## Assignment-4

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- 1) Package name and directory structure are closely related. For example if a package name is collages taff related. For example if a package name is collages taff ose, then there are 3 directions, collage , staff and est such that ese is present in staff and staff is such that ese is present in staff and staff is present in collage. The idea is to make sure that classes are easy to locate.
- 2) to put a class into a package at the first line of code

  Define package Pi

  create a class Ci

  Define q classementhod mi

  which prints a line

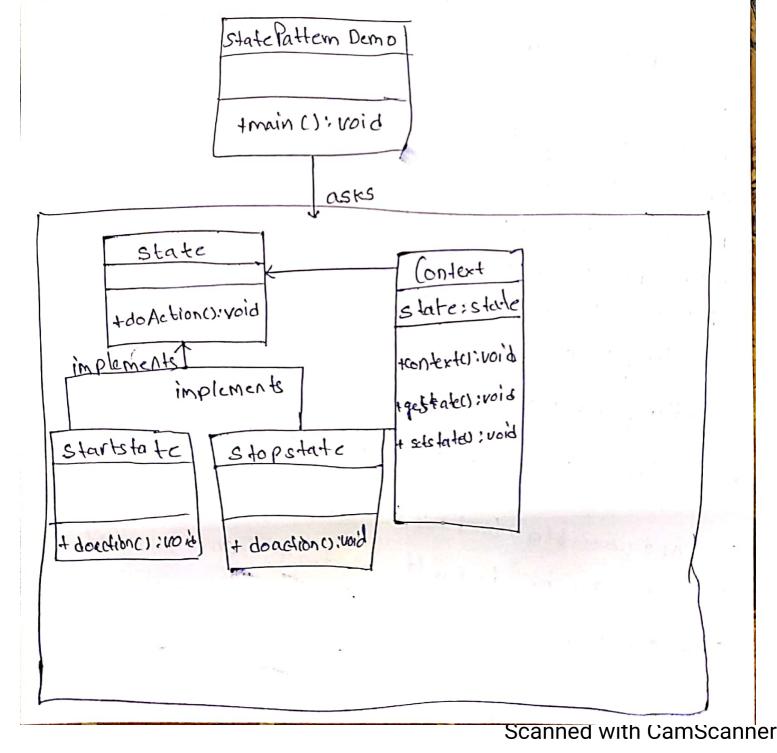
  defining the main method.

  creating an object of class ci
- calling method m, 3) 4 like a class an interface can have methods
- a) and variables, but the methods declared in an interface are by default abstract only method signature, no body)

\* state is a behavioral design pattern that allows an object to change the behavior when its internal stete changes.

## Implementation:

we are going to create as take interface defining an action and Concerate state classes implementing the state interface context is a class which Corrier asthe.



Cirate context class Context. Java Public class Confert & Private state state Public context () { State = null; Public void sent state (state state) & This, satate = state; Public stateget state () & return state; use the context to see change in Behavior when the state changes state patter Demo Java Public class state Pattern Demos Public static void main (string avgs []) { Context context = new context (); start state start state = new start state (); start State. do Action (context);

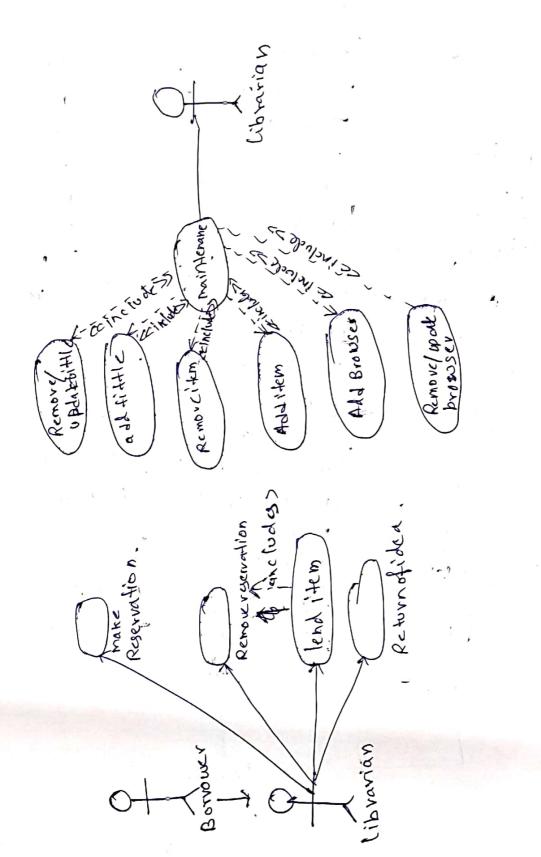
system.out. println(context.get state().tostring());
stopstate do Action (context)
systemout. println(context.get state().to extring());

