**Topic:** Elementary Programming

**Activity Guidelines**

**Group Size:** 3

**Method of Assigning Students:** Count the number of students in the class, divide by 3, count off from 1 to the quotient, and group identical numbers.

**Materials:**

- Handout (one copy per group) with questions to be answered at the end of the session

**Roles:**

- **Coordinator/Leader:** Clarifies goals and objectives, allocates roles for each team member and divides the tasks within the group.

- **Monitor/Evaluator:** Person designed to evaluate the different ideas to approach the problem and make an accurate judgment of the most beneficial option.

- **Implementer:** Person in charge to transform discussions and ideas into a technical solution for the given problem.

**Individual Accountability:** Every student will be working on teams for the exercises. Every team member is given a specific role which allows everyone on the team to get involved and participate in the problem-solving activity. Every team member should participate in solving the exercises according to their determined role in the group.

**Activity Summary**

1) Create three short Java programs that involve user input, data types and variable manipulation.

   a. Use of the primitive data type double to compute area and perimeter of a rectangle.

   b. Use of the primitive data type int and multiplication operator to find the product of two numbers.

   c. Manipulate several String variables to output a person’s full name.
**INTRODUCTION TO COMPUTER SCIENCE**  
**PEER SESSION**

**Elementary Programming**

1. Write a program that reads in the height and width of a rectangle and computes the area and the perimeter. Display the area and perimeter of the rectangle.

```java
import java.util.Scanner;
public class rectangle {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter width of rectangle: ");
        double width= input.nextDouble();

        System.out.println("Enter height of rectangle: ");
        double length= input.nextDouble();

        double area = width*length;
        double perimeter = (2*width) + (2*length);

        System.out.println("Rectangle area: " + area + " Rectangle perimeter: " + perimeter);
    }
}
```

2. Write a program that computes the product of two numbers. The program prompts the user to enter two integer type numbers, finds their product and displays the result.

```java
import java.util.Scanner;
public class product {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter first number: ");
        int first= input.nextInt();

        System.out.println("Enter second number: ");
        int second = input.nextInt();

        int product = first*second;
        System.out.println("The product of " + first + " and " + second + " is " + product);
    }
}
```
3. Write a program that has the following String variables: firstName, middleName, and lastName. The program should prompt the user to enter first name, middle name and last name. Display the whole name.

```java
import java.util.Scanner;
public class name{
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.println("Enter first name: ");
        String firstName= input.next();
        System.out.println("Enter middle name: ");
        String middleName= input.next();
        System.out.println("Enter last name: ");
        String lastName= input.next();
        System.out.println("The name entered is: " + firstName + " " + middleName + " " + lastName);
    }
}
```