**Primitive Data Types:**

**Integral Data Types**

1. **byte**
   * Size: 8 bits (1 byte)
   * Range: -128 to 127
   * Example:

byte age = 30;

1. **short**
   * Size: 16 bits (2 bytes)
   * Range: -32,768 to 32,767
   * Example:

short distance = 1000;

1. **int**
   * Size: 32 bits (4 bytes)
   * Range: -2^31 to 2^31-1
   * Example:

int population = 1000000;

1. **long**
   * Size: 64 bits (8 bytes)
   * Range: -2^63 to 2^63-1
   * Example:

long bigNumber = 1000000000L; // Note the 'L' suffix to indicate a long literal

**Floating-Point Data Types**

1. **float**
   * Size: 32 bits (4 bytes)
   * Example:

float temperature = 98.6f; // Note the 'f' suffix to indicate a float literal

1. **double**
   * Size: 64 bits (8 bytes)
   * Example:

double pi = 3.14159265359;

**Character Data Type**

1. **char**
   * Size: 16 bits (2 bytes)
   * Represents a single Unicode character.
   * Example:char grade = 'A';

**Boolean Data Type**

1. **boolean**
   * Size: JVM-dependent (commonly 1 bit)
   * Represents true or false.
   * Example:

boolean isJavaFun = true;

**Non-Primitive Data Types:**

1. **String**
   * Used to store a sequence of characters.
   * Example:

String greeting = "Hello, World!";

1. **Arrays**
   * Used to store multiple values of the same data type.
   * Example:

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

1. **Classes**
   * User-defined data types that can have attributes and methods.
   * Example:

class Person {

String name;

int age;

}

1. **Interfaces**
   * Defines a contract for implementing classes.
   * Example:

interface Drawable {

void draw();

}

1. **Enums**
   * A special data type for a predefined set of constants.
   * Example:

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