- Some way that actour can extend another interface in the same way that actour can extend another class. The Brextend key word is used to extend an Interface and the child into face inherits to methods of the parent into face.
- 6) The implementation of their methods has to be provided in a separate class. So, if a new method is to be added in an interface, then its implementation Code has to be provided in the class implementing the same in tenface. To overcome the issue Javahas introduced the conceptof detail methods. which allow the interface to have methods with the implementation without affecting the class that implement the inferface.

## UML Diagram

Liburary management system

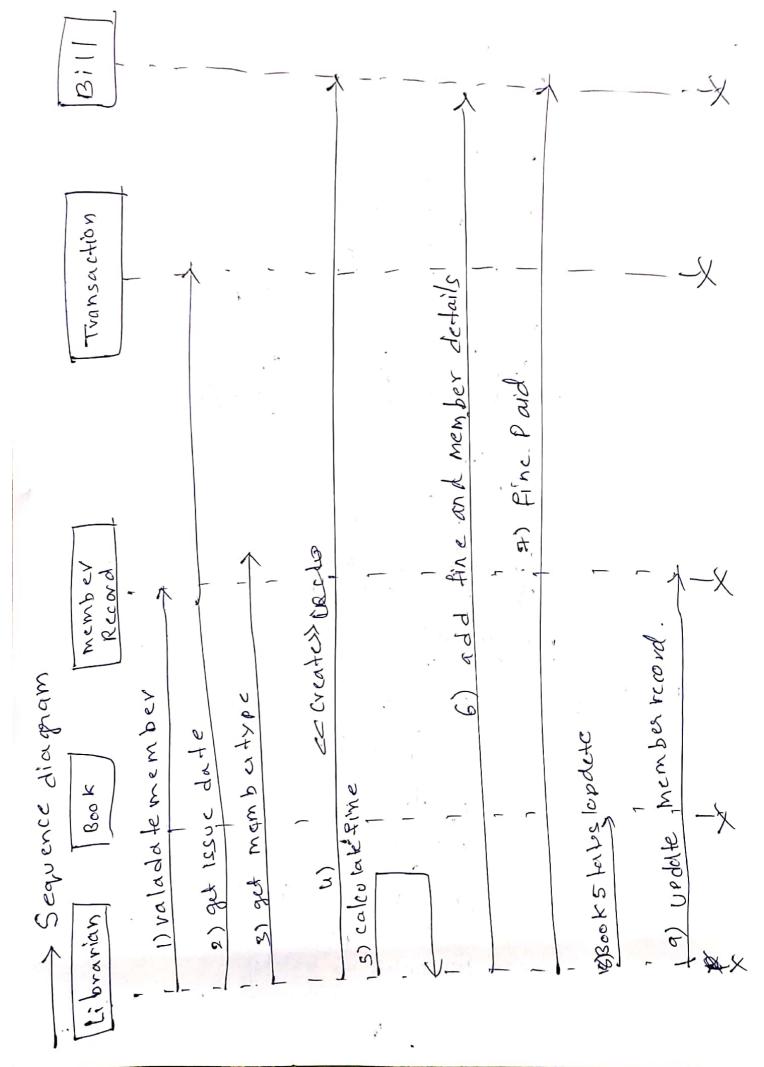
- s use case diagram



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