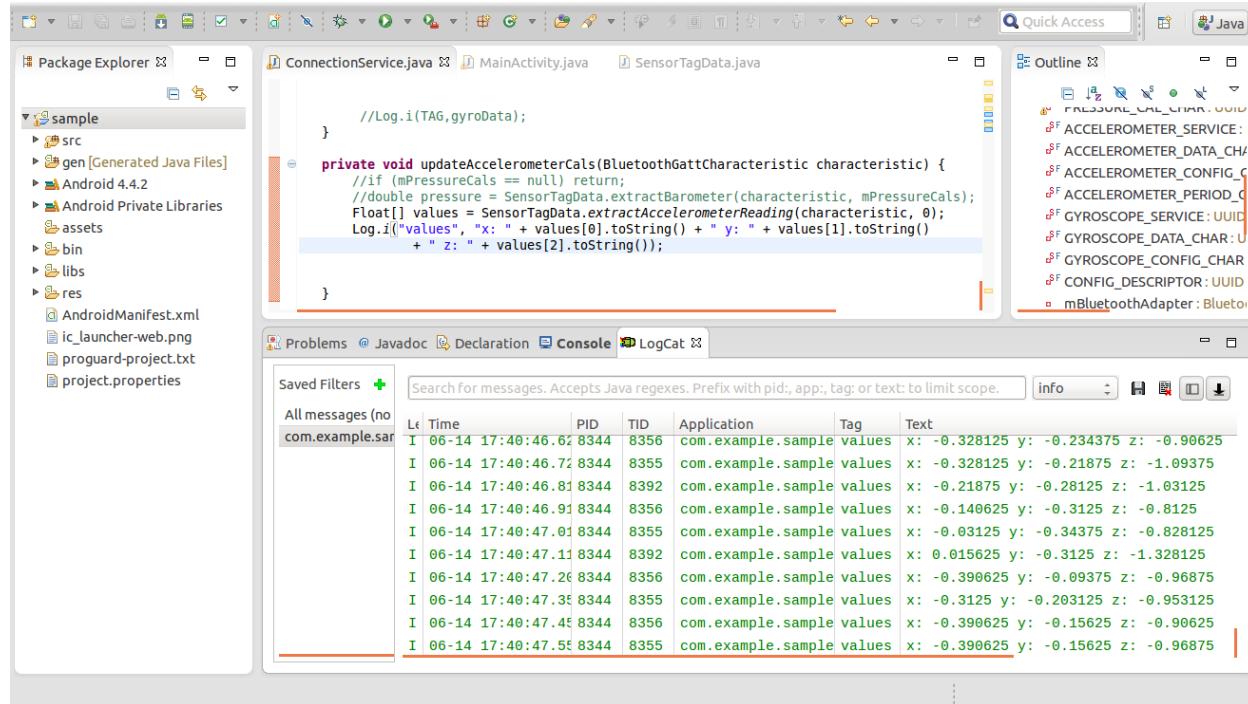


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CS 590BD  
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## Lab 1

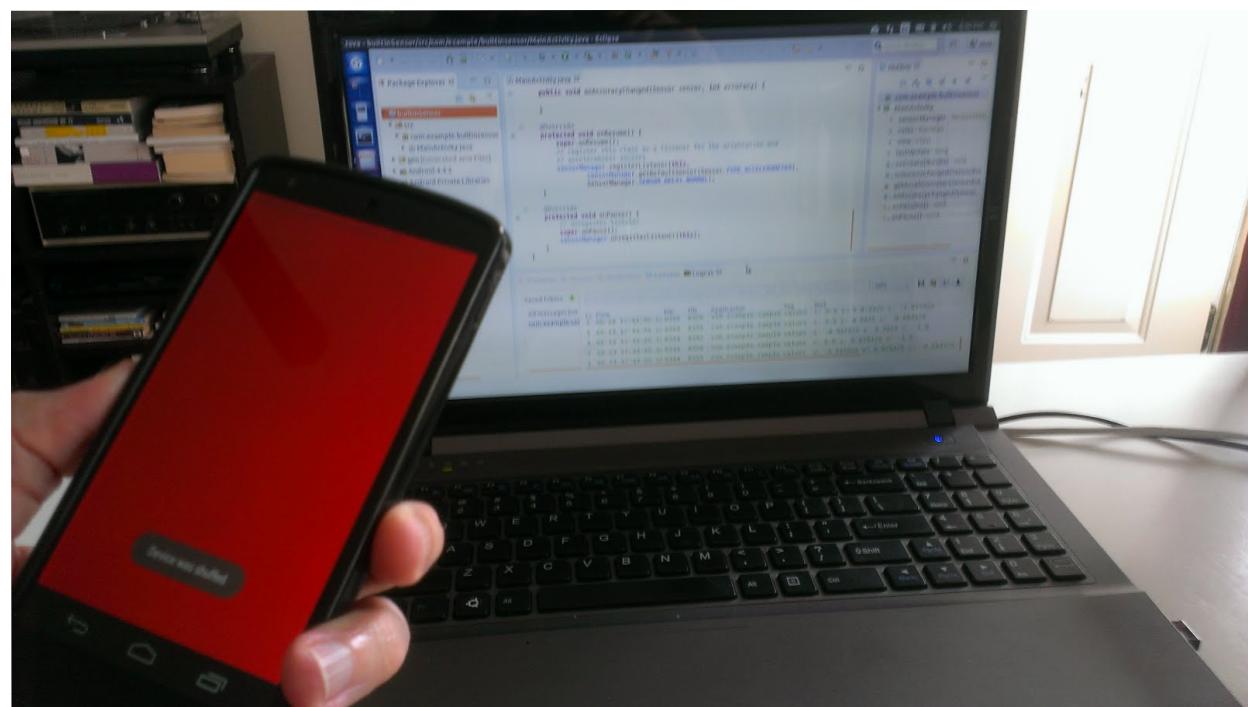
### Task 1: Subtask 1:



