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PART B

Q.1] - One of the most fundamental tasks when building software is breaking the problem down into smaller parts.

- Design patterns can help but trying to keep them in mind as you design your software and implement solution is overwhelming.

- Hence using concepts of Cohesion & Coupling to guide my design of the given problem yeilded me better results.

Coupling

- Coupling refers to the ~~degree to~~ which 2 components - classes or modules interact with one another.

- Its a measure of how much they "know" about each other.

- Marking methods as privates is just 1 way to reduce the no. of methods that any other part of code can know about.

- Generally speaking we want to reduce coupling to bare minimum to implement the given problem.

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Cohesion

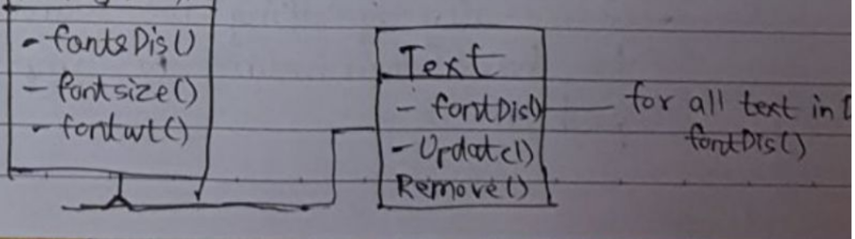
- Cohesion is the degree to which all of the methods & data structures in a class or module are related to one another & belong together.

- Generally speaking we want to increase cohesion as much as possible.

• Low Coupling & High Cohesion was the aim while developing the model. Acheiving that in practise is challenging but it's an ideal worth keeping in mind.

.2]
s] The different pattern applied to design the font selection mechanism for a new version of commercial word processing package.

1) Composite pattern
- Used to represent the dialog's physical structure.
- Composite lets clients treat indivival objects & compositions of objects uniformly.



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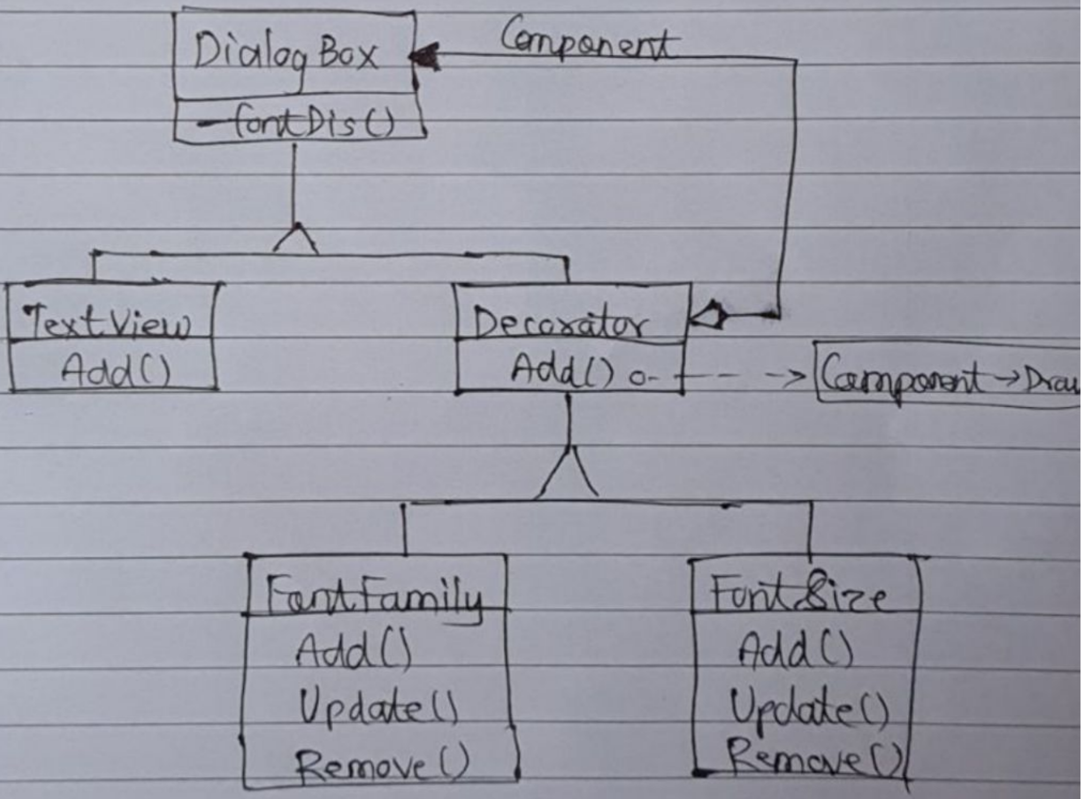
2) Decorater Pattern
- Used for embellishing the user interface.
- Decorators provide a flexibility alternative to subclassing for extending functionality.

