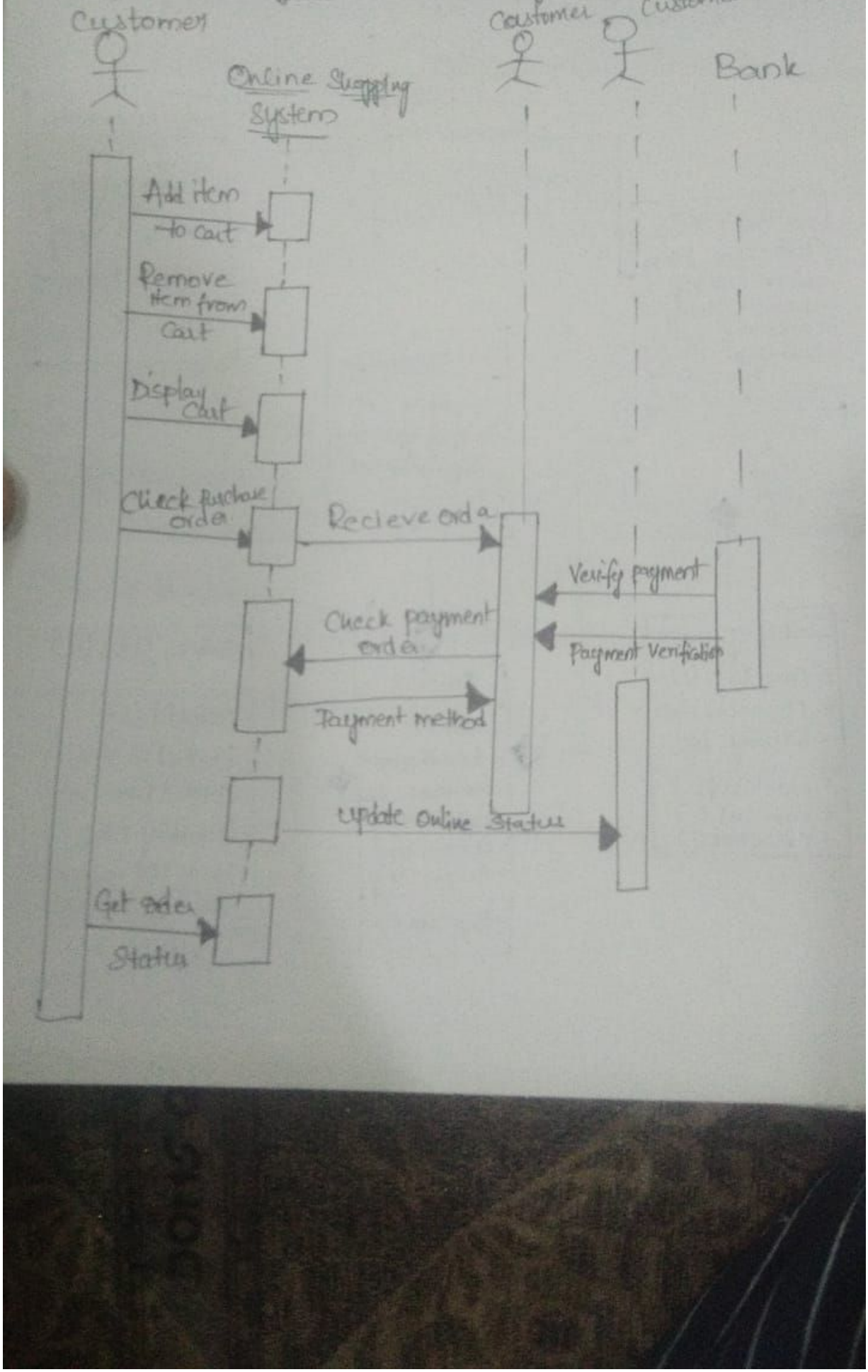
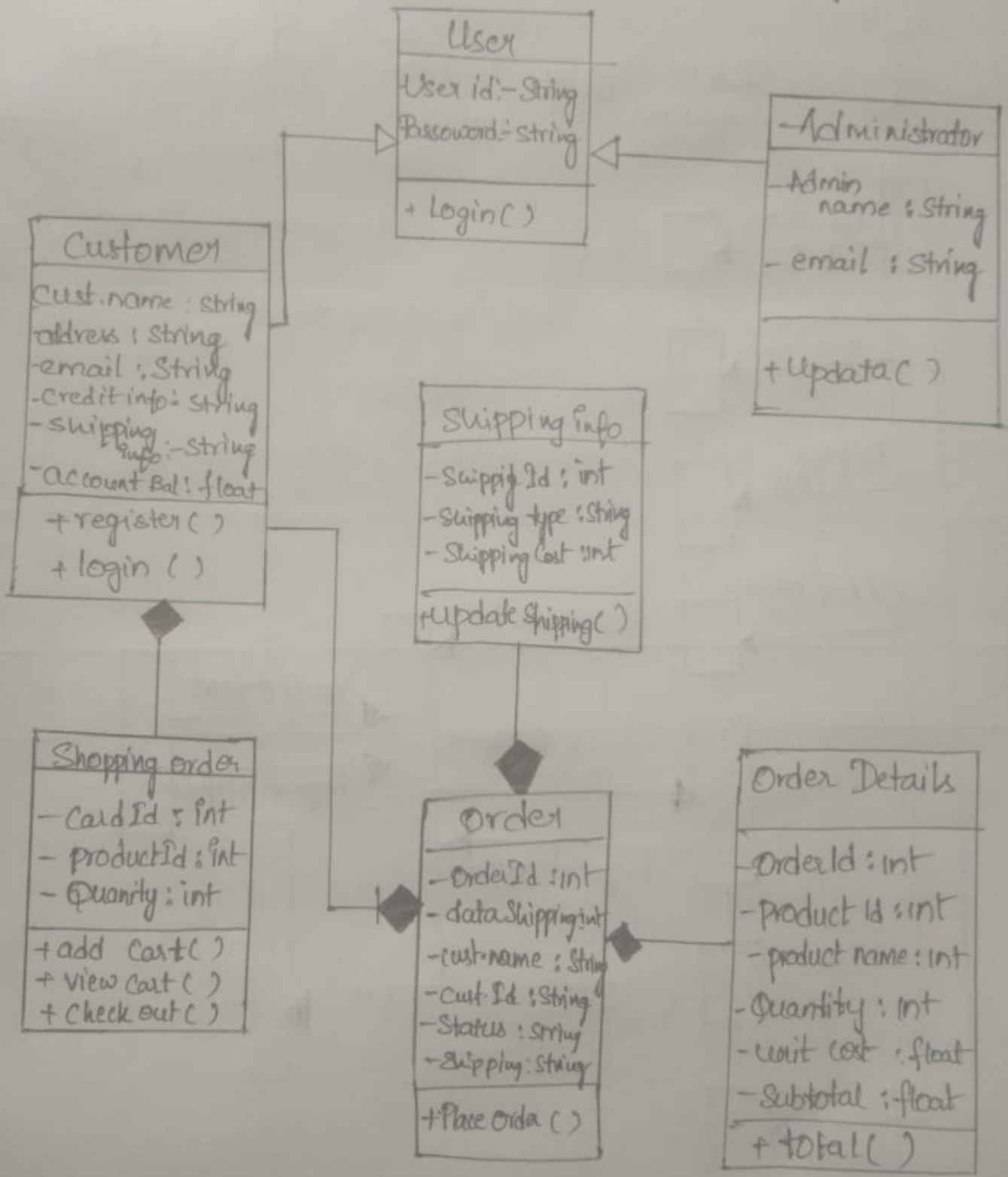
