

The different types of variables.

The diagram illustrates the different types of variables in Java using a code snippet. The code is as follows:

```
*/  
class Budapest {  
    private String zsondor;  
    private static String lajos;  
  
    public Budapest (String deli) {  
        lajos = deli;  
    }  
  
    public static void main (String[] args) {  
        String antal;  
        new Budapest ("Bertalan");  
    }  
}
```

The variables are categorized as follows:

- Member Variables:** `private String zsondor;` and `private static String lajos;` (highlighted with a red box).
- Instance Variable:** `private String zsondor;` (highlighted with a green box).
- Class Variable:** `private static String lajos;` (highlighted with an orange box).
- Parameter:** `(String deli)` (highlighted with a black box).
- Local Variable:** `String antal;` (highlighted with a pink box).
- Argument:** `"Bertalan"` (highlighted with a blue box).

- Member variables in a class are also called *fields*.
- The value of an instance variable is unique to each object. When objects are created from the same class, they each have their own distinct copies of instance variables. Instance variables are referenced by the instance name, as in **instanceName.variableName**;
- Class variable are variables that are common to all objects. They are associated with the class, rather than with any object. Every instance of the class shares a class variable. Class variables are referenced by the class name itself, as in **ClassName.variableName**;
- Parameters are variables inside a method declaration, their primary function is to *receive* values.
- Local variables are variables inside a method or block of code.
- An argument is the value passed to a method when that method is called.

<https://docs.oracle.com/javase/tutorial/java/javaOO/variables.html>