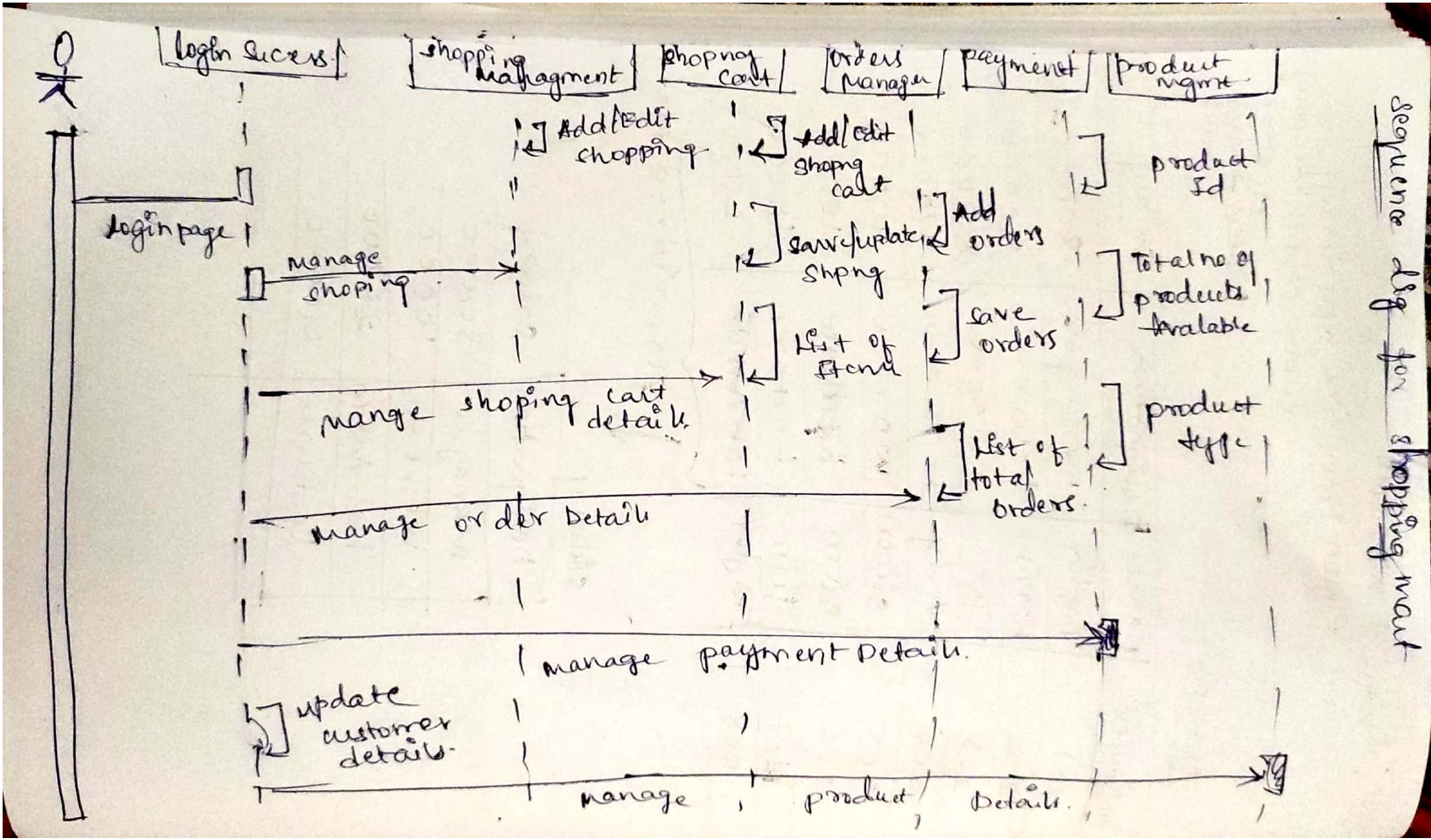
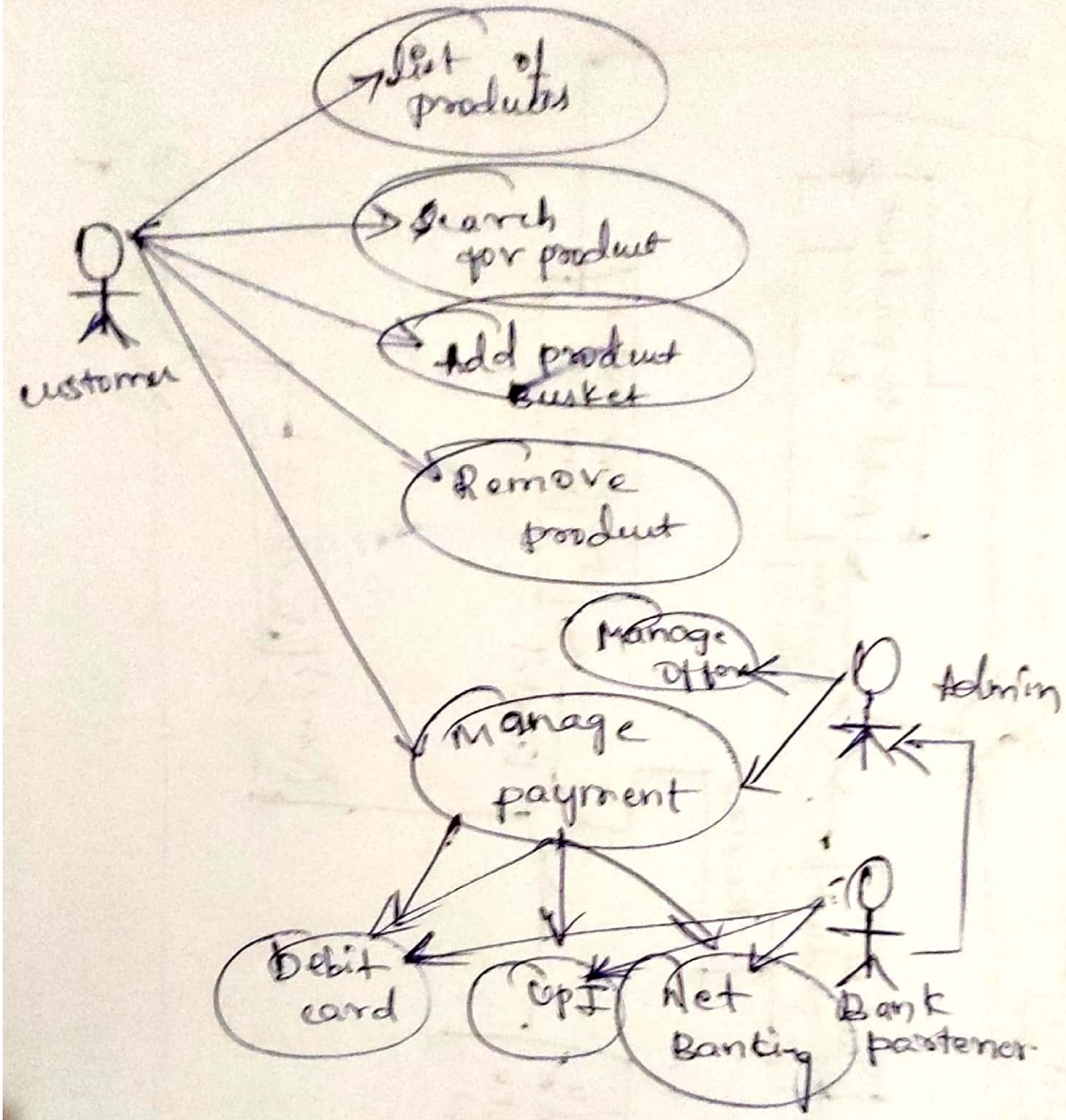