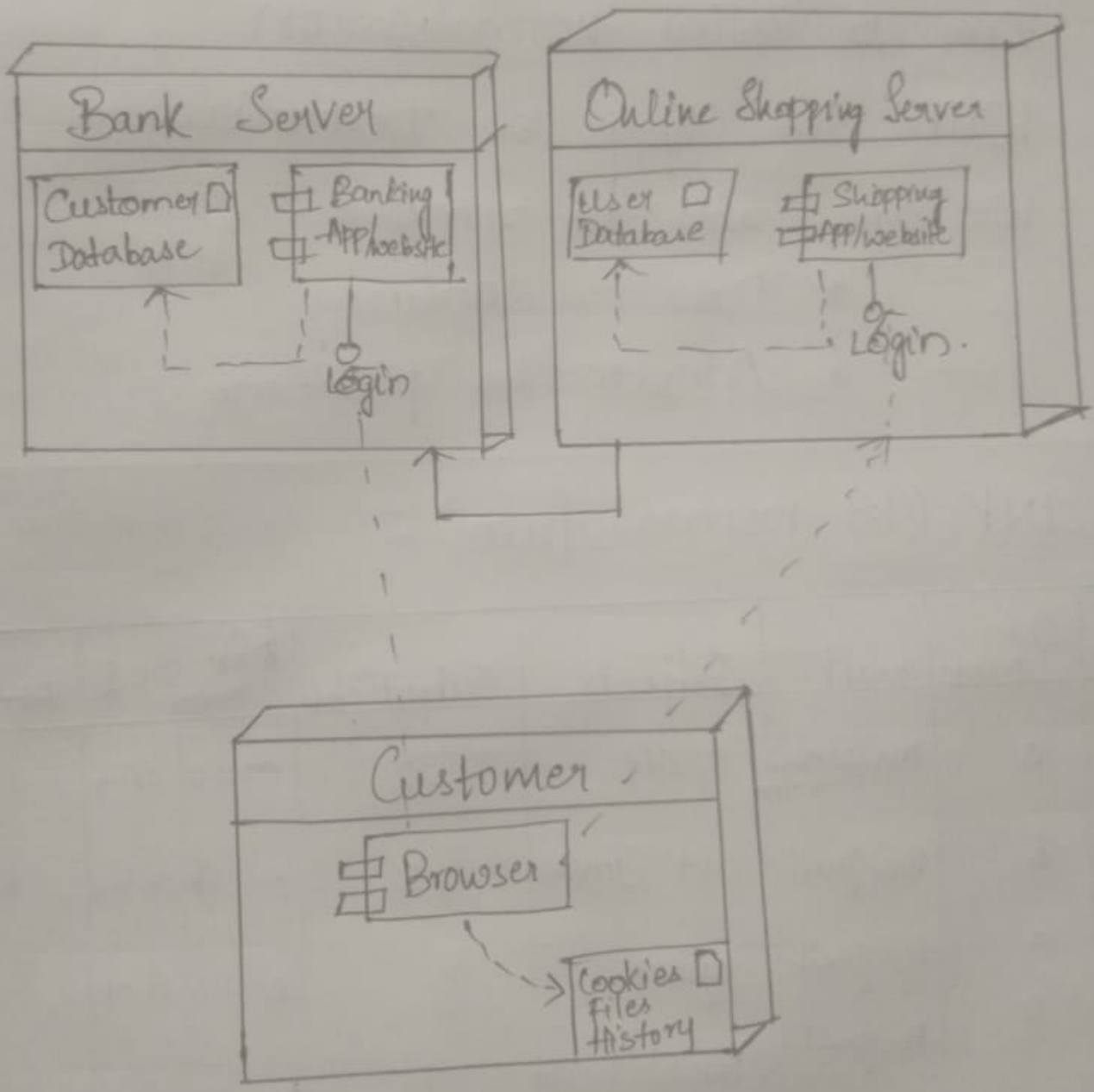
Sequence diagram : (Shopping mall)



