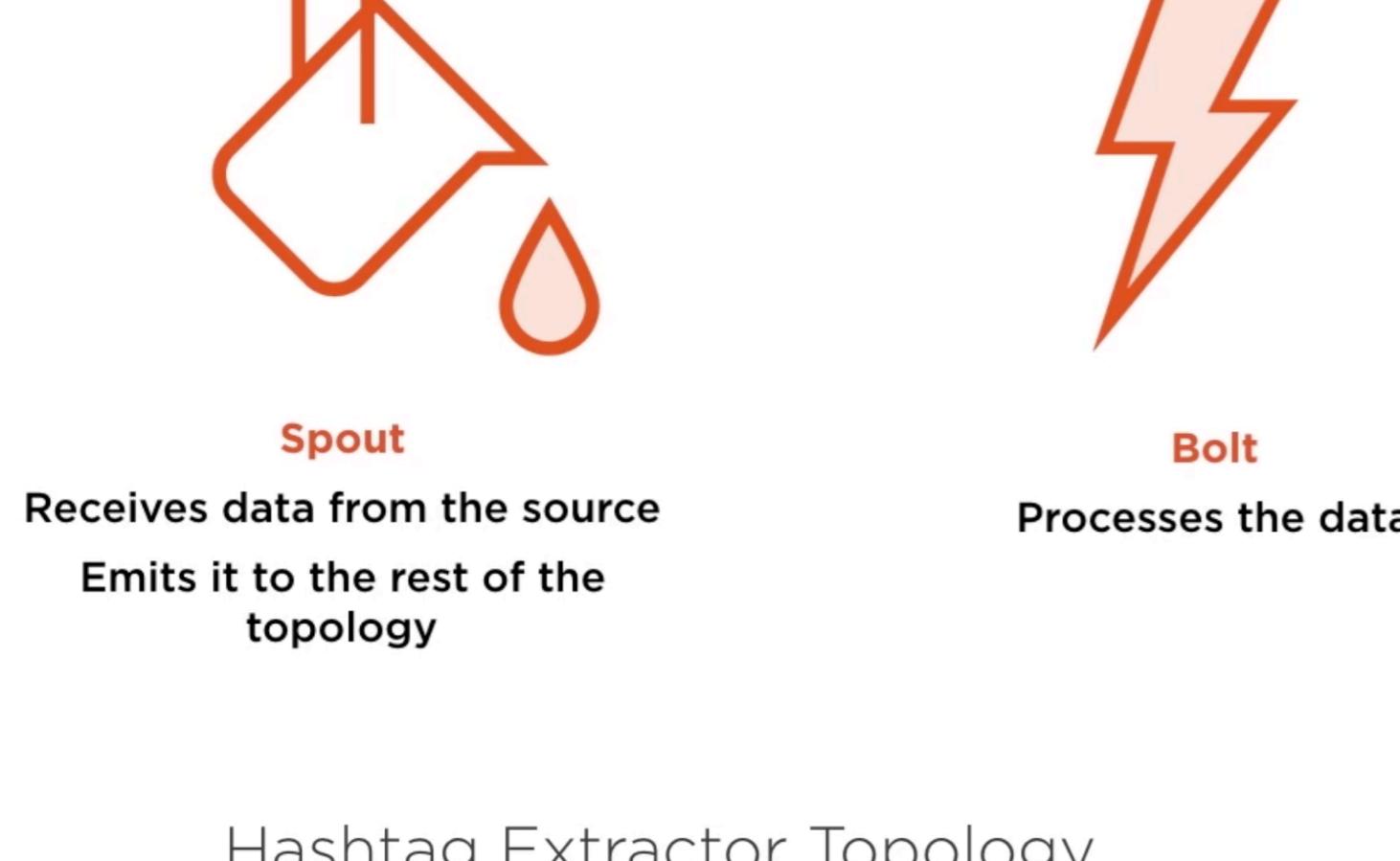
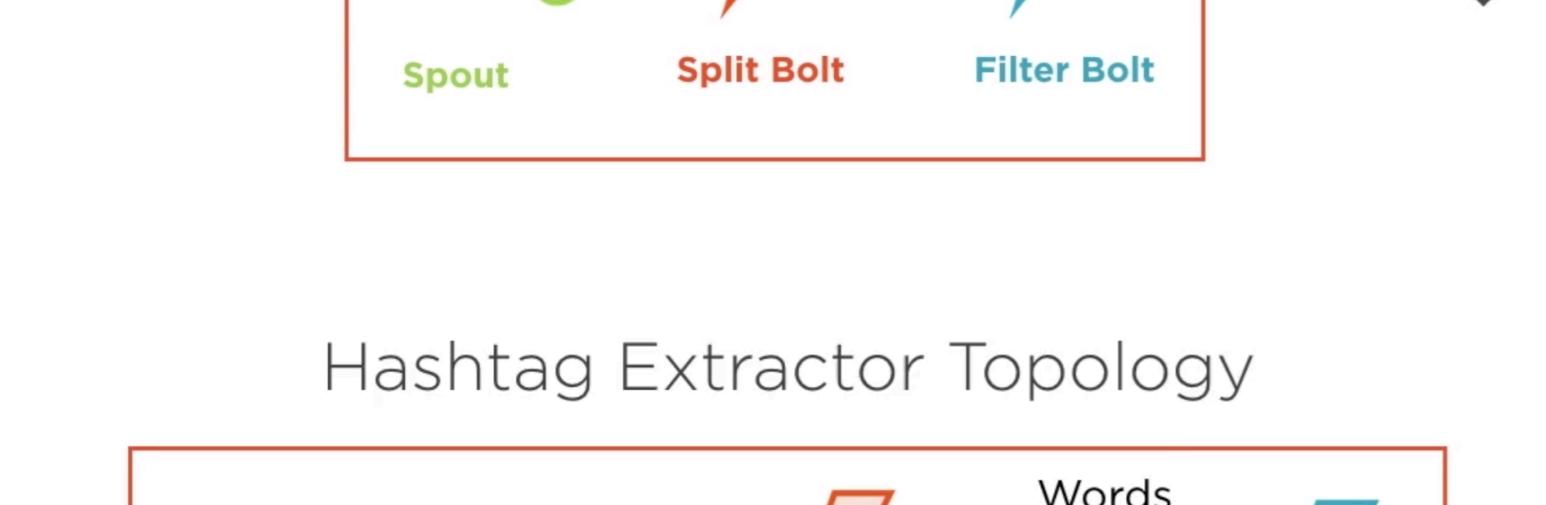


