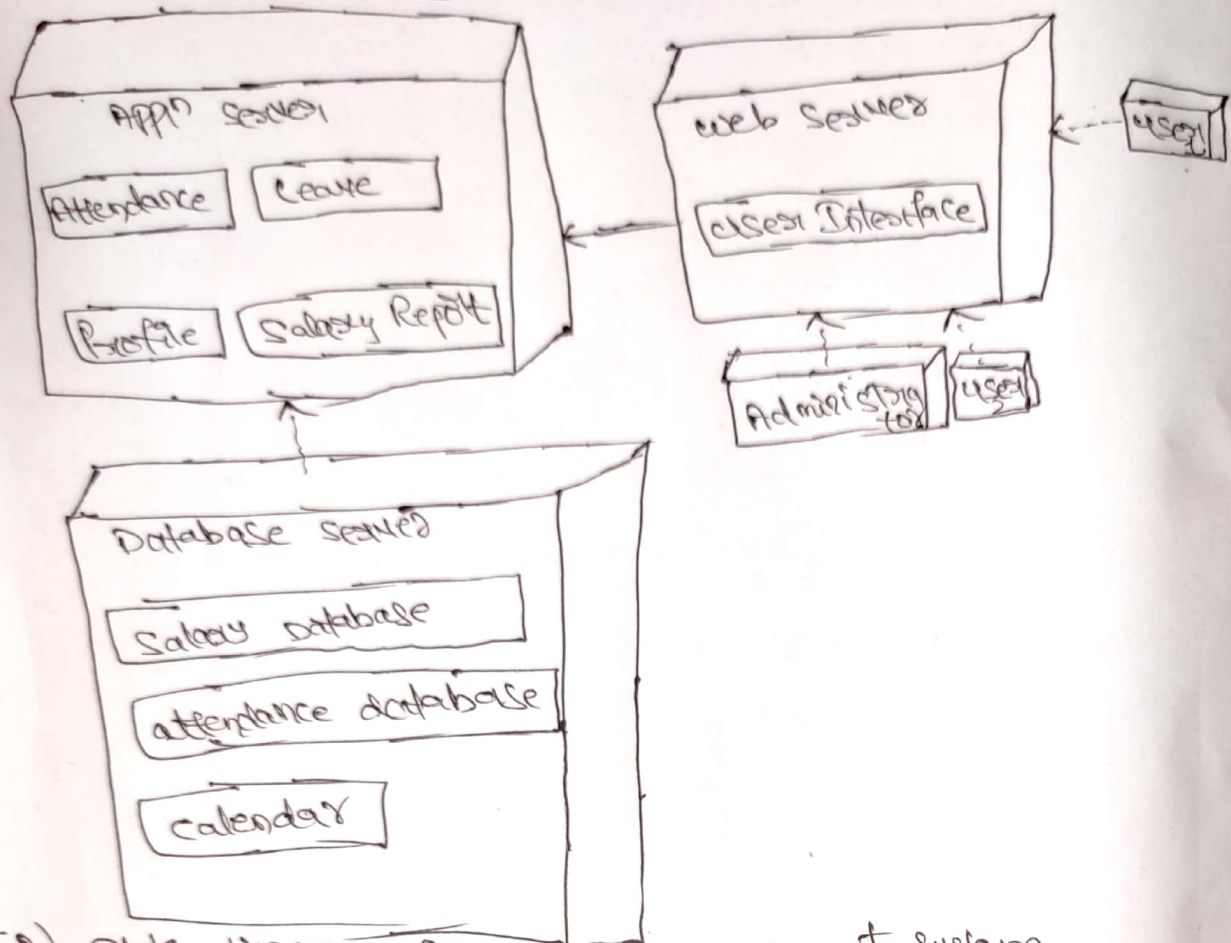
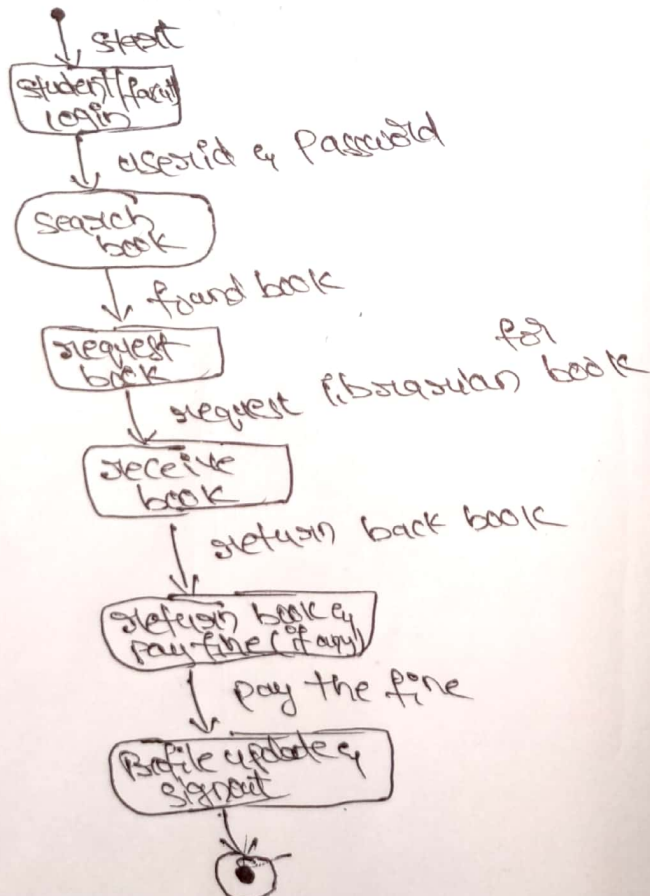


