Java Essentials Module 5 Assignment

Please use the jar file to test the program.

Command: java -jar Module5Assignment.jar

Module5Main Class (contains main()):

**public** **class** Module5Main {

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

// **TODO** Auto-generated method stub

WrapperClass wrapperClass = **new** WrapperClass();

wrapperClass.wrapperConversions();

Collection collection = **new** Collection();

collection.insert1to10();

collection.createEmployeeRecords();

collection.createStudentRecords();

}

}

# Wrapper Class:

**public** **class** WrapperClass {

**int** int1 = 1;

String int2 = "2";

**int** int3 = 3;

String int4 = "4";

**byte** int5 = 5;

**short** int6 = 6;

**long** int7 = 7;

**float** float8 = 8;

**double** double9 = 9;

**public** **void** wrapperConversions() {

System.***out***.println("Wrapper classes and conversions:\n");

Integer wrapper1 = **new** Integer(int1);

System.***out***.println("Constructor from int, wrapper1 = " + wrapper1);

Integer wrapper2 = **new** Integer(int2);

System.***out***.println("Constructor from String, wrapper2 = " + wrapper2);

String wrapper3 = Integer.*toString*(int3);

System.***out***.println("Integer.toString(); wrapper3 = " + wrapper3);

Integer wrapper4 = Integer.*valueOf*(int4);

System.***out***.println("Integer.valueOf(); wrapper4 = " + wrapper4);

Byte wrapper5 = Byte.*valueOf*(int5);

System.***out***.println("Byte.valueOf(byte); wrapper5 = " + wrapper5);

Short wrapper6 = Short.*valueOf*(int6);

System.***out***.println("Short.valueOf(short); wrapper6 = " + wrapper6);

Long wrapper7 = Long.*valueOf*(int7);

System.***out***.println("Long.valueOf(long); wrapper7 = " + wrapper7);

Float wrapper8 = Float.*valueOf*(float8);

System.***out***.println("Float.valueOf(float); wrapper8 = " + wrapper8);

Double wrapper9 = Double.*valueOf*(double9);

System.***out***.println("Double.valueOf(double); wrapper9 = " + wrapper9);

System.***out***.println(" ");

}

}

# Collection Class:

# **import java.util.ArrayList;**

# **import java.util.HashMap;**

# **import java.util.Hashtable;**

# **public class Collection {**

# **public void insert1to10 () {**

# 

# **ArrayList<Integer> intArrayList = new ArrayList<Integer>();**

# **for (Integer i = 1; i < 11; i++ )**

# **intArrayList.add(i);**

# **System.out.println("ArrayList = ");**

# **System.out.println(intArrayList);**

# **}**

# **public void createEmployeeRecords() {**

# 

# **HashMap<String, String> employeeRecords = new HashMap<String, String>();**

# **employeeRecords.put("Wayne", "Marketing");**

# **employeeRecords.put("Dwight", "Development");**

# **employeeRecords.put("Stuart", "Operations");**

# **employeeRecords.put("Nigel", "Sales");**

# **employeeRecords.put("Pam", "Management");**

# **System.out.println("\nEmployee Records Hashmap: ");**

# **System.out.println("Name: \tDepartment: ");**

# **for (String i : employeeRecords.keySet()) {**

# **System.out.println(i + " \t" + employeeRecords.get(i));**

# **}**

# **}**

# **public void createStudentRecords() {**

# 

# **Hashtable<String, Integer> studentRecords = new Hashtable<String, Integer>();**

# **studentRecords.put("Francis", 70);**

# **studentRecords.put("Mabel", 71);**

# **studentRecords.put("Arnold", 72);**

# **studentRecords.put("Donald", 73);**

# **studentRecords.put("Raymond", 74);**

# **Integer highMark = new Integer (0);**

# **String highStudent = null;**

# 

# **System.out.println("\nStudent Records Hashmap: ");**

# **System.out.println("Name: \tScore: ");**

# 

# **for (String i : studentRecords.keySet()) {**

# 

# **System.out.println(i + " \t" + studentRecords.get(i));**

# 

# **if (studentRecords.get(i) > highMark) {**

# **highMark = studentRecords.get(i);**

# **highStudent = i;**

# **}**

# 

# **}**

# **System.out.println("\nHighest scoring student:");**

# **System.out.println(highStudent + " \t" + studentRecords.get(highStudent));**

# **}**

# **}**

# Output:

Wrapper classes and conversions:

Constructor from int, wrapper1 = 1

Constructor from String, wrapper2 = 2

Integer.toString(); wrapper3 = 3

Integer.valueOf(); wrapper4 = 4

Byte.valueOf(byte); wrapper5 = 5

Short.valueOf(short); wrapper6 = 6

Long.valueOf(long); wrapper7 = 7

Float.valueOf(float); wrapper8 = 8.0

Double.valueOf(double); wrapper9 = 9.0

ArrayList =

[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]

Employee Records Hashmap:

Name: Department:

Wayne Marketing

Stuart Operations

Dwight Development

Pam Management

Nigel Sales

Student Records Hashmap:

Name: Score:

Raymond 74

Francis 70

Arnold 72

Mabel 71

Donald 73

Highest scoring student:

Raymond 74