

1. What is static, inferred and dynamic typing?

-Static Typing is when type checking is done at **compile time**

A pro of this is working with relational databases, it helps catch type mismatches sooner at compile time

-Dynamic typing is when type checking is done at **run time**

-Inferred typing is the ability to automatically gather the type of an expression or variable at compile time.

2. How does stringiest pools work in JAVA

Well when we use double quotes to create a String, java first looks for a string with the same value in the string pool, if the **string is found, it just returns a reference**, if not, a new string is created in the pool and then referenced.

3. What is functional Programming and how does it differ from pure object oriented?

Functional programming is a language that focuses on the computation of pure functions.

Sub.) What are pure functions?

Pure functions always return the **same result**, **given the same input** and have **no side effects**.

When compared to Object Oriented, **functional programming objects are immutable**(cannot be changed). **Functional programming avoids shared state**(objects do not share scope)

4. What is lambda function?

Java lambda expressions are functions which can be created without belonging to a class. We commonly use this to implement simple event listeners/callbacks

5. What are some ways Kotlin achieves null safety?

First by default Kotlin assumes that values cannot be null.

Safe Calls - allows us to execute an action when the specific reference is non null.

Elvis Operator - allows some default value if the reference holds a null

Nullable Unsafe Get - allows us to take a value from a nullable reference and throws a null pointer exception if it holds null.