## Day-2

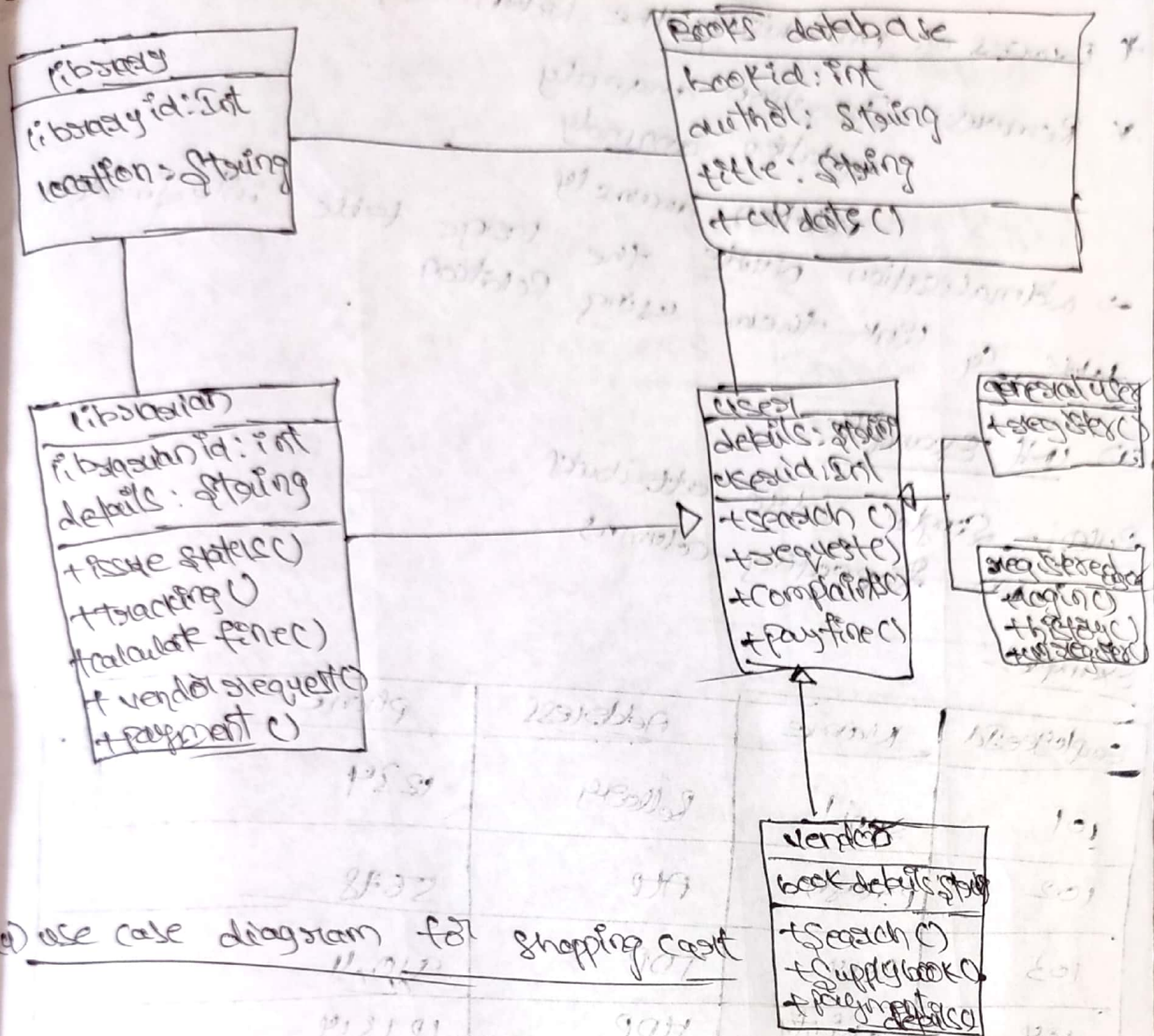
### (1) Deployment diagram for staff management system



