**package** project3\_test;

**import** java.net.\*;

**import** java.io.\*;

**import** java.util.Scanner;

**import** java.util.Random;

**public** **class** MyClient {

**private** **static** **double** f() {

**long** toss, number\_of\_tosses, number\_in\_circle = 0;

**double** x, y, distance\_squared, pi\_estimate;

Random generator = **new** Random();

number\_of\_tosses = generator.nextInt(5000) + 5000;

**for** ( toss=0 ; toss< number\_of\_tosses ; toss++) {

x = 2\*Math.*random*() - 1;

y = 2\*Math.*random*() - 1;

distance\_squared = x \* x + y \* y;

**if**(distance\_squared <= 1) number\_in\_circle++;

}

pi\_estimate = 4 \* number\_in\_circle/((**double**) number\_of\_tosses);

**return** pi\_estimate;

}

**public** **static** **void** main(String [] args) {

@SuppressWarnings("resource")

Scanner input = **new** Scanner(System.***in***);

System.***out***.println("Please enter the value of the constant identifier: ");

**int** size = input.nextInt();

**double** array[] = **new** **double**[size];

**try** {

Socket clientSocket = **new** Socket("localhost", 4321);

DataOutputStream out = **new** DataOutputStream(clientSocket.getOutputStream());

**for**(**int** i = 0; i < array.length; i++) {

// storing random values of pi as different elements of the array

array[i] = *f*();

out.writeDouble(array[i]);

System.***out***.println(array[i]);

}

DataInputStream in = **new** DataInputStream(clientSocket.getInputStream());

System.***out***.println("\nServer responds Average Value: " +in.readDouble());

clientSocket.close();

} **catch**(IOException e) {

System.***out***.println("Error: " + e);

System.*exit*(0);

}

}

}