Coupling: The coupling between two modules indicates the degree of interdependence between them. If two modules interchange a large amount of data, then they are highly interdependent. The degree of coupling between two modules depends on their interface complexity. The interface complexity is basically determined by the number of types of parameters that are interchanged while invoking the functions of the module.

(1). Highly Coupled: When the modules are highly dependent on each other then they are called highly coupled.

(2).Loosely Coupled: When the modules are dependent on each other but the interconnection among them is weak then they are called loosely coupled.

(3).Uncoupled: When the different modules have no in then they are called uncoupled modules.

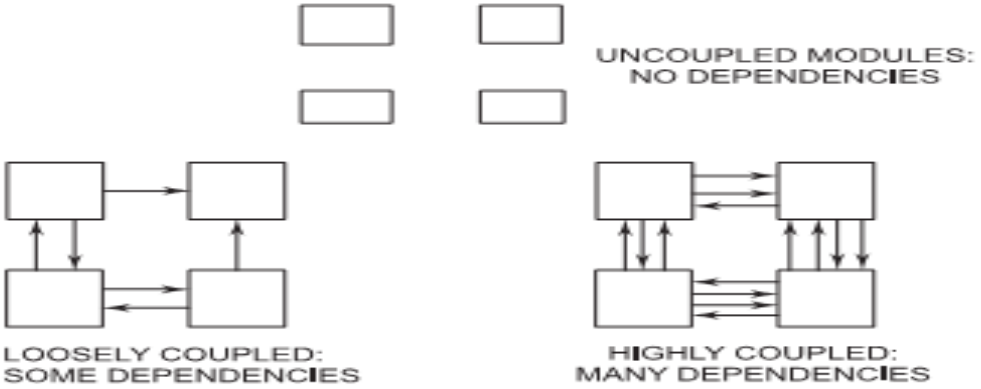


Figure 1: Coupling

Types of Couplings

Different types of couplings include content, common, external, control, stamp, and data. The strength of a coupling from the lowest coupling (best) to the highest coupling (worst) is given in Figure 2.

Data coupling	Best
Stamp coupling	
Control coupling	
External coupling	
Common coupling	
Content coupling	(Worst)

Figure 2: Types of coupling

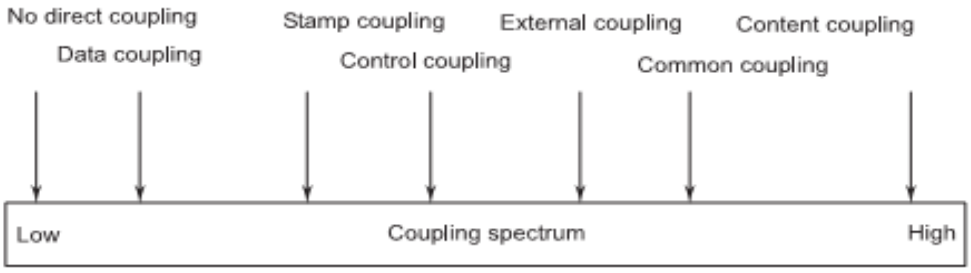


Figure 3 :Coupling:

High coupling among modules not only makes a design difficult to understand and maintain, but it also increases development effort as the modules having high coupling cannot be developed independently by different team members. Modules having high coupling are difficult to implement and debug.

Cohesion: Cohesion is a measure of the relative functional strength of a module. The cohesion of a component is a measure of the closeness of the relationships between its components. A cohesive module performs a single task within a software procedure, requiring little interaction with procedures being performed in other parts of a program.

A strongly cohesive module implements functionality that is related to one feature of the solution and requires little or no interaction with other modules. This is shown in Figure 4. Cohesion may be viewed as the glue that keeps the module together. It is a measure of the mutual officity of the components of a module.

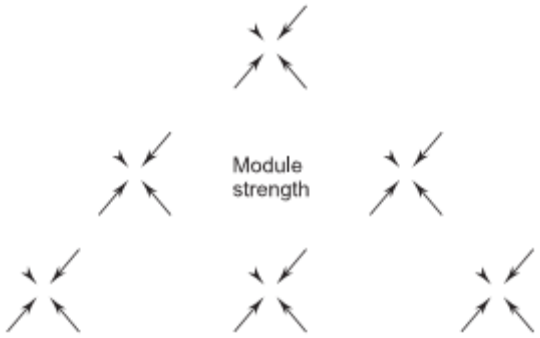


FIGURE 4 Cohesion-strength of Relation within Modules

Thus, we want to maximize the interaction within a module. Hence, an important design objective is to maximize the module cohesion and minimize the module coupling.

Types of Cohesion

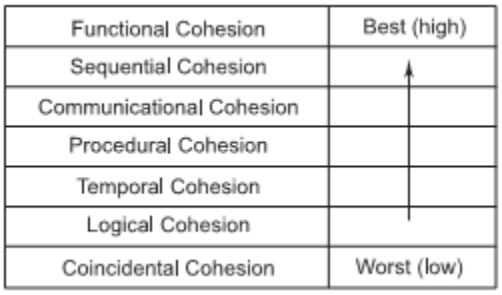
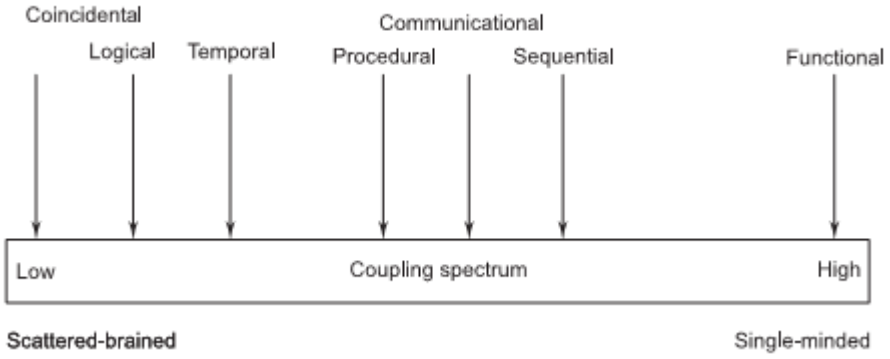


FIGURE 5. The Types of Module Cohesion



Figure(6).Cohesion