

Certainly! Here are examples of various data types in Java:

1. **Primitive Data Types**:

- **byte**: Represents a 8-bit signed integer.

```
```java
byte myByte = 100;
```
```

- **short**: Represents a 16-bit signed integer.

```
```java
short myShort = 10000;
```
```

- **int**: Represents a 32-bit signed integer.

```
```java
int myInt = 1000000;
```
```

- **long**: Represents a 64-bit signed integer.

```
```java
long myLong = 1000000000L; // Note the 'L' suffix
```
```

- **float**: Represents a 32-bit floating-point number.

```
```java
float myFloat = 3.14f; // Note the 'f' suffix
```
```

- **double**: Represents a 64-bit floating-point number.

```
```java
double myDouble = 3.14159265359;
```
```

- **char**: Represents a single 16-bit Unicode character.

```
```java
char myChar = 'A';
```
```

```
```
```

- **boolean**: Represents a true or false value.

```
```java
boolean isTrue = true;
```
```

## 2. **Reference Data Types**:

- **String**: Represents a sequence of characters.

```
```java
String myString = "Hello, Java!";
```
```

- **Array**: Represents a collection of elements of the same data type.

```
```java
int[] numbers = {1, 2, 3, 4, 5};
```
```

- **Class Objects**: Instances of user-defined classes.

```
```java
Car myCar = new Car("Toyota", "Corolla", 2022);
```
```

- **Interfaces**: Representing a contract that classes can implement.

```
```java
interface Shape {
    void draw();
}
```
```

- **Enums**: Represents a set of predefined constants.

```
```java
enum Day {
    SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY
}
```
```

- **\*\*User-Defined Reference Types\*\***: Created by defining classes.

```
```java
class Student {
    String name;
    int age;
}
Student student1 = new Student();
```
```

Certainly, here are a few more examples of data types and their usage in Java:

1. **\*\*String Concatenation\*\***:

```
```java
String firstName = "John";
String lastName = "Doe";
String fullName = firstName + " " + lastName;
System.out.println("Full Name: " + fullName);
```
```

2. **\*\*Arrays\*\***:

```
```java
int[] numbers = {10, 20, 30, 40, 50};
System.out.println("Second Element: " + numbers[1]);
```
```

3. **\*\*Class Objects\*\***:

```
```java
class Person {
    String name;
    int age;
}
Person person1 = new Person();
person1.name = "Alice";
person1.age = 25;
System.out.println(person1.name + " is " + person1.age + " years old.");
```
```

4. **\*\*Enums\*\***:

```
```java
```

```
enum Season {
    SPRING, SUMMER, AUTUMN, WINTER
}
Season currentSeason = Season.SUMMER;
System.out.println("Current Season: " + currentSeason);
...

```

5. ****Boolean Logic****:

```
...java
boolean isSunshine = true;
boolean isRainy = false;
if (isSunshine || isRainy) {
    System.out.println("Weather is unpredictable!");
} else {
    System.out.println("Weather is nice.");
}
...

```

6. ****Casting****:

```
...java
int intValue = 100;
double doubleValue = intValue; // Implicit casting (widening)
System.out.println("Double Value: " + doubleValue);

double anotherDoubleValue = 3.14;
int roundedValue = (int) anotherDoubleValue; // Explicit casting (narrowing)
System.out.println("Rounded Value: " + roundedValue);
...

```

7. ****User-Defined Reference Types****:

```
...java
class Book {
    String title;
    String author;
}
Book myBook = new Book();
myBook.title = "The Great Gatsby";
myBook.author = "F. Scott Fitzgerald";
System.out.println("Book Title: " + myBook.title + ", Author: " + myBook.author);
...

```

These additional examples showcase how different data types are used in various contexts, such as string manipulation, arrays, casting, and working with user-defined classes. Data types play a crucial role in Java programming, enabling you to work with a wide range of data efficiently and effectively.