Tutorial No - 9

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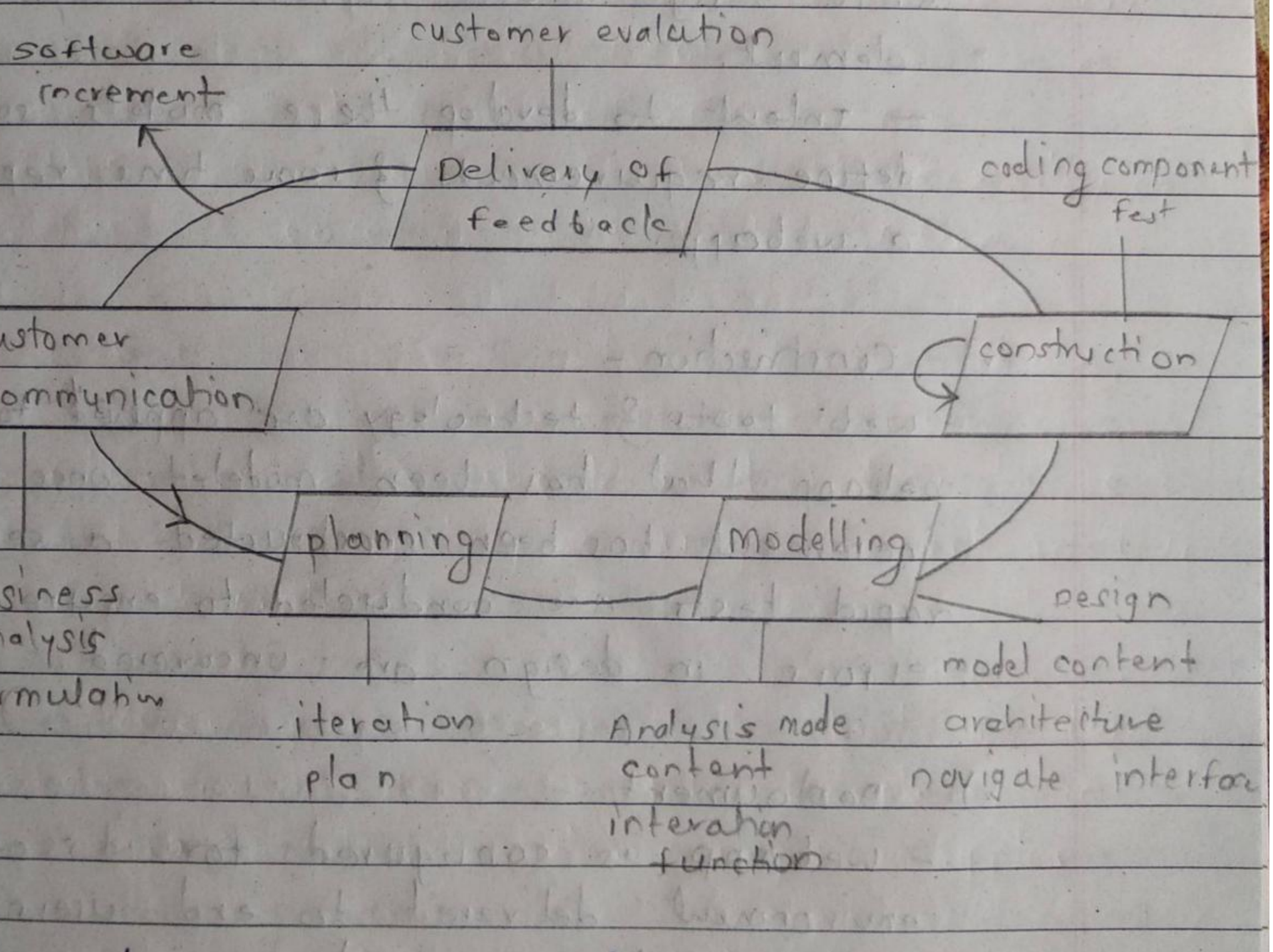
Q.1) Explain web engineering process with diagram?

