

TH1F Example

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This example is taken from the SVN repository: `./Examples/TH1F/Test.java`.

It creates a ROOT file (FromJava.root), creates a TH1F called "demoA" and fills it with 4096 random points.

A subdirectory called "subdir1" is created, and we move to it and create a second TH1F called "demoB", which is filled with more random data.

```
import java.util.Random;
import hep.physics.vec.*;
import org.lcsim.thirdparty.javaROOT.*;

public class Test
{
    public static void main(String[] args)
    {
        // Load the library
        try
        {
            System.loadLibrary( "javaROOT" );
        }
        catch( UnsatisfiedLinkError javaROOT_linkError )
        {
            System.err.println( "JavaROOT native library failed to load.\n" + javaROOT_linkError +
"\n" );

            System.exit( -1 );
        }

        // Create a RNG to fill our histograms with.
        Random r = new Random( 0 );

        // Create a file
        RootSessionField sess = new RootSessionField( "FromJava.root", "RECREATE", "Test", 1 );

        // Create a TH1F and fill it with some data. (Exactly the same principle for the other
histograms.)s
        sess.newTH1F( "demoA", "demoA", 100, 0, 1 );
        for( int i = 0; i < 4096; i++ )
        {
            sess.fillTH1F( "demoA", (float) r.nextGaussian() );
        }

        // Create a subdirectory and switch to it.
        sess.mkdir( "subdir1" );
        sess.cd( "subdir1" );

        // Create a second TH1F (inside the new subdirectory) and fill it.
        sess.newTH1F( "demoB", "demoB", 100, 0, 1 );
        for( int i = 0; i < 4096; i++ )
        {
            sess.fillTH1F( "demoB", (float) 2 * r.nextGaussian() );
        }

        // Essential to ensure all values are properly committed to the file.
        sess.delete();
    }
}
```