Temario Academia Java APX

Semana 1

Lunes

- Java class structure
- Package declarations and imports
- Creating objects

Martes

- Primitive types vs. reference types
- Variable declaration, initialization, and scope
- Garbage collection

Miércoles

- Java operators (arithmetic, unary, assignment, relational, logical)

Jueves

- Control flow statements (if-then, if-then-else, switch)
- Iteration statements (while, do-while, for)

Viernes

- Advanced flow control (break, continue, labels)
- String manipulation

Semana 2

Lunes

- StringBuilder and String
- Java arrays and ArrayList

Martes

- Wrapper classes and autoboxing
- Working with dates and times

Miércoles

- Method design and overloading
- Access modifiers
- Static methods and fields

Jueves

- Passing data among methods
- Constructors
- Encapsulation and immutability

Viernes

- Inheritance
- Abstract classes
- Interfaces

Semana 3

Lunes

- Polymorphism
- Casting objects
- Exception types

Martes

- Try-catch-finally blocks
- Throwing and handling exceptions

- Creating nested classes (inner classes, anonymous classes, static nested classes)

Miércoles

- Coding equals(), ==hashCode()==, and toString()

- Working with ==Enums==

- Using instanceof

Jueves

- Designing interfaces and functional interfaces

- Understanding design principles (JavaBeans, is-a and has-a relationships)

Viernes

- Working with design patterns (Singleton, Immutable Objects, Builder, Factory)

- Dependency Injection

Semana 4

Lunes

- Advanced use of ==collections==

- Working with generics (classes, interfaces, methods)

Martes

- Using Lists, Sets, Maps, and Queues

- Comparing collection types

- Comparator vs. Comparable

Miércoles

- Advanced use of lambdas

- Working with built-in functional interfaces

- Using Optional

Jueves

- ==Working with Streams (creating, terminal operations, intermediate operations)==

- ==Working with primitive streams==

- ==Advanced stream pipeline concepts==

Viernes

- Using multi-catch and try-with-resources

- Creating custom exceptions

- Working with assertions

- ==Introducing threads and concurrency==

- ==Creating and managing threads==

- ==Using ExecutorService==