→ The web Engineering process must accomodate increment delivery, frequent changes, short timeline. Therefore, an ineremental model should be used in virtually situations & an agile process model is appropriate in many situations.

- Web Engineering process framework :-



1) customer communication :-
- Business analysis defines business / organizational context for webapp.
- formulation is requirements gathering activity involving all stakeholders. Intent is to describe the problem that webapp is to solve using best info. available.

ii) planning :-
- The plan consists of a task defn & timeline schedule for time period projected for the development of webapp increment.
- project plan for webapp increment is created.

iii) Modeling :-
- Analysis model establishes a basis for design while design model represents key webapp element.
- intend to develop these models so as to define requirements & some time represent a webapp.

iv) Construction -
- web tools & technology are applied to constructing webapp that has been modeled. once webapp increment has been constructed a series of rapid tests are conducted to ensure that errors in design are uncovered.

v) Deployment :-
- webapp is configured for its operational environment delivered to end users & then an evaluation period commences.
- Evalution period commences.
- Evalution feedback is prerented to web-team.

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Q.2) Explain worst practices and reality for web app projects?

→ ① worst practice 1 :-
we have great idea, so let's begin building webApp now don't bother considering whether webApp is business justified, whether users will really want to use it, whether you understat business requirements Time is short, we have to start.

- Reality :- Take few hours/days and make business case for webApp. Be sure that idea is endorsed by those who will fund it & those will use it.

② Worst practice 2 :-
staff will change constantly, so theis no point in trying to understand webApp requirements. Never while anything down. Rely solely on word of mouth.

- Reality :- It is true that webApp requirement evolve as web eng. activities proceed. It's also fast & simple to convey info verbally However cavalier approach to requirement-gathering and analysis is catalyst for even money change the reality

③ worst practice 3 :-
Developers whose dominant experience has been in traditional s/w developement can develop webApp immediately. No new training is required. After all s/w is s/w, isn't it?

- Reality - ~~wb~~ webApps are different. A brand array of methods, tech & tools must be expertly applied.

④ worst practice 4 :-
Be bureacratic. Insist an lead process models, time sheets, lots of unneccessary "progress" meetings & project, leaders who have never managed a webApp project.
- Reality - Encourage an agile process that emphasize that competence & creativity of an experienced web engg. team. & If project related data must be collected data entry collection should be as simple as possible.

⑤ worst practice 5 :-
Testing ? why bother ? We will give it to few end users & let them tell us what works & what doesn't.
- Reality - Overtime end users do perform through tests but they are so upset by unreliability & poor perform once that they leave long before problems are corrected.

Q.3) Explain content model for webApp.
The content model contains structural element that provide an imp views of content requirement for a webapp content model includes all analysis classed - user-visible entities,

that are created or manipulated as user interacts with the webApp.

- Defining content objects -
  web application present pre-existing info called content to an end user.
  - content may be developed prior to implementation of webApp while webApp is being built.
  - content obj. might be textual description of product, an article describing a news event a short video of speech etc.
  - content objects are extracted from use cases by examining scenario description for direct & indirect reference to content.

- content Relationships & hierrarchy :
  In many instances, a simple list of content objects is sufficient to define requirement for content that must be designed & implemented
  - consider ~~data~~ data tree created for safe Home. Tree represents hierarchy of info that is used to describe component.
  - Simple or composite data items are represented as unshaded rectangles.
  - content objects are represented as shaded rectangles in fig. description is defined by 5 content object.
  - In some cases, one or more of these objects would be further refined as data tree expands with objects.

