1. Concatenate first name and last name

```
import java.util.Scanner;

public class NameConcatenation {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter first name: ");
        String firstName = scanner.nextLine();
        System.out.print("Enter last name: ");
        String lastName = scanner.nextLine();

        String fullName = firstName + " " + lastName;
        System.out.println("Full Name: " + fullName);
        scanner.close();
    }
}
```

2. Combine name, age, and address using string concatenation

```
import java.util.Scanner;

public class PersonalInfoConcatenation {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter your name: ");
        String name = scanner.nextLine();
        System.out.print("Enter your age: ");
        int age = scanner.nextInt();
        scanner.nextLine(); // consume leftover newline
        System.out.print("Enter your address: ");
        String address = scanner.nextLine();

        String info = "Name: " + name + ", Age: " + age + ", Address: " + address;
        System.out.println(info);
        scanner.close();
    }
}
```

3. Use concatenation inside a loop to build a pattern

```
import java.util.Scanner;

public class PatternConcatenation {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
```

```
        System.out.print("Enter number of rows: ");
        int rows = scanner.nextInt();

        String pattern = "";
        for (int i = 1; i <= rows; i++) {
            pattern += "*";
            System.out.println(pattern);
        }
        scanner.close();
    }
}
```

4. Demonstrate precedence of concatenation and addition

```
public class ConcatPrecedence {
    public static void main(String[] args) {
        String name = "Alice";
        System.out.println(1 + 2 + name);       // 3Alice  -> left-to-right, 1+2 first
         System.out.println(name + 1 + 2);        // Alice12  -> after String, rest are concatenated
           System.out.println(name + (1 + 2));       // Alice3    -> parentheses force addition
         System.out.println(1 + (2 + name));     // 12Alice  -> 2+name -> "2Alice", then 1 + "2Alice"
         System.out.println("" + 1 + 2 + name);  // 12Alice  -> starting with "" forces all to String
    }
}
```

5. Accept input strings and concatenate with formatting

```
import java.util.Scanner;

public class FormattedConcatenation {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter city: ");
        String city = sc.nextLine();
        System.out.print("Enter state: ");
        String state = sc.nextLine();
        System.out.print("Enter country: ");
        String country = sc.nextLine();

        // Using concatenation
        String address1 = city + ", " + state + ", " + country;
        // Using String.format
        String address2 = String.format("%s, %s, %s", city, state, country);
```

```
        System.out.println("Concatenated: " + address1);
        System.out.println("Formatted  : " + address2);
        sc.close();
    }
}
```