**Class Quality Control Code Highlighting KEY**

**Yellow:** Object/Class types | **Blue:** Method declarations | **Underlines:** Java Keywords

**Orange/Red:** VariableIdentifiers | **Pink:** Operators | **Green:** Method Calls

package components.comp1\_languageCore.lc3\_controlOfFlow;

import java.util.Random;

public class QualityControl {

final static int QUALITY\_TRESHOLD = 65;

final static int MAX\_QUALITY = 100;

final static int UNITS\_TO\_MAKE = 10000;

static int unitQuality = 0;

static int totalFailures = 0;

static int totalUnitsMade = 0;

public static void main(String[] args){

// make a random number generator

Random randomGenerator = new Random();

while(totalUnitsMade < UNITS\_TO\_MAKE){

// generate a random number between 0 and 100

unitQuality = randomGenerator.nextInt(MAX\_QUALITY + 1);

System.out.println("Unit Quality: " + unitQuality);

// increment our total unit counter

totalUnitsMade = totalUnitsMade + 1;

if(unitQuality < QUALITY\_TRESHOLD){

System.out.println("Unit below quality standards!");

totalFailures = totalFailures + 1;

} else {

System.out.println("Unit passes quality test");

} // close if/else

System.out.println("Total failures: " + totalFailures +

" out of " + totalUnitsMade + " units made");

} // close while

// calculate summary statistics with division

double productionRatio = (double)totalFailures /

(double)totalUnitsMade;

// print out summary statistics

System.out.println("\*\*\*PRODUCTION SUMMARY\*\*\*");

System.out.println("Tested " + totalUnitsMade + " Units.");

System.out.println("Failure Ratio: " + productionRatio);

} // close main

} // close class