

SADP

Assignment no-4

4-1

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Aim: To implement a structural/behavioral design Pattern.

Object: Implement a structural/behavioral design

Problem Factory system

Statement

Theory

Benefits of structural design Pattern

- Increased reusability
- Enhanced readability
- Separating implementation from interface
- Reducing complexity by providing classes
- Simple interface to a system that are easier for client system to understand.

Benefit of behavioral design Pattern

These Pattern help us to reduce complexity of code and duplication of code, reduced coupling and loose coupling and enable better support by other and flexibility in the future.

Type of structural design Pattern

- Adapter Pattern
- Bridge Pattern
- Composite Pattern
- Decorator Pattern
- Facade Pattern
- Weight Pattern

TYPE of Behavioural Design Pattern

- Chain of Responsibility Pattern
- Command Pattern
- Interpreter Pattern
- Iterator Pattern
- Mediator Pattern
- Observer Pattern

Platform : Draw.io → class Diagram
Python → code

I/P : Item to purchase

O/P : Price and delivery of the item

FAQ

Q) What are the elements of a design pattern?

Ans The element of design pattern are

- Pattern name in gate vocabulary of design
- Problem + intent context when to apply
- Solution : like like structure class or a
- Consequence : result solely

2) Composite Iterator and Adapter design pattern

Ans Adapter

convert the interface a class into another interface client expect, Adapter let class work together that couldn't otherwise because of incompatible interface.

Iterator

provide a way to access the elements of a collection sequentially without exposing it

underlying representation

