

Objektovo orientované programovanie

9. cvičenie

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Object

<https://docs.oracle.com/en/java/javase/25/docs/api/java.base/java/lang/Object.html>

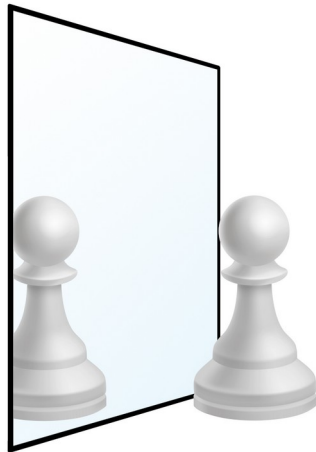
<code>protected</code>	<code>Object</code>	<code>clone()</code>	Creates and returns a copy of this object.
<code>public</code>	<code>boolean</code>	<code>equals(Object obj)</code>	Indicates whether some other object is "equal to" this one.
<code>public</code>	<code>int</code>	<code>hashCode()</code>	Returns a hash code value for the object.
<code>public final</code>	<code>Class<?></code>	<code>getClass()</code>	Returns the runtime class of this Object.
<code>public</code>	<code>String</code>	<code>toString()</code>	Returns a string representation of the object.
<code>public final</code>	<code>void</code>	<code>notify()</code>	Wakes up a single thread that is waiting on this object's monitor.
<code>public final</code>	<code>void</code>	<code>notifyAll()</code>	Wakes up all threads that are waiting on this object's monitor.
<code>public final</code>	<code>void</code>	<code>wait()</code>	Causes the current thread to wait until it is awakened, typically by being notified or interrupted.
<code>public final</code>	<code>void</code>	<code>wait(long timeoutMillis)</code>	Causes the current thread to wait until it is awakened, typically by being notified or interrupted, or until a certain amount of real time has elapsed.
<code>public final</code>	<code>void</code>	<code>wait(long timeoutMillis, int nanos)</code>	Causes the current thread to wait until it is awakened, typically by being notified or interrupted, or until a certain amount of real time has elapsed.
<code>protected</code>	<code>void</code>	<code>finalize()</code>	Deprecated, for removal: This API element is subject to removal in a future version. Finalization is deprecated and subject to removal in a future release.

Metódy equals() a hashCode()

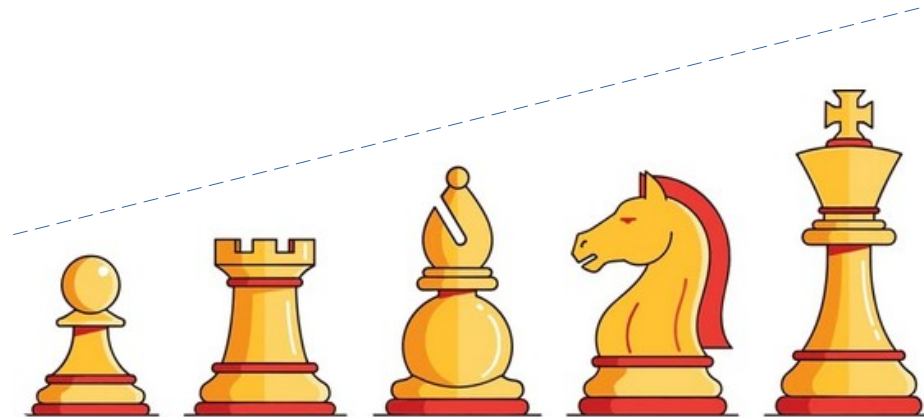
- ak definujeme, tak definovať oboje, aby boli konzistentné
- ak equals() vráti true, tak hashCode() oboch objektov musí byť rovnaké
- ak equals() vráti false, tak hashCode() oboch objektov môže ale nemusí byť rôzne

Dva typy porovnávaní

`equals()`, `hashCode()`



`Comparable<T>`, `Comparator<T>`



Comparable

```
public interface Comparable<T> {  
    public int compareTo(T o);  
}
```

výstupná hodnota metódy
this < o → záporná hodnota
this = o → nula
this > o → kladná hodnota

Comparator

```
public interface Comparator<T> {  
    int compare(T o1, T o2);  
    .  
    .  
    .  
    .  
    .  
}
```

výstupná hodnota metódy
o1 < o2 → záporná hodnota
o1 = o2 → nula
o1 > o2 → kladná hodnota

Enum

Enumeračné typy sú podtriedou triedy Enum

<https://docs.oracle.com/en/java/javase/25/docs/api/java.base/java/lang/Enum.html>

Vnorené typy

- listener (observer) ako inštancia vnorenej triedy
- reakcia na stlačenie tlačidla