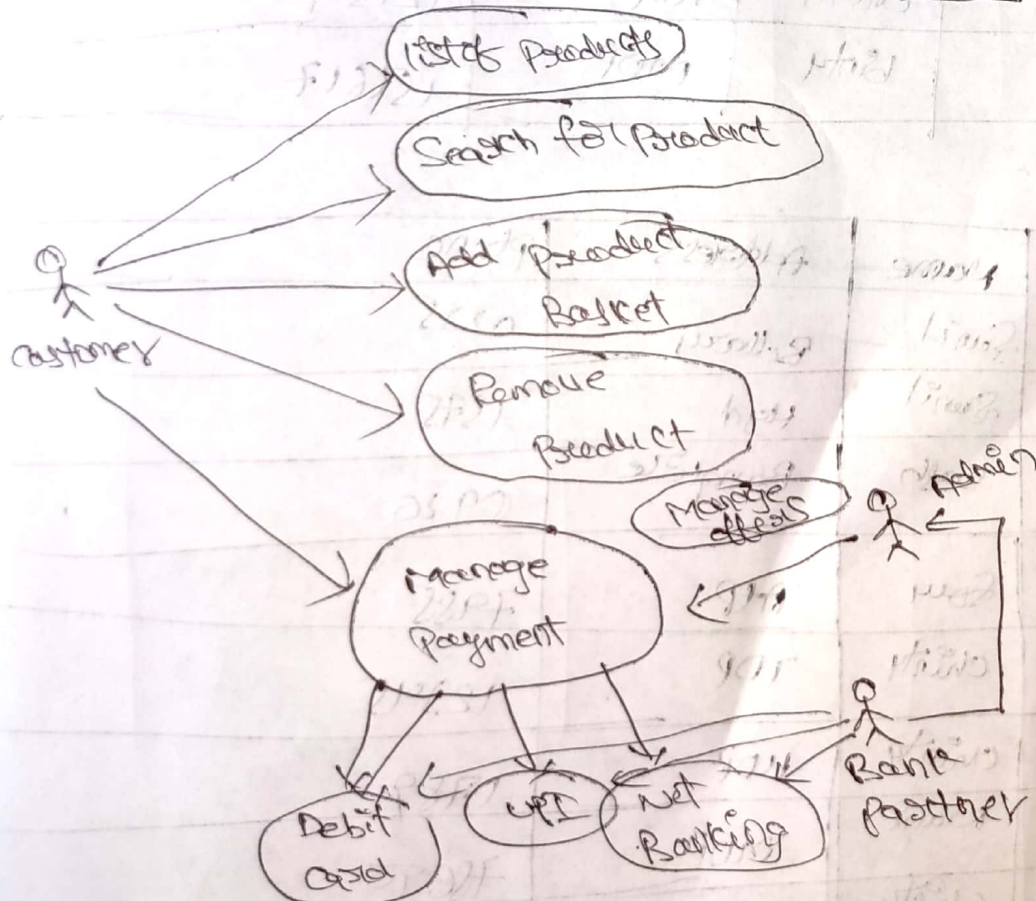
### (2) State diagram for library management system



3) class diagram for library management system:-



4) use case diagram for shopping cart





## Normalisation:

\* Process of Minimizing the Redundancy

\* Removes: - Insertion anomaly  
update anomaly  
deletion anomaly

→ Normalisation divide the large table into smaller table & link them using Relation

(1) 1NF Example:

Rule 1 - Single value attributes  
No Repeating columns

Example:

EmployeeId	Name	Address	phone
101	Sunil	Bellary	1234
102	Pooja	ATP	5678
103	Soni	TDP	9014
104	Chinty	HDP	121314
105	Batu	MDP	151617

1NF:-

EmpId	Name	Address	Phone
101	Sunil	Bellary	0225
101	Sunil	Hgt	1545
102	Son	Banglore	0920
103	Soni	ATP	7985
103	Chinty	TDP	12345
104	Chinty	HDP	1789
104	Wani	MDP	78690
105	Chinty	ATP	1245

## 2NF - Rules

→ Should be in 1NF

→ no partial dependency → Core column depends on Primary Key

→ occurs when composite key

↓  
more than one primary key

Example:

Std ID	course	Name	Marks	Teacher
201	SW Arch	Jacky	85	A
202	SW Design	Maxim	90	B
201	Quality Assurance	Jacky	75	G
204	English	Andy	63	D
205	History	Simon	74	L
206	Project Management	Sam	93	G
205	SW Arch	Simon	70	A
208	Quality Assurance	Jacky	61	G

Primary Key

↓  
Teacher is a partial dependency on course.

course	Teacher
SW Arch	A
SW Design	B
Quality Assurance	G
English	D
History	L
Project Management	G



3NF:- Rules 1 NF, 2NF

→ non transitive dependency

one column depend on other  
(ex → avg value)

Example:-

Employee Id	Name	Designation	Salary
201	Raghu	Manager	80000
202	Harish	Lecturer	40000
203	Max	Manager	80000
204	Andy	Lecturer	40000
205	Simon	Worker	10000
206	Jim	Worker	10000
207	Jim	Lecturer	40000
208	Daryl	Lab Assistant	25000

↓ transitive dependency

Designation	Salary
Manager	80,000
Worker	10000
Lab Assistant	25000
Lecturer	40000