**Computer Science 2 Lab # 06**



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**CS2 Section # 3**

**Due:**Problem A by the **end of the lab** and Problem B by the end of **Saturday** of the same week.

**TOPIC: Recursion**

**Project A:**

**Problem Description:**

1) Problem A is at MyProgrammingLab # 20867 (chapter 18, 18.4)

**Analysis:**

(Describe the problem including input and output in your own words. Type your answer in the following with **BLUE font color**)

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| **Creating a method called productOfOdds that takes an int array and an int parameter. The method calculates the product of all odd values in the array.** |

**Design:**

(Describe the major steps for solving the problem.Type your answer in the following with **BLUE font color**)

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| 1. **Make the return value of the method int because it has to return the product** 2. **Use an if statement (if a==1) as a base case if there is only one element in the array** 3. **Using if statements and else if statements to recall the same method within itself and the product** |

**Coding:** (Copy and Paste Source Code here. Type your answer in the following with **BLUE font color**)

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| **public static int productOfOdds(int[] list, int a){**  **if(a == 1){  if((list[a-1] % 2) != 0){  return list[a-1];  }else{  return 1;  }  }else if((list[a-1] % 2) != 0){  return (list[a-1] \* productOfOdds(list, a-1));  }else{  return productOfOdds(list, a-1);  } }** |

**Testing:** (Describe how you test this program.Type your answer in the following with **BLUE font color**)

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| **RUN three times, using the same input as in the sample runs:**  **\*\*I used BlueJ to create a main method to test my productOfOdds method**  **Test 1:**  **int [] arr = {3,9,1,4,2,7};**  **System.out.print(productOfOdds(arr, arr.length);**  **OUTPUT - 189**  **Test 2:**  **int [] arr = {2,2,3,3,5,4,8,6,9};**  **System.out.print(productOfOdds(arr, arr.length);**  **OUTPUT - 405**  **Test 3:**  **int [] arr = {3,1,2,4,6,8,10,11};**  **System.out.print(productOfOdds(arr, arr.length);**  **OUTPUT - 33** |