The screenshot shows the Eclipse IDE interface. In the center, there is a code editor window displaying Java code for a class named ConnectionService.java. The code includes a method updateAccelerometerCals that logs accelerometer values. To the right of the code editor is the Outline view, which lists various service and characteristic UUIDs. Below the code editor is the LogCat view, which displays a list of log messages from the application's log. The log messages show timestamped entries of accelerometer values (x, y, z coordinates) at regular intervals.

Time	PID	TID	Application	Tag	Text
I 06-14 17:40:46.62	8344	8356	com.example.sample	values	x: -0.328125 y: -0.234375 z: -0.96625
I 06-14 17:40:46.72	8344	8355	com.example.sample	values	x: -0.328125 y: -0.21875 z: -1.09375
I 06-14 17:40:46.81	8344	8392	com.example.sample	values	x: -0.21875 y: -0.28125 z: -1.03125
I 06-14 17:40:46.91	8344	8356	com.example.sample	values	x: -0.140625 y: -0.3125 z: -0.8125
I 06-14 17:40:47.01	8344	8355	com.example.sample	values	x: -0.03125 y: -0.34375 z: -0.828125
I 06-14 17:40:47.11	8344	8392	com.example.sample	values	x: 0.015625 y: -0.3125 z: -1.328125
I 06-14 17:40:47.26	8344	8356	com.example.sample	values	x: -0.390625 y: -0.09375 z: -0.96875
I 06-14 17:40:47.35	8344	8355	com.example.sample	values	x: -0.3125 y: -0.203125 z: -0.953125
I 06-14 17:40:47.45	8344	8356	com.example.sample	values	x: -0.390625 y: -0.15625 z: -0.96625
I 06-14 17:40:47.55	8344	8355	com.example.sample	values	x: -0.390625 y: -0.15625 z: -0.96875

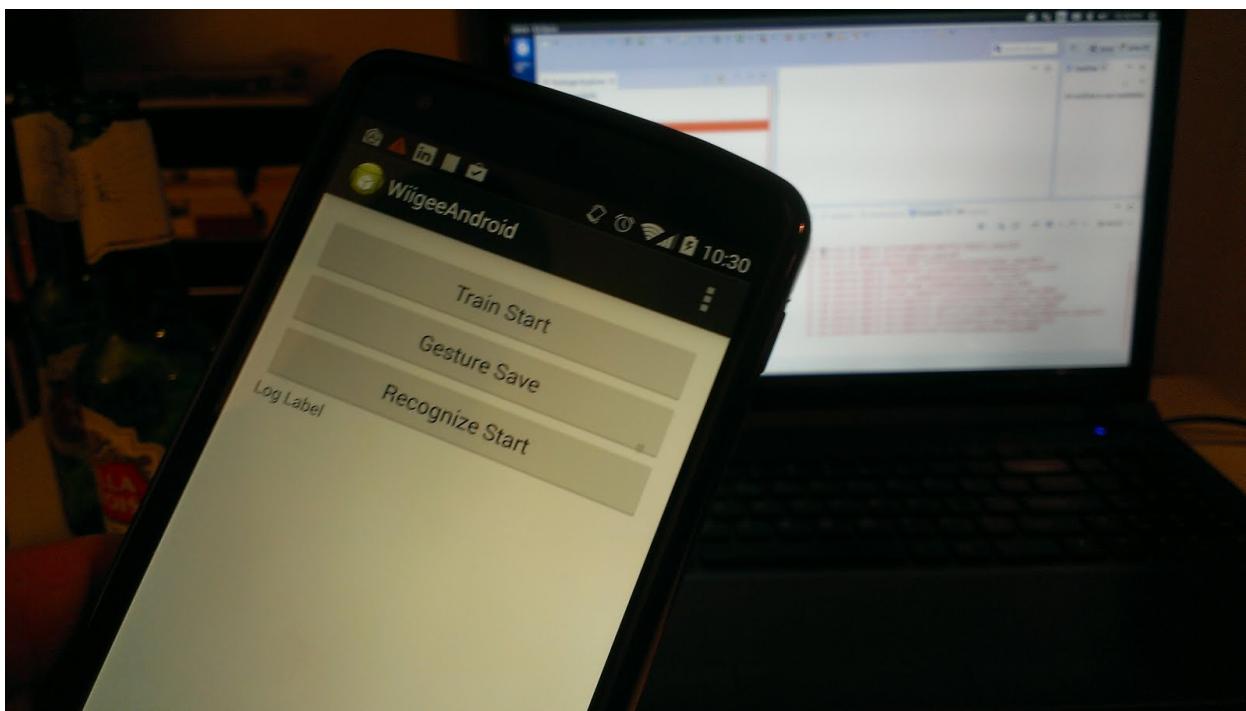
### Subtask 2:

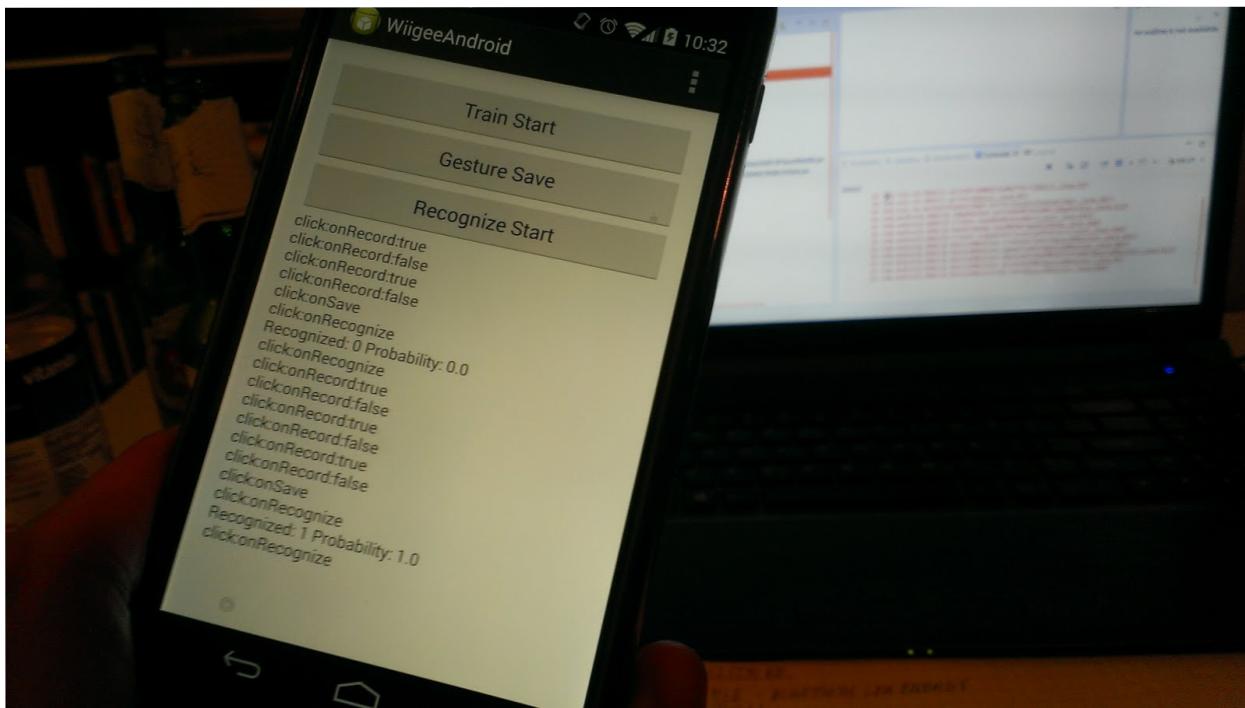


Subtask 3:

