Announcements

- Assignment 2 is due on Thursday at 11:59pm
- Check out updated office hours in the course calendar
7.3 – CD.java

```java
import java.text.NumberFormat;

public class CD {
    private String title, artist;
    private double cost;
    private int tracks;

    public CD(String name, String singer, double price, int numTracks) {
        title = name;
        artist = singer;
        cost = price;
        tracks = numTracks;
    }

    @Override
    public String toString() {
        return JSON
    }
}
```

7.3 – CDCollection.java

```java
import java.text.NumberFormat;

public class CDCollection {
    private CD[] collection;
    private int count;
    private double totalCost;

    public CDCollection () {
        collection = new CD[100];
        count = 0;
        totalCost = 0.0;
    }

    public void addCD (String title, String artist, double cost, int tracks) {
        if (count == collection.length)
            increaseSize();
        collection[count] = new CD (title, artist, cost, tracks);
        totalCost += cost;
        count++;
    }

    public String toString() {
        NumberFormat fmt = NumberFormat.getCurrencyInstance();

        String report = Format
        report += Number of CDs: count + "\n"
        report += Total cost: totalCost + "\n"
        report += Average cost: totalCost + "\n"
        report += Count + "\n"
        for (int cd = 0; cd < count; cd++)
            report += collection[cd].toString() + "\n"

        return report;
    }
}
```
7.6 – Two-Dimensional Arrays

- A **two-dimensional array** can be thought of as a table of elements, with rows and columns.
- In Java a two-dimensional array is an **array of arrays**.
- It is **declared** by specifying the size of each dimension separately:
  ```java
  int[][] scores = new int[12][50];
  ```
- An array element is **referenced** using two index values:
  ```java
  value = scores[3][6];
  ```
- The array stored in any one row can be specified using one index.

### 7.6 – TwoDArray.java

```java
/*
 * Demonstrates the use of a two-dimensional array.
 * @author Java Foundations
 */
public class TwoDArray {
    /**
     * Creates a 2D array of integers, fills it with increasing
     * integer values, then prints them out.
     */
    public static void main(String[] args) {
        int[][] table = new int[5][10];
        // Load the table with values
        for (int row=0; row < table.length; row++)
            for (int col=0; col < table[row].length; col++)
                table[row][col] = row * 10 + col;
        // Print the table
        for (int row=0; row < table.length; row++)
            for (int col=0; col < table[row].length; col++)
                System.out.print(table[row][col] + " ");
        System.out.println();
    }
}
```