- Also known as Wrapper.

- Sometimes we want to add changes to indiviua objects, not to an entire class. Our font selection mechanism for eg should let us add properties like font size, font family to the text in dialog box.



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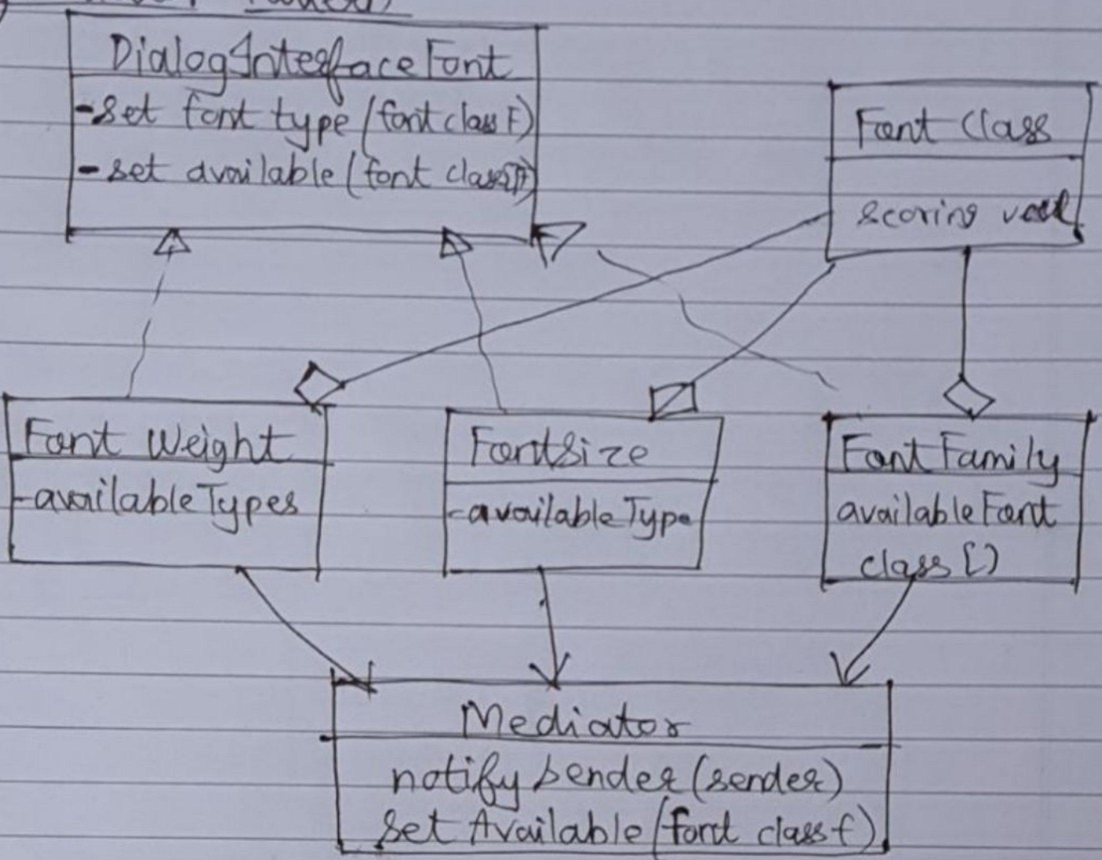
3) Mediator Pattern



~~Mediator~~ :
~~Classes involved~~

Classes involved

- Mediator : ConcreteFontDialog Mediator
- Components : FontWeight, FontSize, Font Family