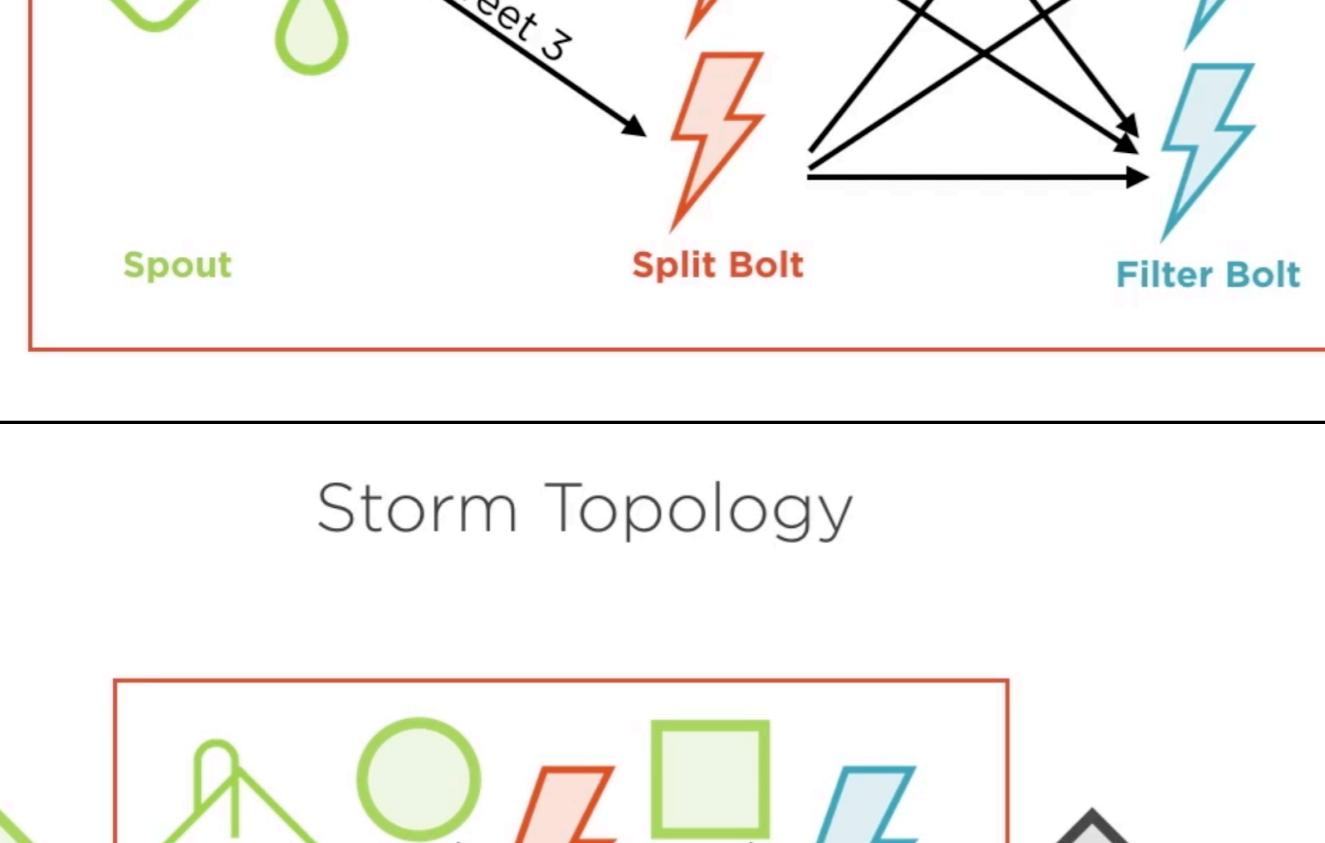
## Components of a Storm Topology



## Hashtag Extractor Topology



## Hashtag Extractor Topology



## Storm Topology

Components emit **Tuples**

Tuple is basically a backing class

```
public void declareOutputFields(OutputFieldsDeclarer declarer){  
    declarer.declare(new Fields("symbol","date","price"));  
}
```

## Declare Fields

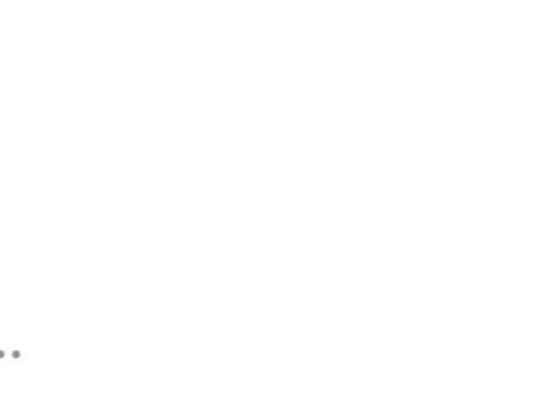
Implement this method in every storm component