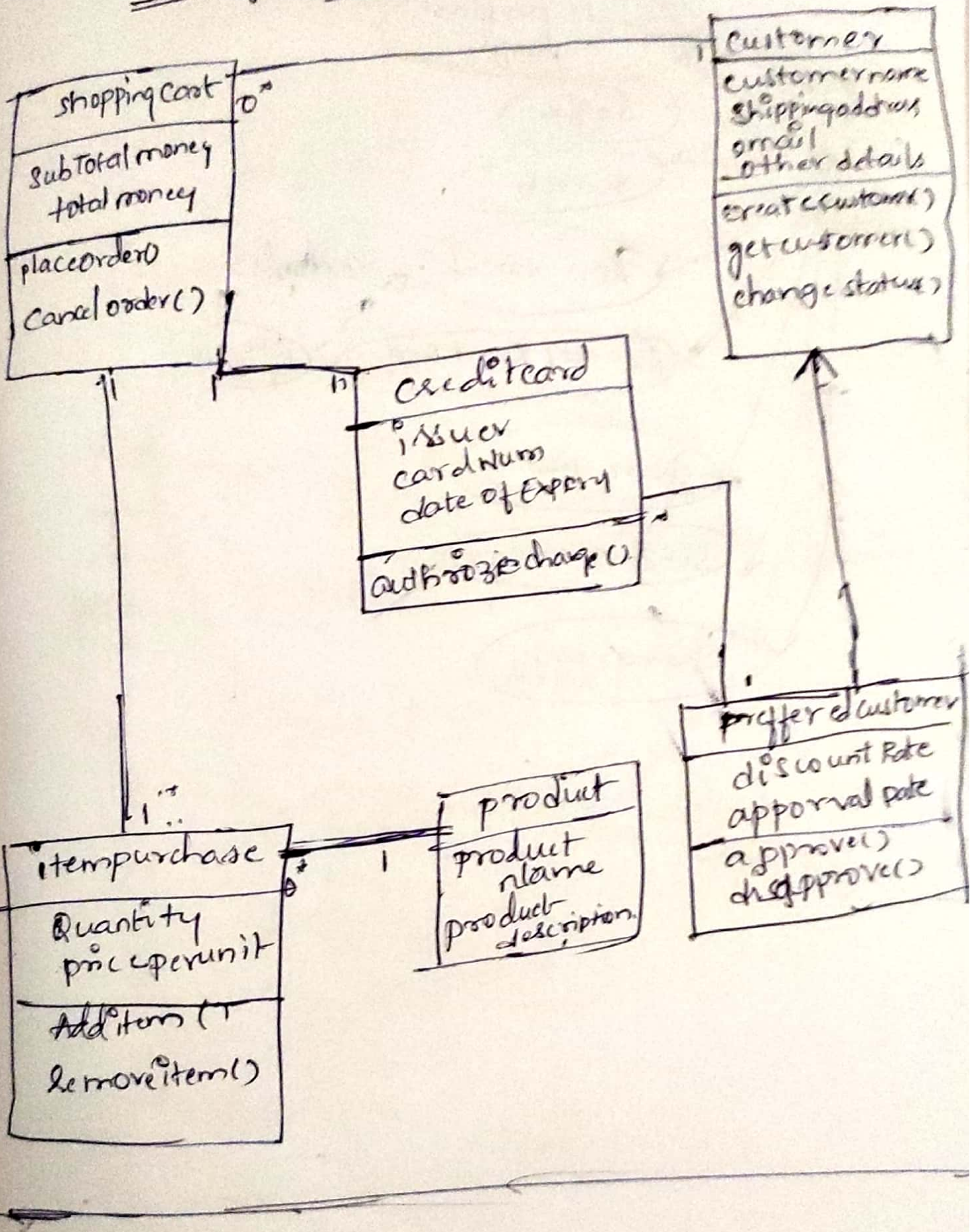


