(LAM)

Chapter-08 (Design Concepts) 22.11.23.

Analysis model → Design model

good design characteristics

1) design must implement all of the explicit req.

2) must be readable

3) should provide the complete picture of the software.

guidelines for quality design.

Data Abstraction → simple thing → (doors attributes) complex procedure.

procedural Abstraction → procedure. (open the door)

28.11.23

8.3.3 patterns

1) Apply

2)

3) same জিনিস কে Reuse

3) প্রব্লেম sol. কে guide হিসেবে use করা.

8.3.4 seperation of concerns (philosophy)

8.3.5 Modularity (soft → addressable or module এ ভাগ করা)

(seperation of concerns কে কোনো use করা)

monolithic soft → one module
→ customer ggমতি, Design, ggমতিকার

Fig 8.2

information hiding → two modules should not share common information.

functional independence.

8.3.10 what is Refactoring (code এর behaviour change করে না structure change করে)
working of Refactoring: [illegible]
→ Redundancy [illegible]
→ Inefficient Algorithm.
→ Redundant Design factor.

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8.3.9 Aspects

Req 1 → Req 2 (∵ R2 satisfy হলে তবে R1 হবে; similary for R1)
satisfy.

These req are called aspects.

8.3.11 Design class (4 class)

1) complete and sufficient
2) primitive
3) High cohesion
4) low coupling.

Coupling and cohesion (slide)

Content coupling

common coupling → All modules have read/write access to a global data block.

control coupling → If one models execution depends on another then these two model will be called control coupling

stamp coupling -

Data coupling → if there are homogenous data items.
Examples are imp

29. 11. 2023

Cohesion : degree of relatedness

Coincidental : parts of the component perform multiple completely unrelated actions.

logical : related logically and not functionally,

```
area {
    Circle area()
    Triangle area()
    Rec. Area()
}
```

3 methods for PK is

Temporal cohesion : related by timing, execution at the same time or same time frame.

procedural : related only to ensure a particular order of execution.

Communicational: performs a series of actions and all actions works on/shares same data.

sequential: the methods output → other methods input.

functional cohesion: Every essential element to a single computation is contained in the component.