**Interview Questions**

**JAVA-111: Session 2**

**Answering interview questions is crucial in your journey of applied learning. Review them to ensure your understanding of important topics covered in the previous session and to prepare yourself for upcoming challenges. Remember that it's important to answer these questions on your own before viewing the solution. The solutions are hyperlinked to community posts on our platform.**

**✅ 1. What are the different components of a method signature in Java?**

In Java, the **method signature** is the **part of the method declaration** that the compiler uses to differentiate one method from another.

🔹 **Components of a method signature:**

* **Method name**
* **Parameter list** (type and order of parameters)

🔸 For example:

java

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public int add(int a, int b) { ... }

✅ **Method signature**: add(int, int)

Note: **Return type** and **access modifiers (public, private) are NOT part of the method signature**.

**✅ 2. What is a Control Flow statement?**

A **control flow statement** is used to determine the **flow or direction** in which the program executes.

🔹 Java has 3 main types of control flow statements:

1. **Conditional Statements** – if, if-else, switch
2. **Looping Statements** – for, while, do-while
3. **Branching Statements** – break, continue, return

➡️ These statements help control how the **statements in your code are executed based on conditions**.

**✅ 3. What are conditional statements and how do they work in Java?**

Conditional statements let you **execute code blocks based on boolean conditions**.

**🔹 Common types in Java:**

1. **if Statement**

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if (condition) {

// code runs if condition is true

}

1. **if-else Statement**

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if (condition) {

// true block

} else {

// false block

}

1. **if-else if-else Ladder**

java

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if (cond1) {

// block 1

} else if (cond2) {

// block 2

} else {

// default block

}

1. **switch Statement**  
   Used when you have multiple constant values to compare.

java

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switch (value) {

case 1:

// code

break;

case 2:

// code

break;

default:

// fallback

}

✅ They **evaluate a condition** (like n % 2 == 0) and decide **which block of code should run**.

**📘 Additional Readings (for deeper understanding):**

**🔸** [**If/Else Conditional Statements in Java – Oracle Docs**](https://docs.oracle.com/javase/tutorial/java/nutsandbolts/if.html)

**🔸** [**Methods in Java – Oracle Docs**](https://docs.oracle.com/javase/tutorial/java/javaOO/methods.html)