Class Diagram : (Shopp Online Shopping)



Deployment Diagram : (Online Shopping)



Normalization

- Splitting bigger tables into smaller one is called normalization.
- With the help of normalization we are able to remove:
  * Data redundancy
  * Anomolies problems

1NF (1st normal form):

St ID	Std name	mail	Subjects	Subject code	~~BOI~~ DOB	DOR	~~DOR~~
1	A	ma@gmail.com	C, C++	1, 2	07-11-12	20 May	
2	B	B@gmail.	C++, Java	2, 3	01-13-15	20-10-21	
3	C	c@gmail.	Python	5	03-9-21	19-10-21	
4	D	D@gmail.com	Digital Electronics	9	5-9-20	12-12-21	
5	E	E@gmail.com	EMFT	11	21-11-19	22-11-20	

S.ID	Std name	mail	Subject	Subject Code	DOI	DOR
1	A	A@gmail	C	1	10-1-21	20-2-21
1	A	A@gmail	C++	2	9-2-19	22-5-21
2	B	B@gmail	C++	3	3-4-18	22-6-18
3	C	C@gmail	Java	5	04-12-21	30-7-[illegible]
4	D	D@gmail	Python	9	12-12-19	26-2-20
5	E	E@gmail	EMFT	11	16-8-19	2-10-20