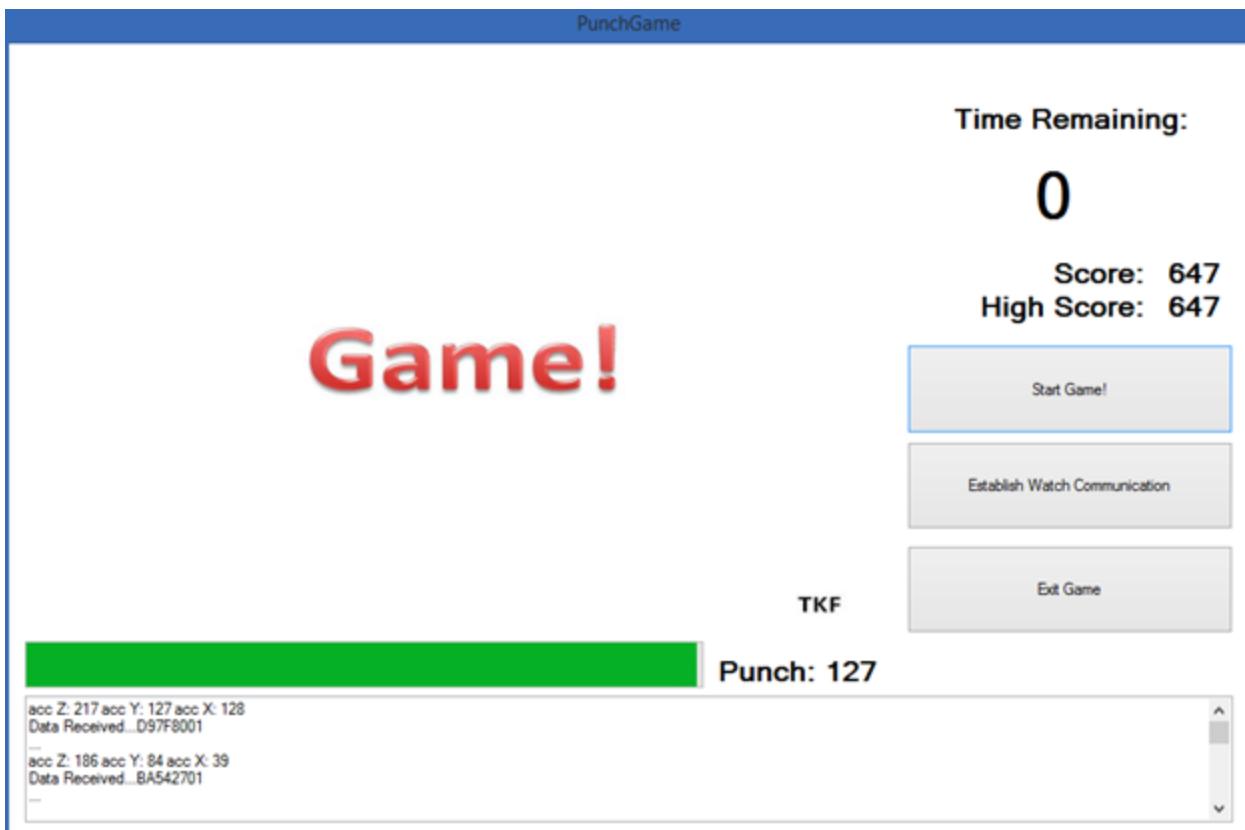


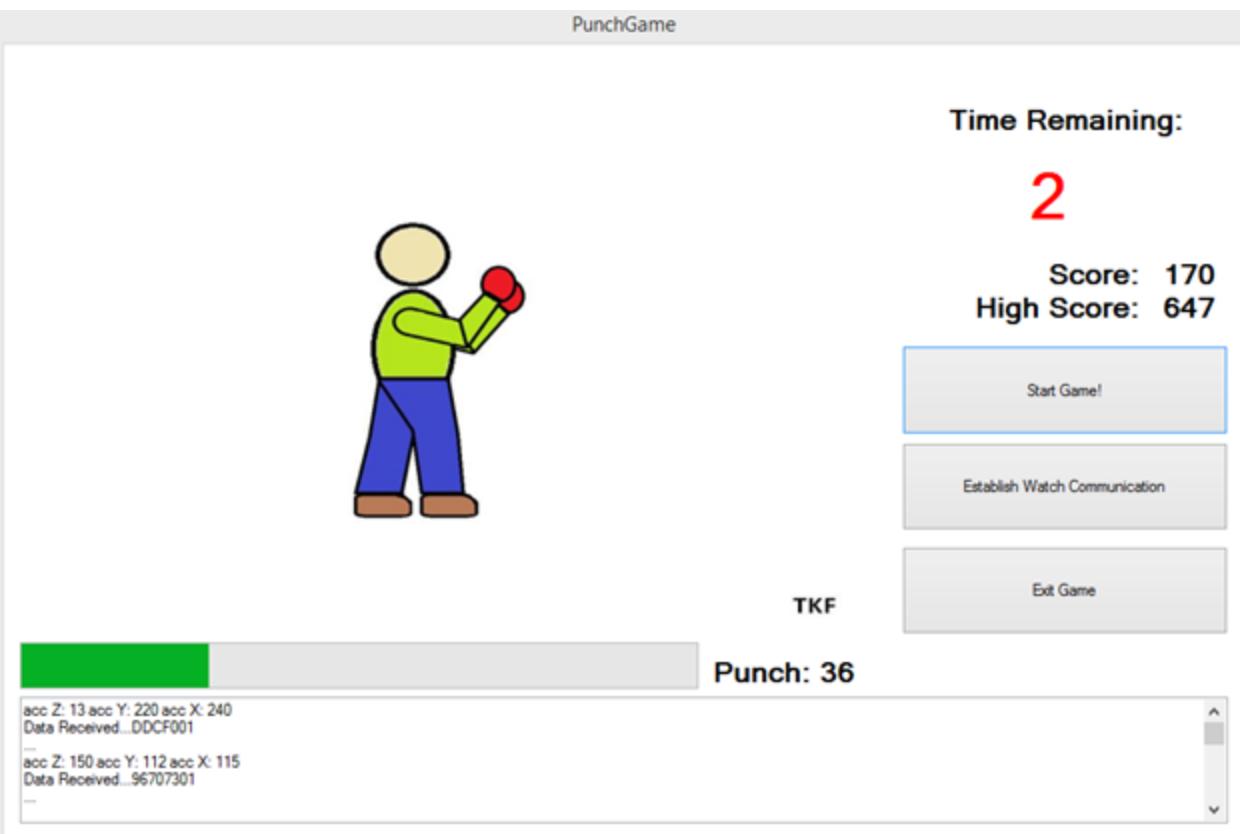