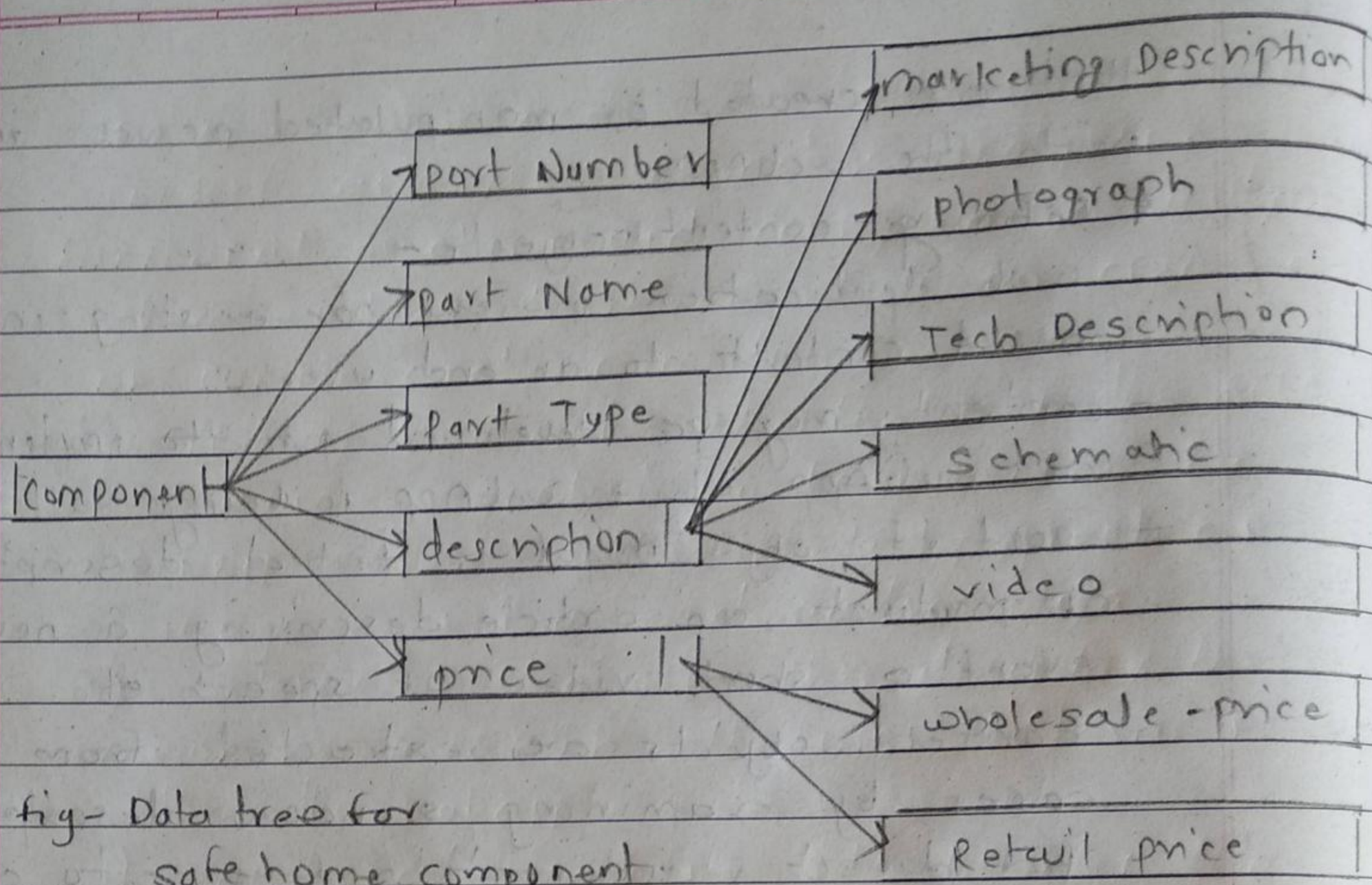

fig- Data tree for safe home component

- Analysis classes for webApps : Analysis classes are determined by examing each use-case
  - components webApp will recommend product components (censors, cameras) & other features.
  - The webApp will create & display bill of material as I select various components.
  - The two classes :- (i) product component class encompasses all safehome components that may be purchased to customize product. Each product component object contains info corresponding to data tree for the class.
  (ii) Bill of material class consists list of components that new customer has selected. It is actually an aggregation of B.O.M items class that builds list composed of each component to be purchased & specific attributes

about component as shown in fig.

