

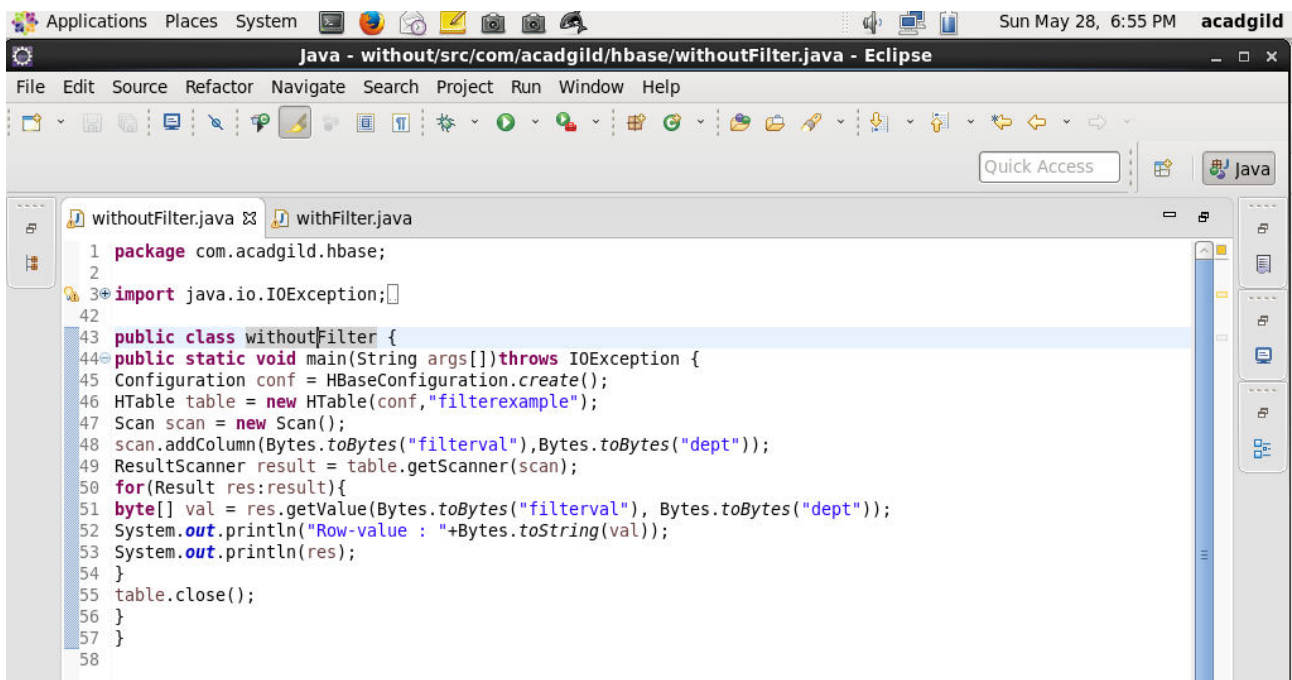
## Assignment13.5

### implement filters using Java API

input data:

```
hbase(main):005:0> scan 'filterexample'
ROW          COLUMN+CELL
1            column=filterval:dept, timestamp=1495977634689, value=admin
2            column=filterval:dept, timestamp=1495977634917, value=sales
3            column=filterval:dept, timestamp=1495977636902, value=administration
3 row(s) in 0.3350 seconds
```

