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|  | **Features / PL:** | **Java:** | **JavaScript:** |
| Default more secure programming practices | Memory Management | Garbage Collection | Garbage Collection provided by JVM |
| bounds checking | run times bound checking | run times bound checking |
| Static Type checking | no | check on compile time |
| Dynamic Type checking | a variable can hold an object of any type and cannot be restricted | Partial dynamic checking, i.e down casting. |
| Type safety: Strong/weak | weakly typed | strongly typed |
| Exception handling | using try-catch and can throw any kind of exception | using try-catch with build-in Exception class |
| Compiled/ Interpreted | Interpreted | Compiled to byteCode, and than interpreted by JVM |
| Conditional compilation | Not support | Yes, but need some tricks |
| Assertions | User self-defined | Java support assert |
| Web application development | Dynamic Web Pages | Using Server-Side JavaScript (SSJS) | JSP |
| Web Server | IIS, Apache | Tomcat, JBoss, GlassFish |
| Web Framework/Libraries | JAXER | J2EE framework |
| Session management | Yes, using Jaxer.session | Yes, are represented by an HttpSession object. |
| Security | Yes | Yes |
| Model-ViewController | can create MVC structure using Jaxer | J2EE/Spring/Struts |
| Database interaction | Jaxer.DB | JDBC |
| Secure Sockets Layer support | Yes | JavaSSL |
| web service design & composition | Web Services including(SOAP, WSDL, UDDI) | Yes, it is possible using an AJAX/XMLHttpReques t-based web service client [sr-13]. Gmail and Google services are good examples. | Yes. i.e using Apache XML-RPC for Java library [JL-6] or Spring Web Services, JAX-WS 2.1) |
| Web services security | Yes, Ajax can be used with any dynamic web programming language that support HTTPS protocol (SSL). | Yes. HTTPS, above libraries support “XMLbased standards” such as WS-Policy, WSSecurity and WSTransfer standards) Web Services pipeline watching |
| Web Services composition | No, JavaScript doesn’t support web services composition. We can only consume web services using JavaScript. | J2EE WS composition. |

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|  | **Features / PL:** | **Java:** | **JavaScript:** |
| OO based abstraction | Central unit | Function | Class |
| Structural elements | variable, function | constructors, methods, members |
| Multiple inheritance | support multiple inheritance | no, can be implemented |
| Polymorphism | N/A - not considered | Yes, basic feature for OOP. Method overloading. By default methods are virtual. |
| Partial Classes | N/A - not considered | Yes, can declare interface in a file and implement it in another file |
| Structs support | N/A - not considered | No, doesn’t support Structs declaration. |
| Instantiation | N/A - not considered | Yes, Class instantiation using the new keyword. |
| Extension/ Inheritance | N/A - not considered | Yes, a class can extend a abstract class. |
| Accessibility control | N/A - not considered | Yes, private, public and protected for inter-type members. |
| Reflection | Access to program’s metadata | Yes, can access directly | Yes, since Java 5.0. Annotation-based development style. |
| Generation code at run-time | Yes, compile-time reflection | Yes, such as JUni |
| Dynamic invocation | N/A - not considered | N/A - not considered |
| Aspect Orientatiton | Aspect-oriented programming | AspectJS is an open source and free framework for AOP in Javascript | AspectJ is extension of Java for AOP |
| Modularity | Yes, we use the main module as the central point through which data is delivered to and from other modules | Same as AspectJ |
| Code reusability | N/A - not considered | Same as AspectJ |
| Security | N/A - not considered | Same as AspectJ |
| Errors handling/Logging | N/A - not considered | Same as AspectJ |

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|  | **Features / PL:** | **Java:** | **JavaScript:** |
| Functional Programming | Type inference | N/A - not considered | Functional Java – a extension of Java, but each variable has to assign a type |
| Lambda expression | yes | No, Java does not support it |
| Anonymous methods | N/A - not considered | No, Java has anonymous classes, but do not support anonymous functions |
| Higher-order functions | yes | Java cannot pass function and return function |
| Closure | N/A - not considered | No, but Java simulate some features of closures |
| First-class functions(delegat es) | N/A - not considered | No, function is not first class object for Java |
| Recursion | yes | Yes, Java function can call itself |
| Batch scripting | Run external programs/external commands | Only with Internet Explorer using ActiveXObject. | Yes, using Runtime class |
| Tasks automation | Yes, nearly in every web browsers with support for JavaScript | yes |
| Accept command line arguments | No, JavaScript run with a browser and not from the command line | yes |
| Has to recompile after changing the code source | No, no need to recompile JavaScript after changing the source code | yes |