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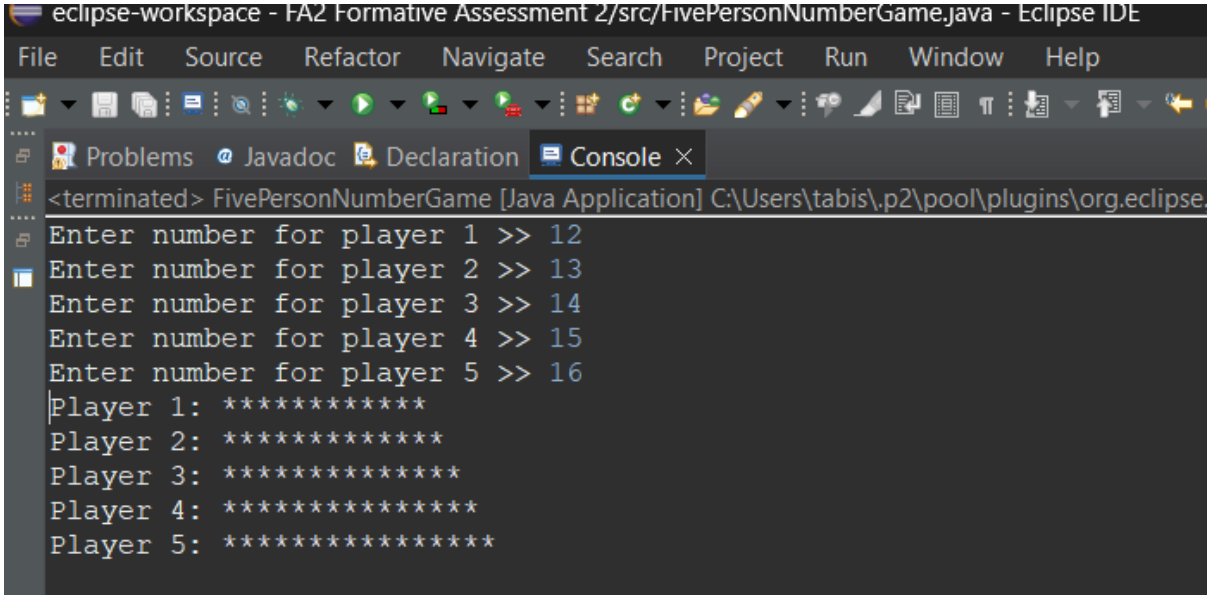
Formative Assessment 2: Systems Development 1 (HSYD100-1)

1.

```java
import java.util.Scanner;

public class FivePersonNumberGame {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        int[] numbers = new int[5];
        for (int i = 1; i <= 5; i++) {
            System.out.print("Enter number for player " + i + " >> ");
            numbers[i-1] = input.nextInt();
        }
        for (int i = 0; i < numbers.length; i++) {
            String asterisks = "";
            for (int j = 0; j < numbers[i]; j++) {
                asterisks += "*";
            }
            System.out.println("Player " + (i+1) + ": " + asterisks);
        }
    }
}
```



2.1.

```java
public class Purchase {
    int invoiceNumber;
    double saleAmount;
    double salesTax;

    public void setInvoiceNumber(int invoiceNumber) {
        this.invoiceNumber = invoiceNumber;
    }

    public void setSaleAmount(double saleAmount) {
        this.saleAmount = saleAmount;
        this.salesTax = saleAmount * 0.05;
    }

    public void displayPurchaseDetails() {
        System.out.println("Invoice Number: " + invoiceNumber);
        System.out.println("Sale Amount: $" + saleAmount);
        System.out.println("Sales Tax: $" + salesTax);
    }
}
```

2.2.

```java
import java.util.Scanner;

public class Purchase {

    int invoiceNumber;
    double saleAmount;
    double salesTax;

    public Purchase(int invoiceNumber, double saleAmount) {

        this.invoiceNumber = invoiceNumber;
        this.saleAmount = saleAmount;
        this.salesTax = saleAmount * ;
    }

    public int getInvoiceNumber() {

        return invoiceNumber;
    }

    public double getSaleAmount() {

        return saleAmount;
    }

    public double getSalesTax() {

        return salesTax;
    }

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);
        int invoiceNumber = 0;
        double saleAmount = 0.0;

        while (invoiceNumber < 1000 || invoiceNumber > 6000) {
            System.out.print("Enter invoice number (between 1000 and 6000): ");
            invoiceNumber = scanner.nextInt();
        }
```

```
40          }
41
42          while (saleAmount < 0) {
43              System.out.print("Enter sale amount (non-negative value): ");
44              saleAmount = scanner.nextDouble();
45          }
46
47          Purchase purchase = new Purchase(invoiceNumber, saleAmount);
48          System.out.println("Invoice number: " + purchase.getInvoiceNumber());
49          System.out.println("Sale amount: $" + purchase.getSaleAmount());
50          System.out.println("Sales tax: $" + purchase.getSalesTax());
51      }
52  }
```