## Setting up a Storm Component

collector.emit(new Values("MSFT", "Mar 12 9:00 AM", 62.5))

## Emit Values

Provide Objects in the same order as declared Fields



## Declare Fields



## Emit Values

## Stock Price Tracker

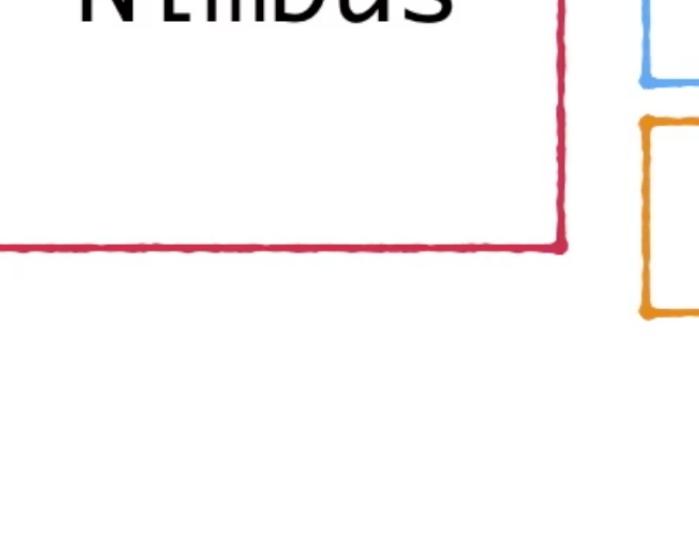


```
public void open(Map conf, TopologyContext context,  
    SpoutOutputCollector collector) {}  
  
public void nextTuple() {}  
  
public void declareOutputFields(OutputFieldsDeclarer declarer) {}
```

