Getters and Setters in Java

Getters and setters are methods used to access and update the value of an object's properties (fields). They are a fundamental part of encapsulation in object-oriented programming, ensuring that fields are accessed or modified in a controlled way.

Example:

```java
public class Person {
    // Private fields
    private String name;
    private int age;

    // Getter for name
    public String getName() {
        return name;
    }

    // Setter for name
    public void setName(String name) {
        this.name = name;
    }

    // Getter for age
    public int getAge() {
        return age;
    }

    // Setter for age
    public void setAge(int age) {
        if (age > 0) {  // Example validation
            this.age = age;
        }
    }
}
```

Definition:

Getter: A method used to retrieve the value of a private field.

Setter: A method used to set or update the value of a private field, often with additional validation or logic.

Syntax:

Getter:

```
public <ReturnType> get<FieldName>() {
    return <FieldName>;
}
```

Setter:

```
public void set<FieldName>(<ParameterType> <parameterName>) {
    this.<FieldName> = <parameterName>;
}
```

Key Points:

- Getters and setters allow control over the access to private fields.

- They are commonly used to enforce rules or validation on data being set.

- Getters return the value of the field, while setters modify the field value.