* **Discuss the different types of coupling in terms of their nature.**

Ingeno discusses 8 different types of coupling, data coupling, stamp coupling, control coupling, external coupling, content coupling, common coupling, message coupling, and no coupling (2018).

* **Data coupling** – Modules interact with each other. Data coupling has the type of dependence in modules determined by their ability to communicate via data transfer. Data coupling is a low coupling method type.
* **Stamp coupling** – Stamp coupling, or data-structured coupling, is a low type of coupling method used for transferring a full data structure between modules.
* **Control coupling** – This is a moderate type of coupling method that exists when one module controls the internal logic of the other through the passing of information.
* **External coupling** – This is another type of high coupling method. External coupling is when modules share the same part of an environment which is external to the software, such as interfaces and communication formats.
* **Content coupling** – Also referred as pathological coupling, content coupling is the highest type of coupling method. Content coupling exists when the internal or private information of one module is directly referenced by the other.
* **Common coupling** – Common coupling, or global coupling, is a high coupling type of method that exists between modules that share global data.
* **Message coupling** – Message coupling is the lowest type of coupling method. Message coupling exists when a module calls the method of another module without passing any parameters.
* **No Coupling** – No coupling exists when modules are completely independent of each other with no direct communication between them.
* **Analyze how coupling will impact the design (positively vs. negatively).**

The impact of the design, through the types of coupling in a system, determines how challenging it will be to modify, extend, or reuse modules in maintaining the system or in other projects. The design should always use the lowest coupling possible to meet the requirements of the project.

* **Identify the techniques used to reduce coupling.**

The most significant way to reduce coupling is to reduce or eliminate as many dependencies between modules that is possible.

* **Describe how coupling will impact cohesion.**

Cohesion and coupling are inversely related. A system with high cohesion will have low coupling, whereas a system with low cohesion will have high coupling. The impact of coupling on cohesion, therefore, is as the coupling is increased, cohesion is decreased.

**References**

Ingeno, J. (2018). Software architect’s handbook: Become a successful software architect by implementing effective architecture concepts. Retrieved from https://www.vitalsource.com/