## Initializing the Spout

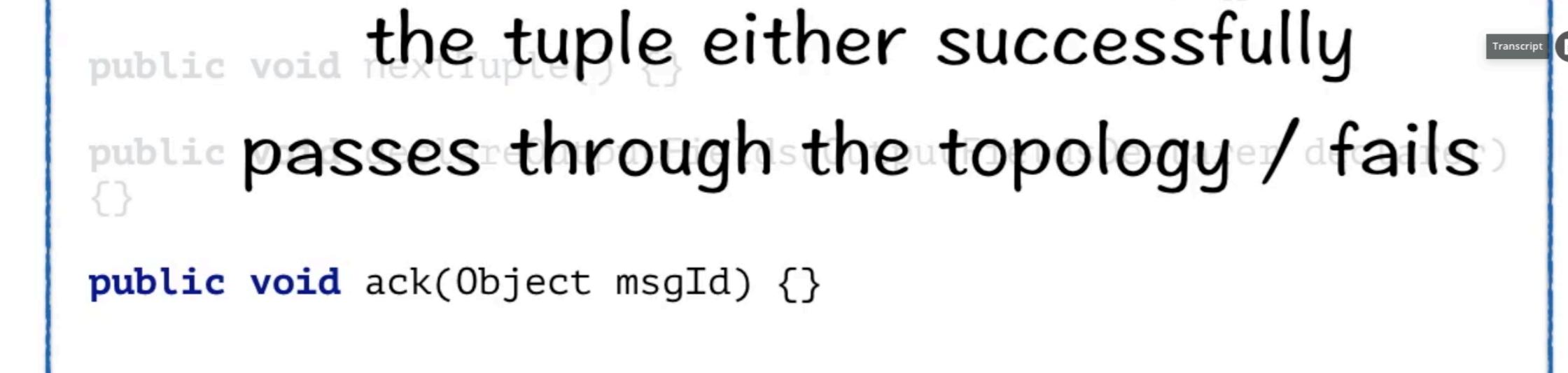
```
public static void main(String[] args) {  
    //Build Topology  
    TopologyBuilder builder = new TopologyBuilder();  
    builder.setSpout("yf-finance-spout", new YahooFinanceSpout());  
    builder.setBolt("yf-finance-bolt", new YahooFinanceBolt()).shuffleGrouping("yf-finance-spout");  
    StormTopology topology = builder.createTopology();  
  
    //Configuration  
    Configuration config = new Config();  
    config.setDebug(true);  
    config.put("fileDirName", "/Users/ytshigaraian/Documents/WorkSpaces/ytind/WorkSpaces/yf-output/output.txt");  
    //Submit Topology to Cluster  
    LocalCluster cluster = new LocalCluster();  
  
    try {  
        cluster.submitTopology("Stock-Tracker-Topology", config, topology);  
    } catch (Exception e) {  
    } finally {  
        cluster.shutdown();  
    }  
}
```

## Apache Storm



Central co-ordinating process

## Apache Storm



In the remote mode, the nimbus and executors run on different machines

## BaseRichSpout

```
public void nextTuple() {}  
public void ack(Object msgId) {}  
public void fail(Object msgId) {}
```

To Execute Storm Jar:

Jar Location: SPACE Main Class Name without EXTENSIONS

stormCode.jar "/Users/swethakolalapudi/Movies/Loonycorn Videos/Udemy/Storm/SourceCode/out/artifacts/SourceCode\_jar/SourceCode.jar"

examples.ex12\_DRPC.remoteDRPC

Building a Spark like Pipeline:

Topology.newDRPCStream("Simple", drpc)

```
.map(new lowercase())  
.flatMap(new split())  
.groupByKey(new Fields("args"))  
.aggregate(new Count(), new Fields("count"));
```