Architectural Thinking for Intelligent Systems

Assignment for Lecture A8

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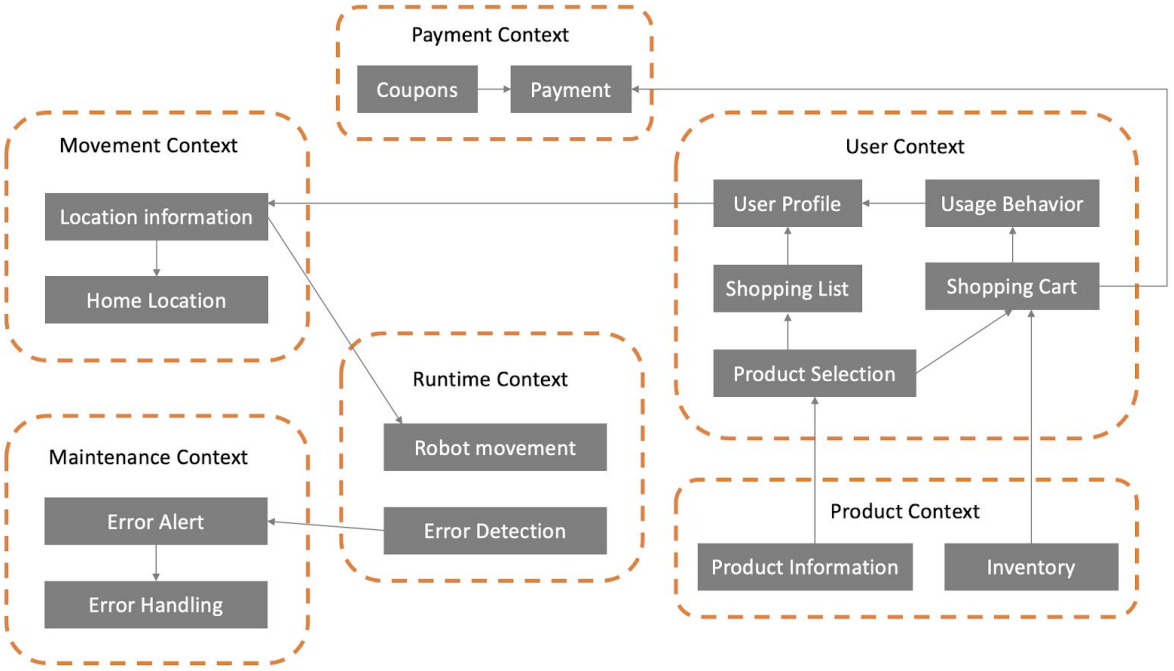
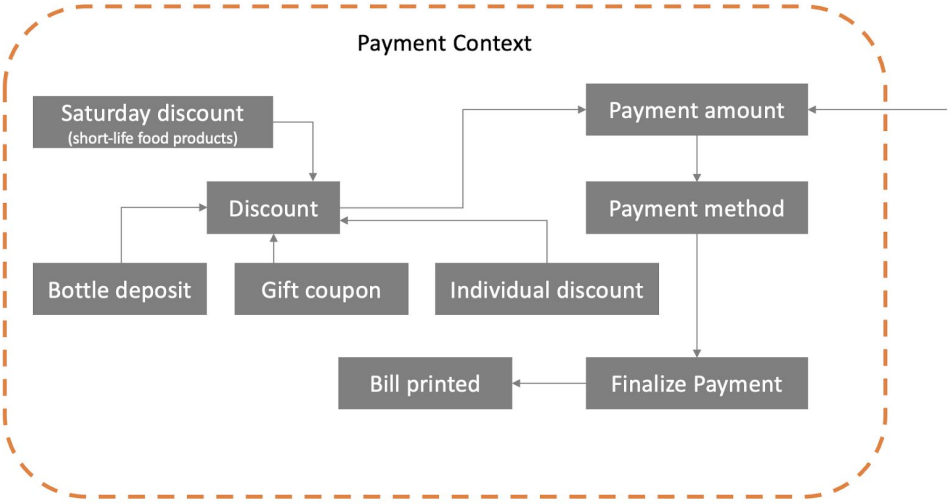
1) Context Map



2) Refine one bounded context + select 3 most relevant entities



The three most relevant entities in our context are:

- user
- payment method
- bill/cart

3) Entity: bill/cart

Value Objects:

- Empty cart
- Payment Status
- Discounts
- VAT
- Invoice generation

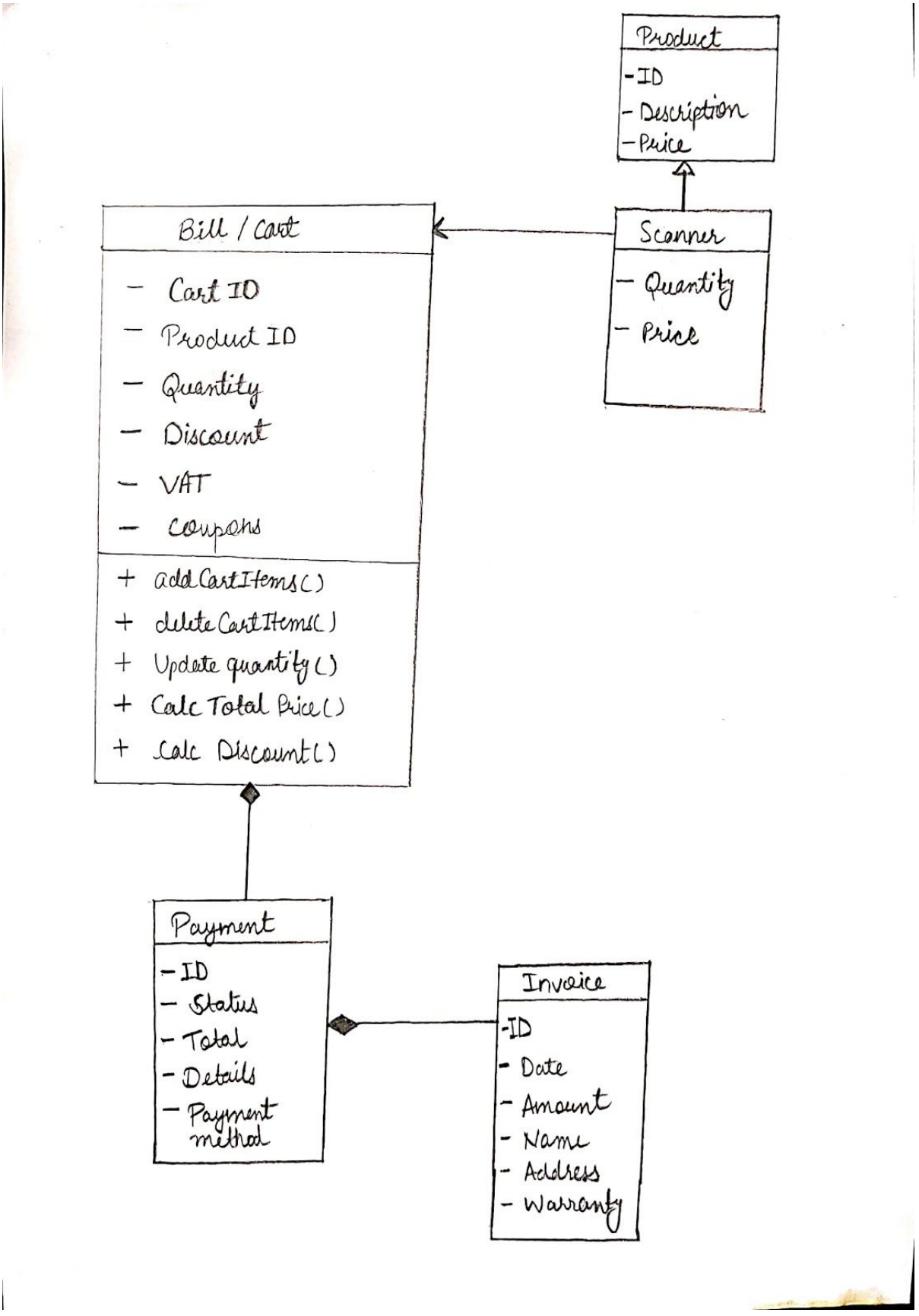
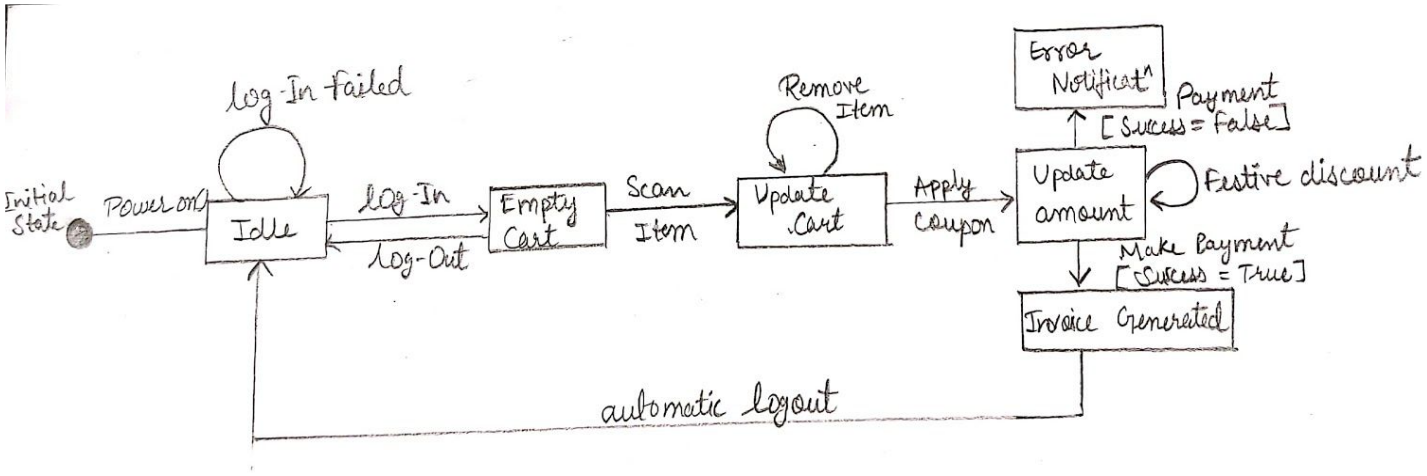


