```java

public class Application {

    public static void main String[] args) {
        // TODO Auto-generated method stub
        int ages[]  = new int[9];
        ages[0] = 3;
        ages[1] = 9;
        ages[2] = 23;
        ages[3] = 64;
        ages[4] = 2;
        ages[5] = 8;
        ages[6] = 28;
        ages[7] = 93;
        ages[8] = 33;
        int resultOfAgesSub = ages[ages.length - 1] - ages[0];
        System.out.println("sum of subtraction between last and first array input: " +
resultOfAgesSub);


        double totalAge = 0;
        double lengthAgeArr = ages.length;
        for (int i = 0; i < ages.length; i++) {
            totalAge += ages[i];
        }
            double averageAge = totalAge / lengthAgeArr;
            System.out.println("Average age in array: " + averageAge);


            String names[] = new String[6];
            names[0] = "Sam";
            names[1] = "Tommy";
            names[2] = "Tim";
            names[3] = "Sally";
            names[4] = "Buck";
            names[5] = "Bob";

            String concatNames = "Names concatonated: ";
            double numOfChar = 0;
            int lengthNames = names.length;
            int i = 0;
            for (String name : names) {
                numOfChar += names[i].length();
                concatNames += names[i] + " ";
                i++;
            }
            double averageOfChar = numOfChar / lengthNames;
            System.out.println("Average number of characters in names: " +
averageOfChar);
            System.out.println(concatNames);

            int totalBetweenNames = 0;
            int nameLengths[] = new int[6];
            int j = 0;
            for (String name : names) {
                nameLengths[j] = names[j].length();
                totalBetweenNames += nameLengths[j];
            j++;
            }
```

```
58              System.out.println("Total number of characters in Names array: " +
    totalBetweenNames);
59
60              String testMethod = concatWords("Welcome", 2);
61              System.out.println("Working method proof: " + testMethod);
62
63
64              String fullNameTest = fullNameBuilder("Robert", "Lacey");
65              System.out.println("Full name test: " + fullNameTest);
66
67
68              // testing int and double array's
69              int newIntArray[] = new int[5];
70              newIntArray[0] = 12;
71              newIntArray[1] = 24;
72              newIntArray[2] = 36;
73              newIntArray[3] = 6;
74              newIntArray[4] = 2;
75              System.out.println("sum check array answer: " +
    sumCheckArray(newIntArray));
76              double newDoubleArray[] = new double[6];
77              newDoubleArray[0] = 23.29;
78              newDoubleArray[1] = 64.3;
79              newDoubleArray[2] = 59;
80              newDoubleArray[3] = 12;
81              newDoubleArray[4] = 12.21;
82              newDoubleArray[5] = 64.95;
83              double averageOfArray = averageCheckArray(newDoubleArray);
84              System.out.println("Average of double array: " + averageOfArray);
85
86              // checking Comparison method
87              double compareCheckArr[] = new double[5];
88                      compareCheckArr[0] = 24.6;
89              compareCheckArr[1] = 12;
90              compareCheckArr[2] = 24.3;
91              compareCheckArr[3] = 64.12;
92              compareCheckArr[4] = 72.65;
93              System.out.println("First array is larger than second array (double): " +
    compareDoubleArray(newDoubleArray, compareCheckArr));
94              // checking boolean double check
95              System.out.println("Will I buy a drink?: " + willBuyDrink(true, 22.6));
96
97
98
99
100
101
102     }
103
104     public static String concatWords(String wTBC, int x) {
105
106         String finishedConcatonation = " ";
107         for (int i = 0; i < x; i++) {
108             finishedConcatonation += wTBC;
109         }
110         return finishedConcatonation;
111     }
112     public static String fullNameBuilder(String firstName, String lastName) {
113         String fullName = firstName + " " + lastName;
```

```
114         return fullName;
115     }
116     public static boolean sumCheckArray(int[] passedNum) {
117 
118         int sum = 0;
119         for (int i = 0; i < passedNum.length; i++) {
120             sum += passedNum[i];
121         }
122         if (sum > 100) {
123             return true;
124         }
125         else {
126             return false;
127         }
128     }
129     public static double averageCheckArray(double[] doubleArray) {
130 
131         double sum = 0;
132         for (int i = 0; i < doubleArray.length; i++) {
133             sum += doubleArray[i];
134         } double average = sum / doubleArray.length;
135         return average;
136     }
137     public static boolean compareDoubleArray(double[] firstArray, double[]
    secondArray) {
138 
139         double firstSum = 0;
140         double secondSum = 0;
141         for (int i = 0; i < firstArray.length; i++) {
142             firstSum += firstArray[i];
143         } double firstAverage = firstSum / firstArray.length;
144 
145         for (int j = 0; j < secondArray.length; j++) {
146             secondSum += secondArray[j];
147         } double secondAverage = secondSum / secondArray.length;
148 
149         if (firstAverage > secondAverage) {
150             return true;
151         } else {
152             return false;
153         }
154     }
155     public static boolean willBuyDrink( boolean isHotOutside , double moneyInPocket )
    {
156 
157         if (isHotOutside == true && moneyInPocket >= 10.50) {
158             return true;
159         } else {
160             return false;
161         }
162 
163     }
164 
165 
166 
167 
168 
169 
170 }
```

171