Functional language

is language that you need in different day-to-day situations. For example: greeting, introducing yourself, asking for or giving advice, explaining rules, apologising, or agreeing and disagreeing. Any one of these functions can have a number of different exponents, or fixed expressions.

scripting language

is a programming language that is interpreted. It is translated into machine code when the code is run, rather than beforehand. Scripting languages are often used for short scripts over full computer programs. JavaScript, Python, and Ruby are all examples of scripting languages

Multi-language

is when something is expressed in two or more languages. Multi-language is also referred to as multi-lingual. A person who has the ability to speak/ write/ express himself in more than two languages he is said to be multilingual.

Paradigm

is a way of doing something (like programming), not a concrete thing (like a language). Now, it’s true that if a programming language L happens to make a particular programming paradigm P easy to express, then we often say “L is a P language” (e.g. “Haskell is a functional programming language”) but that does not mean there is any such thing as a “functional language paradigm”.

Enterprise Programming

is when a programmer is hired to develop applications for a corporation or other large organization whose primary business is NOT Software Development. ... In either case the software is specific to the organization's business domain.

Sync may refer to any of the following:

 In general, sync or synch is short for "synchronize" and refers to an exchange between multiple devices or programs making the data on all devices identical. For example, you may use Chrome to share your bookmarks, passwords, and browser settings between multiple computers.

 When referring to hardware, sync is connecting a peripheral, like a smartphone, to a computer. This process also involves updating any information that differs on either of the two devices. Syncing keeps a device's data backed up and up-to-date.

 Sync is also used to describe Microsoft's ActiveSync.

 With Windows Sinternals, Sync is a utility that flushes cached data to disk.

Async

is short for “asynchronous”. It's easier to understand async if you first understand what “synchronous”, the opposite, means. In programming, we can simplify the definition of synchronous code as “a bunch of statements in sequence”; so each statement in your code **is** executed one after the other

the difference between Sync & Async :

|  |  |
| --- | --- |
|  |  |
| 1 | Synchronous transmission is fast. | Asynchronous transmission is slow. |
| 2. | Synchronous transmission is costly. | Asynchronous transmission is economical. |
| 3. | In Synchronous transmission, time interval of transmission is constant. | In asynchronous transmission, time interval of transmission is not constant, it is random. |
| 4. | In Synchronous transmission, There is no gap present between data. | In asynchronous transmission, There is present gap between data. |
| 5. | Efficient use of transmission line is done in synchronous transmission. | While in asynchronous transmission, transmission line remains empty during gap in character transmission. |
| 6. | Synchronous transmission needs precisely synchronized clocks for the information of new bytes. | Asynchronous transmission have no need of synchronized clocks as parity bit is used in this transmission for information of new bytes. |

**MySQL SQL Versus Oracle SQL Constructs**

With respect to SQL application syntaxes keeping with the ANSI-SQL 92 standard for database design, both MySQL and Oracle have their quirks.  Previous versions of the MySQL platform lacked essential database application functionality such as stored procedures and view implementations. With MySQL 5.0, many new features were added to the MySQL database engine to be more competitive against major database vendors including Oracle and Microsoft SQL Server. Application developers can now write complex stored procedures and views for their open source applications.

The differences between Oracle and MySQL database SQL constructs will be briefly covered to better appreciate the "gotchas" for migration to Oracle from MySQL. In MySQL there are limits on view implementation.  For example, it is not possible to create indexes on a view in the MySQL database environment. In Oracle 10g, on the other hand, indexes can be implemented in a view. Oracle also provides features such as materialized views.  Materialized views allow complex query aggregations to be stored for future processing; MySQL lacks the mechanism for a materialized view.

Another difference in SQL between the two environments lies in the method of processing database subqueries.  The MySQL environment poses special restrictions on how a subquery may be implemented and processed. For instance, a subquery contained within a FROM clause in MySQL cannot be used as a correlated subquery.

Another limitation and difference concerns how database cursors are processed and implemented. With MySQL, as opposed to Oracle, cursors are read-only and cannot be used to update rows in a table. Oracle 10g, on the other hand, allows more cursor functionality to process database tables.

|  |  |  |
| --- | --- | --- |
|  | **MySQL** | **Oracle** |
| Support for Views | Limited | YES |
| Materialized Views | NO | YES |
| Stored Procedures | YES (5.x and later) | YES |
| Triggers | Limited | YES |
| Functions | Limited | YES |
| Having Clause | Limited | YES |
| Cursors | Read Only | Both read and write |

The critical differences of SQL vs NoSQL:

SQL databases are relational, NoSQL are non-relational.

SQL databases use structured query language and have a predefined schema. NoSQL databases have dynamic schemas for unstructured data.

SQL databases are vertically scalable, NoSQL databases are horizontally scalable.

SQL databases are table based, while NoSQL databases are document, key-value, graph or wide-column stores.

SQL databases are better for multi-row transactions, NoSQL are better for unstructured data like documents or JSON