2 NF :

foreign key Student tabbe

Primary key

Std ID	Std name	mail	Phone
1	A	A@gmail	970.--
2	B	B@gmail	8142--
3	C	C@gmail	9052--
4	X	X@gmail	9581--

Sub code	Sub name	Std ID
01	C	1
02	C++	2
03	Java	3
04	Python	4

↑ Primary key

Book ID	Book Name	Book	Std ID	Subject Code
01	C	D	1	01
05	C++	E	2	02
07	Java	F	3	03
08	Python	G	4	04
~~09~~	SQL	~~H~~	5	05

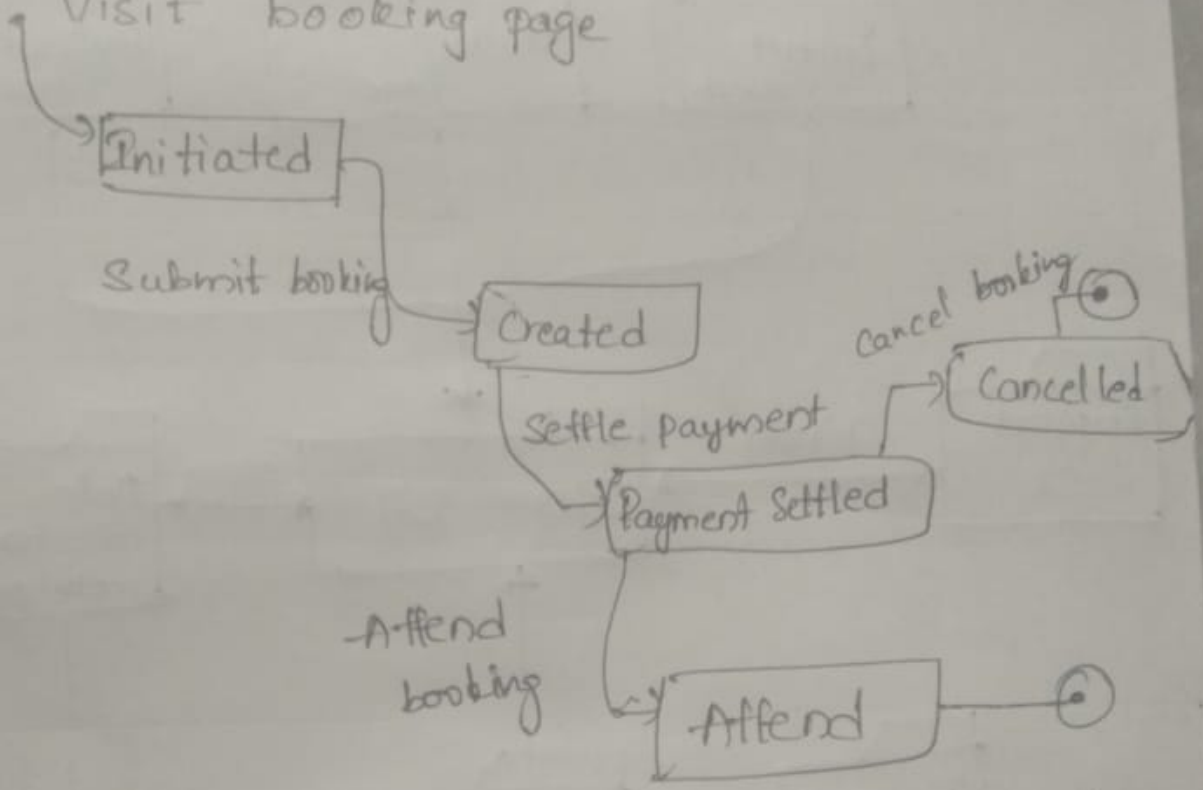
3NF (3rd Normal Form) :

"composite Primary key"

PK PK PK

DOI	DOR	Subject ID	Sub code	Book ID
02-10-19	04-11-19	1	01	01
03-8-19	8-12-19	2	02	05
12-12-20	24-12-20	3	01	07
01-12-20	30-12-20	4	04	08

State Diagram :



- Package diagram :