SADP

Assignment No-3

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Aim : Implement a creational (Singleton / Builder / Prototype) design pattern

Objective : Implement a creational design pattern for any real time software system

Problem Statement : Bakery factory system

Theory : Importance of creational design in software architecture :

- A system should be independent how its objects and product are created
- A set of related objects is designed to be used together
- Hiding the implementation of a class library or product revealing only their interface.
- A class wants its subclass to implement the object it creates
- The class instantiation are specific at right time.
- Instances should be changeable without being modified

Types of creational design patterns

- Abstract factory method
- Factory method pattern
- Builder pattern
- Dependency Initialization pattern
- Lazy Initialization pattern
- Object pool pattern
- Prototype pattern
- Singleton pattern

usage of factory Design Pattern

- When a class doesn't know what sub-class
- will be required to create
- When a class want that its subclass specify
- the object to be created
- when the parent classes choose the creation of object to its subclass.

creation of singleton design pattern

. static member gets memory only once because of static, it contains the instance of the singleton

private constructor

It will prevent to instantiate the singleton class from outside the class.

static factory method

This provides the global point of access of the single object return to its [illegible] to the caller.

Platform

Pow.io → class diagram

Python – code.

Input – choice of the item required by the customer from the bakery. O/P: choice of two item is [illegible] and is done is unit pace called

Conclusion

The bakery system is successfully implemented using singleton design and factory method.

FAQ:

Q What or design Pattern?

Ans is elhis Pattern syPresent the best Practices hyercto objected oriented software provide object creation that can creat object conatabled manner that are suitable to the situation!

Q3) What factor you will consider to choose any design Pattern?

Ans consider how design Pattern solve designproblems.

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