1. Given the following declarations:
   ```java
   int a = 3;
   int b = 2;
   double x = 2.0;
   double y = 1.5;
   double[] list = new double[4];
   ```

   a) Draw a diagram depicting the contents of the array with its default values.

   b) For each of the following assignments, if the code is legal Java, redraw the diagram from (a) and circle the element modified by the assignment; otherwise write “ERROR.”

   - list[x] = 1;
   - list[b] = y;
   - list[b - a] = 3;
   - list[1] = -6;

2. Show the output produced by the following code fragment:
   ```java
double[] list = new double[4];
for (int i=0; i < list.length; i++)
    list[i] = i * 3;

for (int i=list.length - 1; i >= 0; i--)
    System.out.println(list[i]);
```

   Output:

3. Write a code fragment to create an array named `nearlyAllFalse` of 100 values of type `boolean`. Initialize all values to `false`, EXCEPT for the first and last, which should be set to `true`.

CSC1051 Data Structures and Algorithms I
1. Given the following declarations:
   ```
   int a = 2;
   int b = 3;
   double x = 2.0;
   double y = 1.5;
   double[] list = new double[3];
   ```

   a) Draw a diagram depicting the contents of the array list with its default values.

   b) For each of the following assignments, if the code is legal Java, redraw the diagram from
      (a) and circle the element modified by the assignment; otherwise write “ERROR.”

      - list[1] = x;
      - list[b - a] = 3;
      - list[b] = 4;
      - list[x] = a;

2. Show the output produced by the following code fragment:
   ```
   double[] list = new double[4];
   for (int i=0; i < list.length; i++)
     list[i] = i + 3;
   for (int i=list.length - 1; i >= 0; i--)
     System.out.println(list[i]);
   ```

3. Write a code fragment to create an array named bunchOfABAB of 100 char values and
   to set them all to alternating the characters 'A' and 'B'. (so array would consist of
   ABABABA.. etc)