* State Dig for online shoping mart :-

* use case digram for shoping cart.



class dig Shopping cart



NORMALIZATION

* process of minimizing the Redundancy.
* Removes :- 1) Insertion anomaly
  2) updation avamoly
  3) Deletion "

→ Normalization Devide the large table into smaller tables. & link them using Relation.

① 1NF Example:-

Rules: single value attributes
No repeating ~~forms~~ columns.

Example:-

Employee id	Name	Address	phone.
101	sunil	Bellary	02345, 45689
102	Sush	Hyd	12437
103	Sonu	Banglore	37675, 25367
104	chinni	Vij	45689, 28975
105	Nani	pune	12897

1NF

Emp id	Name	Address	phone
101	sunil	Bellary	02345
101	sunil	Bellary	45689
102	Sush	Hyd	12437
103	Sonu	Banglore	37675
103	Sonu	Banglore	25367
104	chinni	Vij	45689
104	chinni	Vij	28975
105	Nani	pune	12897

2NF:- Rules

* should be in 1NF
* No - partial dependency (one column depends on primary key)
* occurs when composite key (more than one primary key)

Example :-

studId	course	Name	Marks	Teacher
201	sfw Arch	Raghu	85	A
202	sfw Design	Harris	90	B
201	Quality Assurance	Raghu	75	G
204	English	Andy	63	O
205	History	Simon	74	L
206	project mgmt	sam	93	G
205	sfw Arch	Simon	70	A
208	Quality Assurance	Taylor	81	G

primary key

Teacher is partial dependency of course

course	Teacher
s/w Arch	A
s/w Design	B
Quality Assurance	G
English	O
History	L
Project mgmt	G

3NF Rules: + 1NF, 2NF

* Non Transitive dependency
  ↓ one column dependency on other (guessing value)

Example:-

Employee id	Name	Designation	Salary
201	Raghir	Manager	80000
202	Harris	Lecturer	40000
203	Max	Manager	80000
204	Andy	Lecturer	40000
205	Simon	Worker	10000
206	Sam	Worker	10000
207	Jim	Lecture	40000
208	Taylor	Lab Assistn	25000

Transitive dependency

salary

Designation	salary
Manager	80,000
Worker	10000
Lab Assistn	25000
Lecturer	40000