**CSCD 300 Homework 7 -- Total 100 points**

**Rules**

**If you have skipped one or more lectures relevant to this homework assignment without an acceptable excuse, the instructor will refuse to answer ANY questions about this homework. An acceptable excuse is usually documented or related to an emergency. Your instructor has checked the class attendance everyday. Please refer to the syllabus for more information regarding this rule.**

**Turn in:**  Please put all your source code files (.java) into a zip file, then please name the single zip file with your last name followed by first initial plus hw7.zip. For example, smithjhw7.zip is for John Smith. Then you go to EWU Canvas, CSCD300🡪 Assignments🡪Hw7🡪Submit the single zip file.

**If you forget to include your source code in the zip file, you get a zero credit for this homework. If your code shows a compile-time error, you get a zero credit. If you turned in a corrupted file, or a file that cannot be opened, you get a zero.**

**Problems Description**

**Continuing** on the Hashtable demo we discussed in the classroom that is based on separate chaining, which has been included in this homework package, you are required to add a **public Object get( Object key)** method into the Hashtable class. As defined in the Java documentation, the get() method returns the value with which the specified **key** is associated, or **null** if this hash table contains no record for the **key**. More formally, if this hash table contains a mapping from a key **k** to a value **v** such that (key.equals(k)), then this method returns **v**; otherwise it returns null. (There can be at most one such mapping.)

Specifics:

1. You have to implement the get() method as described above.
2. Please use the following **Tester.java** code to test your get() method implementation, the Tester.java source file is also included into this homework package.

public class Tester {

public static void main(String[] args) {

Hashtable tab=new Hashtable();

tab.put("abcde", "AA");

tab.put("acbed", "AB");

tab.put("abced", "AC");

tab.put(new Integer(10), "BB");

tab.put(new Integer(11), "BC");

tab.put(new Integer(12), "BD");

tab.put("moist", "CC");

tab.put("pizza", "CD");

tab.put("student", "DD");

tab.put("teacher", "DE");

tab.put("goodperson", "EE");

//b) Testing get for things that exist in the list

String test=(String) tab.get("goodperson");

System.out.println(test);

test=(String) tab.get("student");

System.out.println(test);

test=(String) tab.get(12);

System.out.println(test);

//c) test for data that doesn't exist

test=(String)tab.get("hello");

System.out.println(test);

//d) test for collision, abcde collides with abced and acbde

test=(String) tab.get("acbed");

System.out.println(test);

//The entire list for reference

//System.out.println(tab);

}

}

1. The correct output of your program is supposed to be as follows,

EE

DD

BD

null

AB

1. Please organize all your source code so that I can compile all your code in **one** directory with a single command **javac \*.java** and I am able to run your program by using a single command **java Tester**.