

LEXICON

Alexis Abbott Notes



ABNF

Augmented Backus-Naur Form

Abstract

A keyword that goes on a method or class.

Access Modifiers:

Permission levels and rules for how things can be accessed in your application.

ACID

Atomicity, Consistency, Isolation, Durability

Actuator

Maven dependency that gives environment status information.

Annotation

@Annotation - there are many types and they give information on how to treat the following code.

Anonymous Inner Class

Local classes that have no name for a class that only needs to run once.

AOP

Aspect Oriented Programming

API

Application Program Interface

Array

Container object that holds a fixed collection of values of a single data type.

ArrayList

Container object that holds any number of values of a single type and can be modified.

Aspect Oriented Programming

Development methodology that addresses cross-cutting concerns to further enhance modularity.

Autoboxing

Putting primitive values in an object wrapper to gain common functionality.

BDD

Behavior Driven Development

Beans/Java Beans

A type of POJO that collects many objects and puts them into a single object. It must be serializable.

Class

OOP structure that defines an entity.

Closures

A block of code that can be accessed by the enclosing scope. The stack holds the values of variables while nested methods are processing.

Compiler

Takes the text code and compiles it into a platform-independent Java file.

Common Protocols

HTTP, SMTP, FTP, SNMP, DHCP

Condition (JPA)

Tail end of the naming convention for the JPA library to know how to query the database.

Constant

Created by using the Final keyword on a variable.

Constructor

The method called when an object is created to instantiate a class.

Constructor Chaining

When a new object is called, when the constructor is called, it moves up the class chain invoking super constructors to also make those objects.

CORS

Cross-Origin Resource Sharing

CQL

Cassandra Query Language

CRUD

Create Read Update Delete

DAO

Data Access Object

DTO

Data Transfer Object

Default Gateway

The node in a computer network that uses the internet protocol as the forwarding host (router).

Dependency Injection

A design pattern where one object supplies the dependencies of another object.

DHCP Server

A network server that automatically assigns IP addresses.

DML

Data Manipulation Language

DSL

Domain Specific Language

- **Groovy**
- **Kotlin**

EDU

Engine Dispatchable Unit

EJB

Enterprise Java Bean

Encapsulation

The wrapping of data into a single unit.

Endpoints

The URI mapping to interact with an API.

Entity Mapping

Database development for relations. JPA uses inline annotations to define this information within the application classes.

Enum

A variable with a variety of known possibilities. Often used in Switch statements.

ESB

Enterprise Service Bus

ERD

Entity Relationship Diagram

Fields

Instance variables in a class.

Final

keyword that makes a variable act like a constant. Can also be used on methods to ensure it can't be overridden. Use on classes to make sure no subclasses can be made.

Filter (JPA)

Naming convention to help reduce what is returned from the database.

Functional Programming

A paradigm that allows functions as expressions as well as being able to pass methods as arguments.

Generics

Collections which use the <angle> brackets.

Getter

A method that grabs an instance variable for use in an object.

Gradle

Build automation tool that can work in tandem with the Maven repository.

Hashcode

Value assigned to an object that references the object's memory location.

HATEOAS

Hypermedia As The Engine Of Application State

Heap

Where objects are stored by the JVM until they are no longer needed and destroyed by the Garbage Collector.

Import

A reference to a library to negate the need to fully qualify names in your application.

Interface

A type of abstract class that forces any classes which implement it to define a set of methods declared, without a body, within the implementing class. "Class contracting."

Introducer (JPA)

Part of a naming convention for the JPA which beings the query.

Inversion of Control

Containers which create objects and manage their entire life cycle.

JAR

Java ARchive

Java Reflection

an API used to examine or modify the behavior of methods or classes at runtime.

Java Web Start

A way to launch applications from the browser.

JBS/Java Business Service

Code that serves the logic of the business.

JDK

Java Development Kit

JPA

Java Persistence API

JRE

Java Runtime Environment

JVM

Java Virtual Machine

JUnit

A unit testing framework that uses assertions and annotations.

Keywords

Reserved words in Java that have special functionality.

Lambda

Part of functional programming. Lambdas are written more concisely than anonymous inner classes and have some subtle differences.

LLC

Logical Link Control

Life Cycle of Object

From object creation, manipulation, use and death. Often managed via the concept of Inversion of Control.

