Hemel - 121

Subject..... Date 25 06 2025

1) a. equals() (content comparison)

i. checks if objects have the same value/content.

ii. must be overridden in classes to work properly (default is same as ==)

iii. slower but compares actual data.

a == b (reference comparison)

i. checks if both reference point to the same object in memory.

ii. works for all objects and primitives.

iii. Faster but only checks memory address.

Example:

```
String a = new String ("hello");
String b = new String ("hello");

System.out.println (a == b);
System.out.println (a.equals (b));
```

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2] i. Security – prevents unauthorized modifications (e.g. in network connections, file Path)

ii. Thread safety – can be safely shared between threads.

iii. Performance – Enables string pooling (reuse of common strings)

iv. Hashcode caching – Hash can be calculated once and reused.

Example:

```
String S1 = "Hello";
String S2 = S1.concat("world");

System.out.println(S1);
System.out.println(S2);
```

Key Point: Any operation that seems to "modify" a string actually creats a new string object instead.