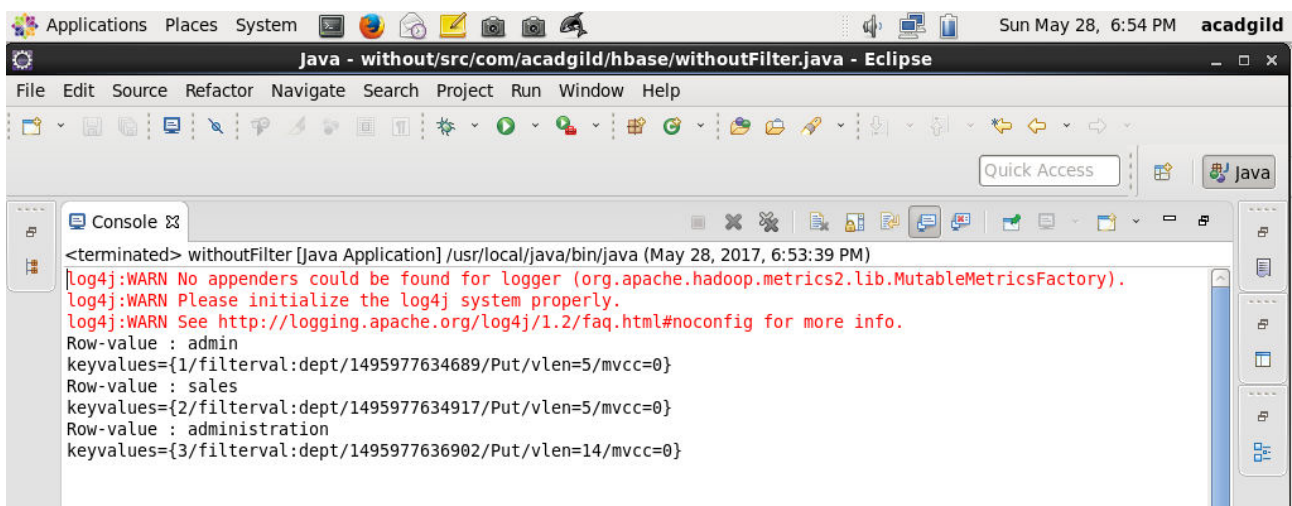
without using filter



The screenshot shows the Eclipse IDE with the file `withoutFilter.java` open. The code is as follows:

```
1 package com.acadgild.hbase;
2
3 import java.io.IOException;
4
43 public class withoutFilter {
44     public static void main(String args[]) throws IOException {
45         Configuration conf = HBaseConfiguration.create();
46         HTable table = new HTable(conf, "filterexample");
47         Scan scan = new Scan();
48         scan.addColumn(Bytes.toBytes("filterval"), Bytes.toBytes("dept"));
49         ResultScanner result = table.getScanner(scan);
50         for(Result res: result){
51             byte[] val = res.getValue(Bytes.toBytes("filterval"), Bytes.toBytes("dept"));
52             System.out.println("Row-value : "+Bytes.toString(val));
53             System.out.println(res);
54         }
55         table.close();
56     }
57 }
58
```

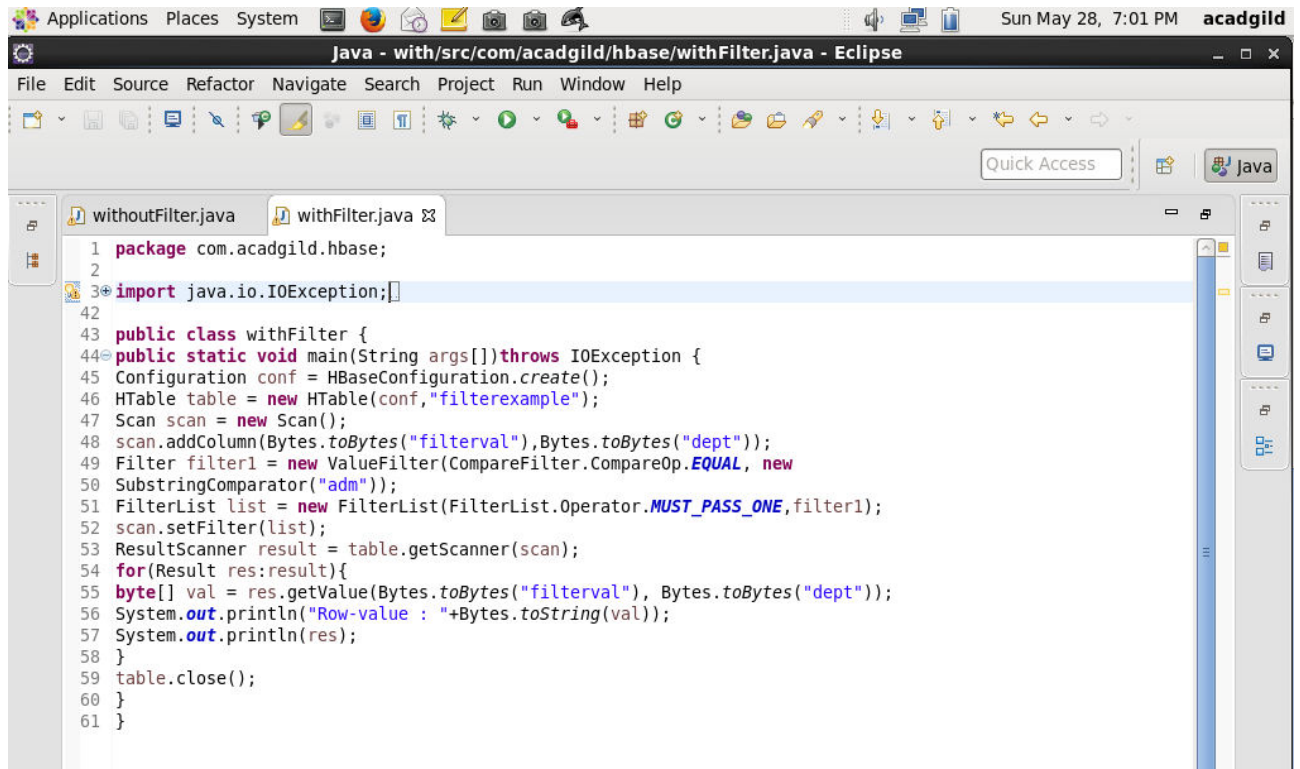
output:



The screenshot shows the Eclipse IDE with the console output of the `withoutFilter` application. The output is as follows:

```
<terminated> withoutFilter [Java Application] /usr/local/java/bin/java (May 28, 2017, 6:53:39 PM)
log4j:WARN No appenders could be found for logger (org.apache.hadoop.metrics2.lib.MutableMetricsFactory).
log4j:WARN Please initialize the log4j system properly.
log4j:WARN See http://logging.apache.org/log4j/1.2/faq.html#noconfig for more info.
Row-value : admin
keyvalues={1/filterval:dept/1495977634689/Put/vlen=5/mvcc=0}
Row-value : sales
keyvalues={2/filterval:dept/1495977634917/Put/vlen=5/mvcc=0}
Row-value : administration
keyvalues={3/filterval:dept/1495977636902/Put/vlen=14/mvcc=0}
```

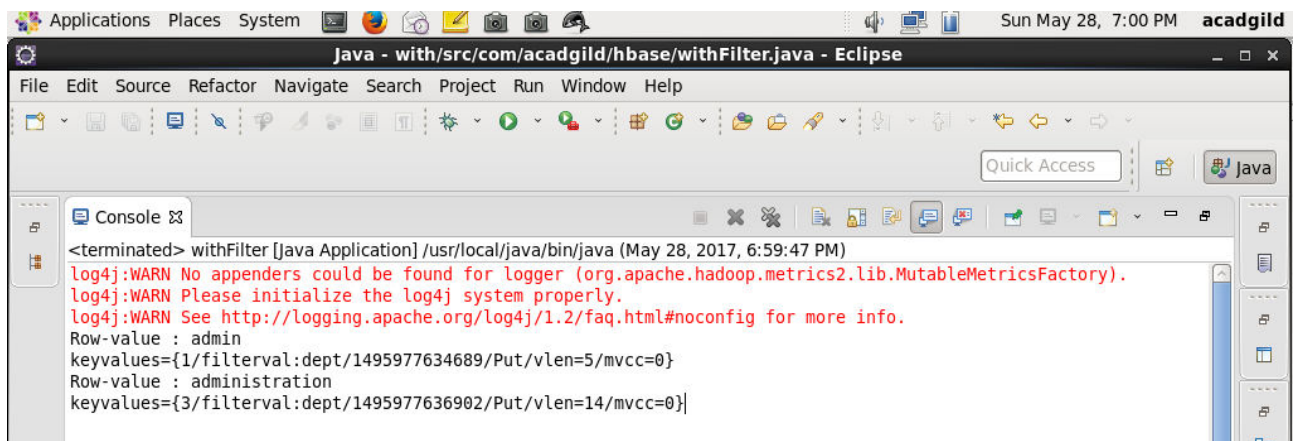
## using filter



The screenshot shows the Eclipse IDE with the file `withFilter.java` open. The code is as follows:

```
1 package com.acadgild.hbase;
2
3 import java.io.IOException;
4
42
43 public class withFilter {
44     public static void main(String args[]) throws IOException {
45         Configuration conf = HBaseConfiguration.create();
46         HTable table = new HTable(conf, "filterexample");
47         Scan scan = new Scan();
48         scan.addColumn(Bytes.toBytes("filterval"), Bytes.toBytes("dept"));
49         Filter filter1 = new ValueFilter(CompareFilter.CompareOp.EQUAL, new
50             SubstringComparator("adm"));
51         FilterList list = new FilterList(FilterList.Operator.MUST_PASS_ONE, filter1);
52         scan.setFilter(list);
53         ResultScanner result = table.getScanner(scan);
54         for(Result res: result){
55             byte[] val = res.getValue(Bytes.toBytes("filterval"), Bytes.toBytes("dept"));
56             System.out.println("Row-value : "+Bytes.toString(val));
57             System.out.println(res);
58         }
59         table.close();
60     }
61 }
```

## output:



The screenshot shows the Eclipse IDE with the console output of the `withFilter` application. The output is as follows:

```
<terminated> withFilter [Java Application] /usr/local/java/bin/java (May 28, 2017, 6:59:47 PM)
log4j:WARN No appenders could be found for logger (org.apache.hadoop.metrics2.lib.MutableMetricsFactory).
log4j:WARN Please initialize the log4j system properly.
log4j:WARN See http://logging.apache.org/log4j/1.2/faq.html#noconfig for more info.
Row-value : admin
keyvalues={1/filterval:dept/1495977634689/Put/vlen=5/mvcc=0}
Row-value : administration
keyvalues={3/filterval:dept/1495977636902/Put/vlen=14/mvcc=0}
```