Loose Coupling

Programming concept of not hard coding dependencies and instead using Dependency Injection to keep code maintainable, easy to test, and overall light.

MAC

Media Access Control

manifest.txt

The file packaged with an application to let the JVM know where to find the main() method.

Maven

Dependency repository.

Method

A block of code inside of a class that does a particular thing.

Method Override

A way in which subclasses can change the functionality of superclasses by defining them in the subclass and rewriting what they do.

Method Reference

Syntactically simple way to write a lambda expression when no arguments are being passed.

Method Signature

The parameter list of a method.

Microservices

A standalone service that can be called independently in a variety of applications.

Mockito

A mocking framework that tests the behavior of units.

MVC

Model View Controller

NAT

Network Address Translation

NTP

Network Time Protocol

OAS

OpenApi Specification

Object

an object is an instance of a class.

Object Graph

When an object is serialized, if it has any references to other objects, those will also be serialized. The whole mapping is considered the Object Graph.

Object Lock

When a thread has an object, it is locked down, meaning no other threads can access it until the thread has released the object lock.

ODM

Operational Decision Manager

OLAP

Online Analytical Processing

OLTP

Online Transactional Processing

Operand

A value being impacted by an operator.

Operator

An operation impacting operands. (+ - * /)

Optional

A class that allows for optional values instead of null references.

ORM

Object Relational Mapping

Overloaded Functions

Functions that are named the same and only have their method signatures changed so when the methods are invoked on the object, it makes them more versatile.

Package

The “container” directory in which code is gathered. Package level access impacts classes within the same package.

Packets

Information sent through TCP/IP is broken into smaller pieces called packets.

PID

Process Identification

POJO

Plain Old Java Object

Polymorphism

“Many forms.” Important for method overriding, method overloading, and subclasses being able to call upon superclass methods and fields.

pom.xml

The XML file in a Maven project that defines several things, but largely the dependencies.

Port

A 16 bit number shipped in the header of an internet or network process to tell the server where to send it when it arrives at the server.

Port Ranges

The possible port numbers that can be used on a server.

Reference Variables

A variable whose value is a reference to an object's memory location.

REST API

REpresentational
State
Transfer

RFC

Request for Comments

RMI/Remote Method Invocation

Proxy objects that deal with sockets and streams.

Serialized

When an object is “flattened”. It's written to bytes and then saved to a file.

Servlets

Server side extensions. AKA, dynamic websites.

Services

Server programs.

Setter

A method in a class to set instance variables.

Singleton

A way to define a global variable. It creates a single instance of itself for use across the application.

SOAP

Simple Object Access Protocol

Spring

A Java framework to make application development easier.

Spring Boot

A bootstrapped version of Spring that is a startup project that is ideal for most Java applications.

Spring Boot CLI

Command line tool that interacts with Spring and allows for Apache Groovy scripting.

Spring Initializr

An online tool that allows for selective dependency selection for Spring Boot and project initialization.

SRP

Single Responsibility Principle

SS Table

Sorted String Table, an immutable table used by Cassandra.

Stack

Where variables are held while they are utilized while they're "alive" in the stack trace.

Static

A keyword that means a variable or method doesn't need to be instantiated to be accessed.

Strings

A sequence of characters in an object.

STS

Spring Tool Suite IDE

Subnet Mask

An IP pattern to signify how many bits are being reserved between subnet and hosts.

Super

A keyword to reference the parent, either method, constructor, or class.

Synchronize

Using the synchronized keyword to modify a method means only one thread can access it at a time. This assures a thread can fully finish a method, even if it goes to sleep in the method.

TCP/IP

Transmission Control Protocol / Internet Protocol

Test Doubles

The types of tools used for BDD specifically in "mocking".

- **Dummy**
- **Fake**
- **Stubs**
- **Mocks**

Thread

An independent path of execution in a program. Many can run concurrently in a program.

Thread Schedule

Part of the JVM that decides what thread runs to execute an application.

Token

The small components of a file.

try/catch

A code block to deal with exceptions if a method might process in an error.

TDD

Test Driven Development

TTL

Time to Live

Type Casting

When primitive values are mixed in an expression.

UDP

User Diagram Protocol

UML

Unified Modeling Language

Variables

A piece of memory that contains a data value.