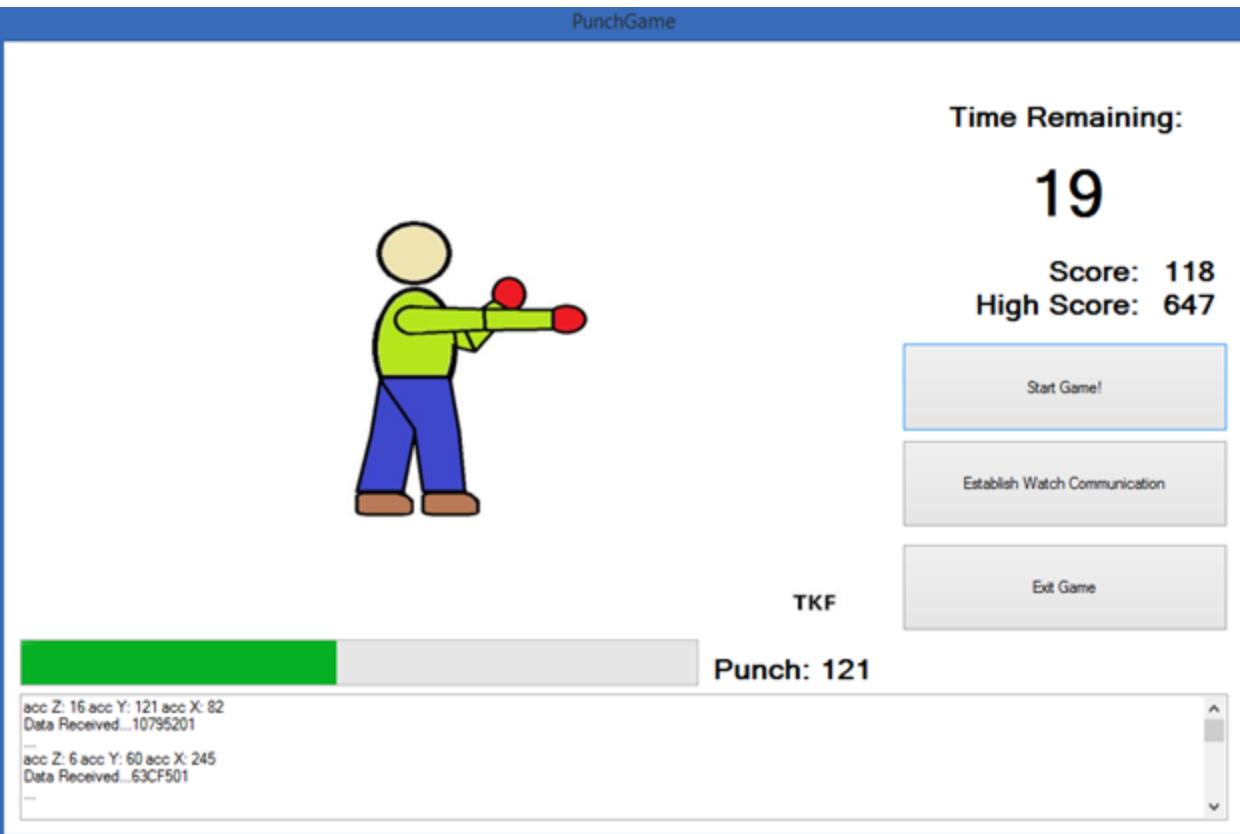
Subtask 4:

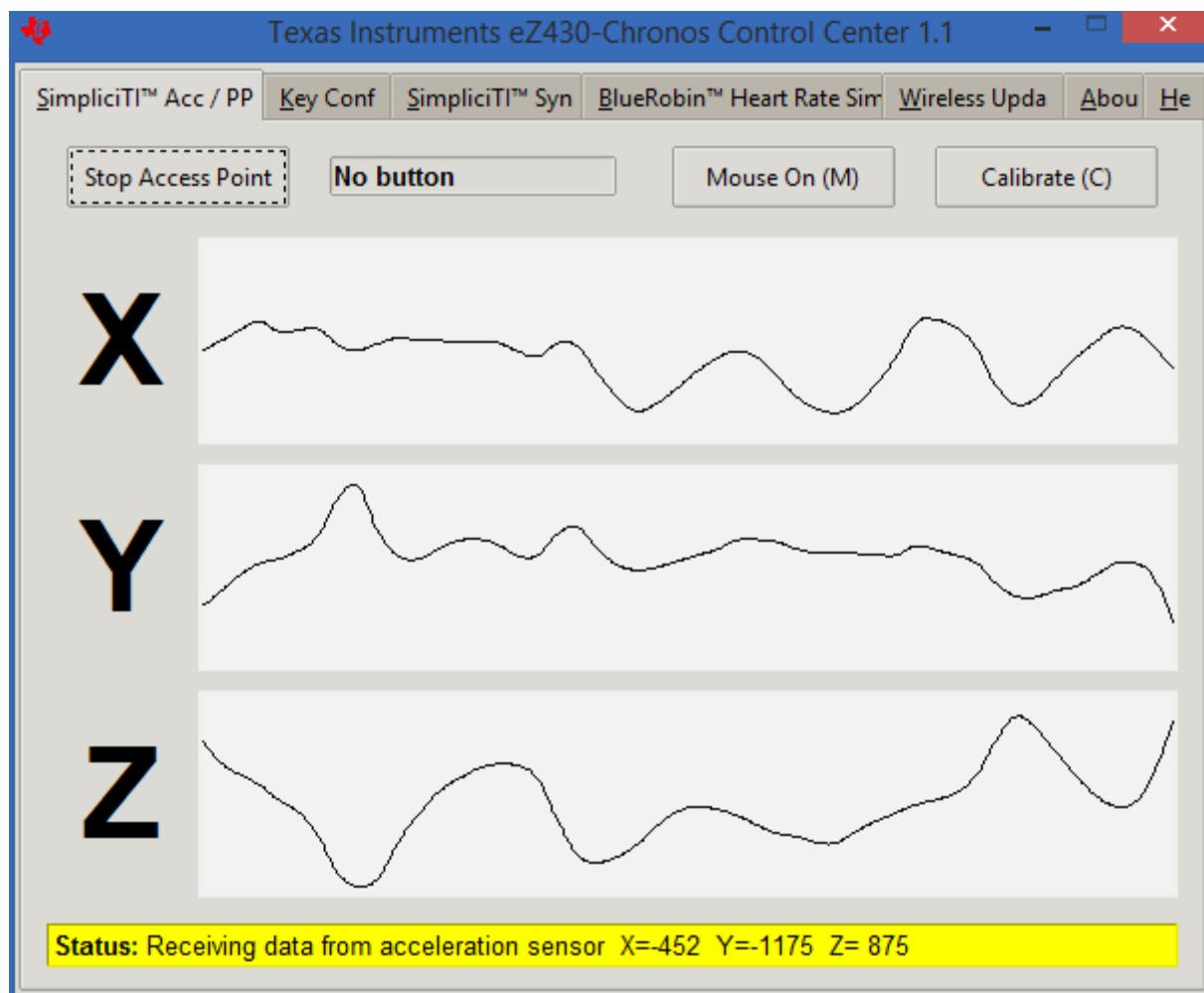


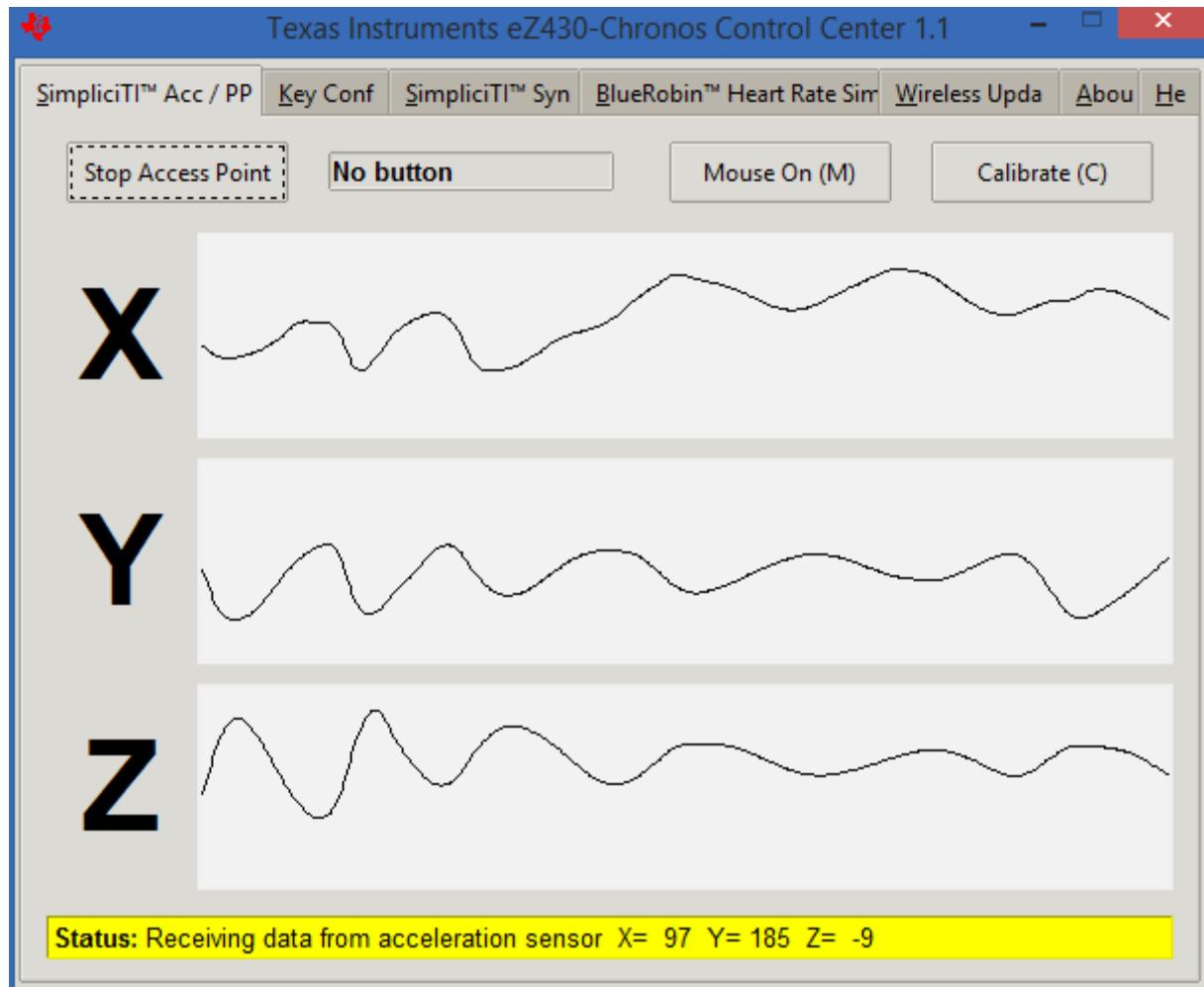


## Subtask 5:



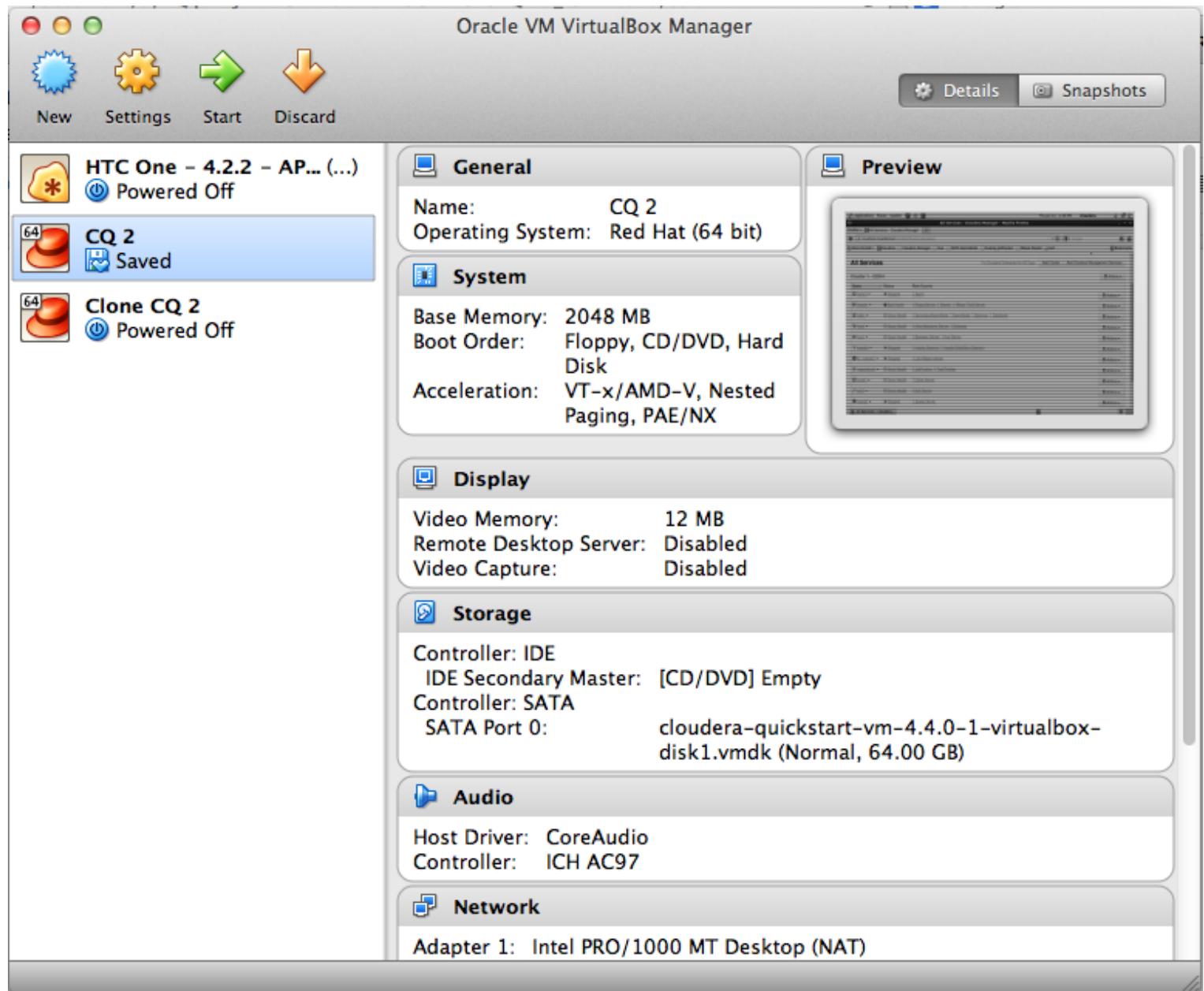






## Task 2

Install the [Cloudera Quickstart VM](#) on VirtualBox:





Run some hadoop commands:

```
hadoop fs -put input input  
hadoop jar wordcount.jar WordCount input output10  
hadoop fs -cat output10/*
```

I can see output10 folder in Hue

<input type="checkbox"/>	<input type="checkbox"/>	cpsc-vectors-1	cloudera	cloudera	drwxr-xr-x
<input type="checkbox"/>	<input type="checkbox"/>	cpsc-vectors-3	cloudera	cloudera	drwxr-xr-x
<input type="checkbox"/>	<input type="checkbox"/>	input	cloudera	cloudera	drwxr-xr-x
<input type="checkbox"/>	<input type="checkbox"/>	output10	cloudera	cloudera	drwxr-xr-x
<input type="checkbox"/>	<input type="checkbox"/>	temp	cloudera	cloudera	drwxr-xr-x
<input type="checkbox"/>	<input type="checkbox"/>	test-cpsc-vectors-1	cloudera	cloudera	drwxr-xr-x

Build WordCountExample and run it.

```

import java.io.IOException;
import java.util.StringTokenizer;

import org.apache.hadoop.conf.Configuration;
import org.apache.hadoop.fs.Path;
import org.apache.hadoop.io.*;