Fig: Class Diagram for entity cart/bill.

4) Lifecycle of bill: (State Machine)



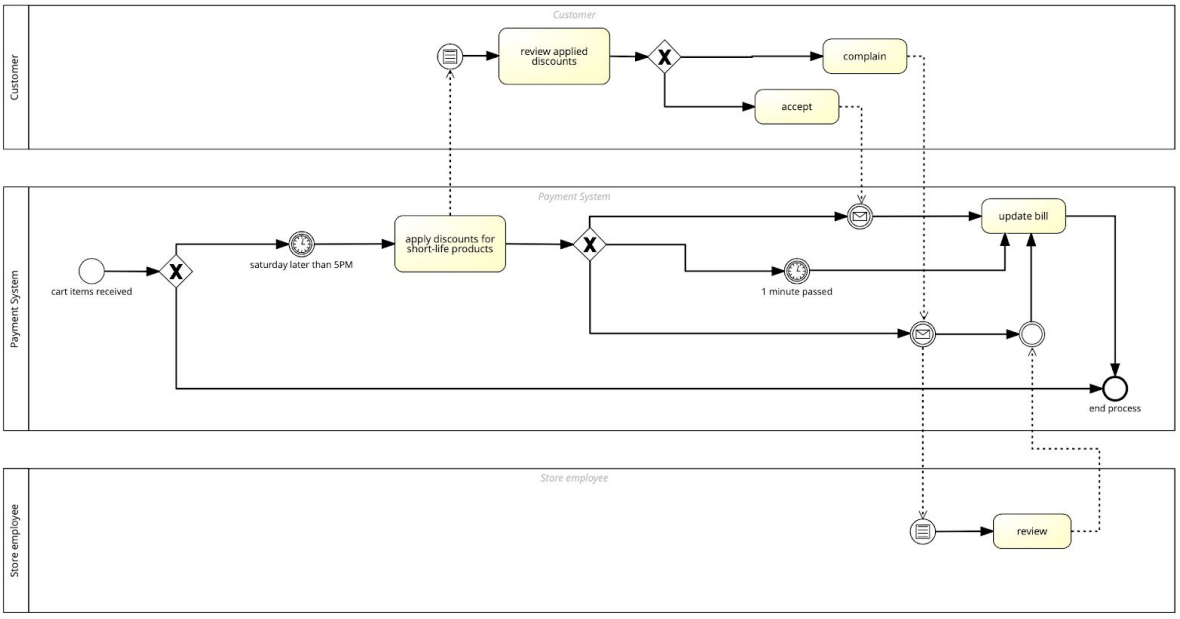
5) Domain events:

- Remove item from the cart
- invoice generation after successful payment
- festive discounts

Transition refinement: included in state machine diagram in part 4.

6) BPMN diagram for a process

<u>The following process will be described:</u>
Application of a discount for short-life products on saturdays



7) Which services will you need?

We were not sure what is meant by ‘services’. Since we had several slides about services in the lecture we decided for that definition.

Services that are needed:

- Go grocery shopping on saturdays after 5PM
- Select short-life products

8) Things that can go wrong, error handling, state of the entity

We included a shop employee in the process diagram already. Whenever an error occurs, like the customer is unsatisfied with the applied discount (it can for sure happen that some products are not in the discount system because of weekly changing offerings), the employee can deal with that complaint and apply the discount manually which sets the state of the bill to ‘waiting for payment approval’ state. Manual changes will definitely be the last step before actual payment and the bill will wait for the approval in order to be printed.