import org.apache.hadoop.mapreduce.Job;
import org.apache.hadoop.mapreduce.Mapper;
import org.apache.hadoop.mapreduce.Reducer;
import org.apache.hadoop.mapreduce.lib.input.FileInputFormat;
import org.apache.hadoop.mapreduce.lib.output.FileOutputFormat;
import org.apache.hadoop.util.GenericOptionsParser;

public class WordCount {
    public static class Map extends
        Mapper<LongWritable, Text, Text, IntWritable> {
        private final static IntWritable one = new IntWritable(1); // type of
                                                               // output
                                                               // value
        private Text word = new Text(); // type of output key
    }
}

```

I installed Hadoop 2.4.0 on Mac OSX. I had to modify the .bash\_profile to include:

```

export HADOOP_INSTALL=~/Applications/hadoop-2.4.0
export PATH=$PATH:$HADOOP_INSTALL/bin

```

Next, I built the word count example and ran these commands:

```
cd ~/Desktop/Hadoop-WordCount
```

```
hadoop jar WordCountExample.jar WordCount input output
hadoop fs -cat output/*
```

The end of the output looks like this:

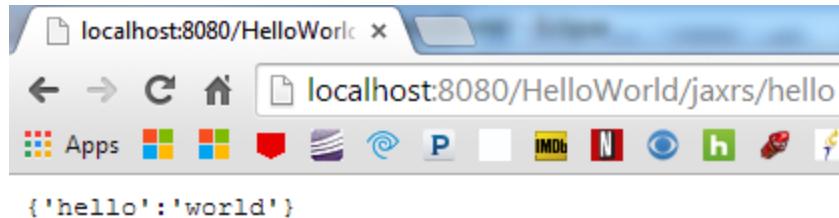
```
you.      14
you."    15
you;     1
you?     2
you??"   23
young    42
young,    7
young.    2
young."   1
younger   1
youngest   3
your     74
yours,"  1
yours??" 1
yourself   5
yourself,' 1
yourself.  1
yourself." 1
yourself;  1
youth     7
youth,    1
youth.    1
youthful   1
jwcmacbookpro:Hadoop-WordCount jwclark$
```

Glassfish RESTful service:

I created the HelloWorld service on UMKC servers.

Name	Enabled
testproject	✓
HDFRestWSJAR	✓
swen.group.cs590bd	✓
esafe	✓
HelloWorld	✓

It is a simple service that prints hello world in json:



A screenshot of a web browser window. The address bar shows "localhost:8080/HelloWorld/jaxrs/hello". The page content displays a single line of JSON code: {"hello": "world"}

Furthermore, I included a method to view the web-inf folder which is useful for reading files from the WAR file that is the application.



A screenshot of a web browser window. The address bar shows "localhost:8080/HelloWorld/jaxrs/hello/webinfopath". The page content displays the absolute path to the WEB-INF directory: /C:/glassfishies/glassfish-3.0.1/glassfish/domains/domain1/eclipseApps/HelloWorld/WEB-INF