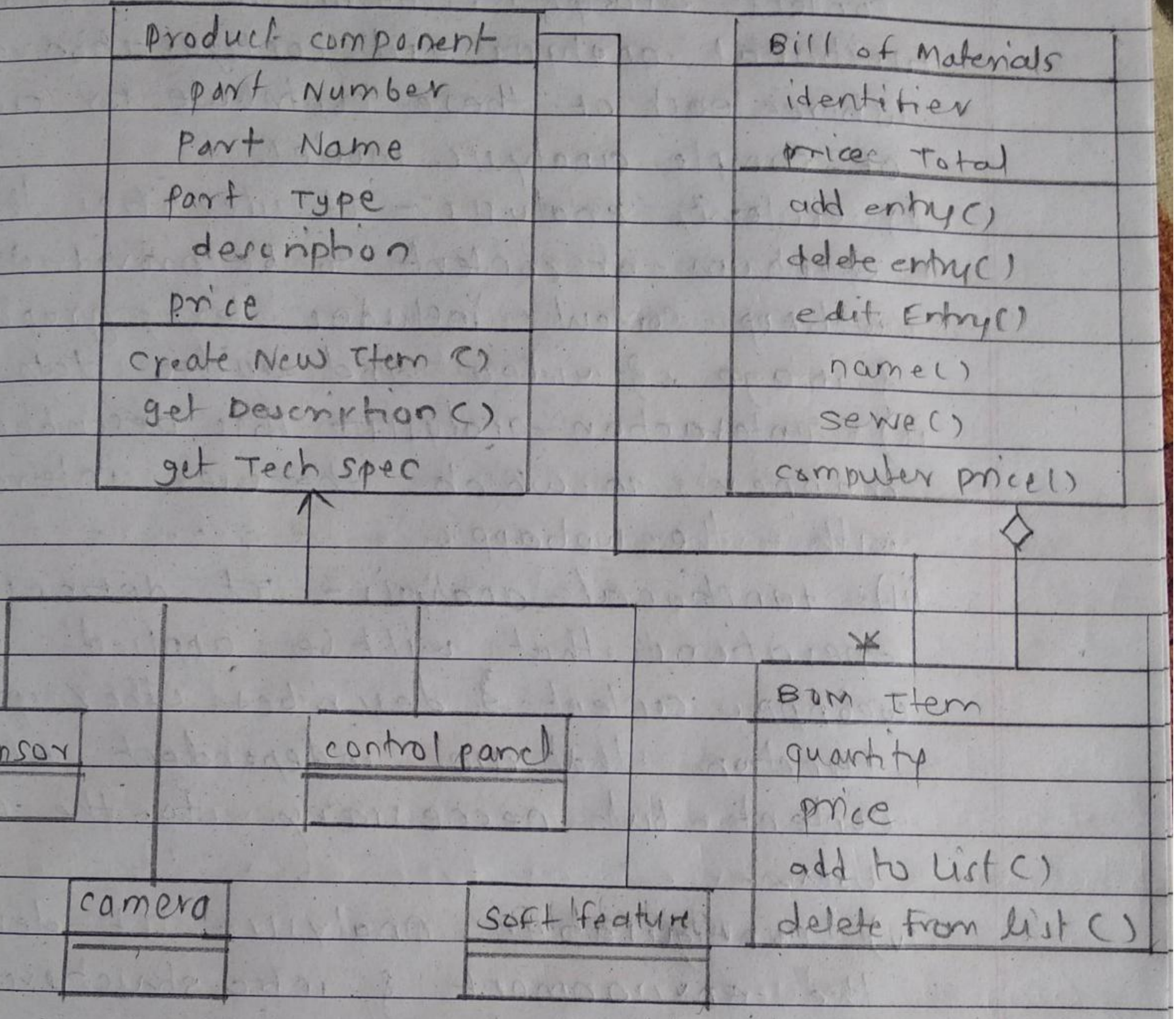

fig - Analysis classes for use case select safe home components

Q.4) List and define four analysis activities. for webApps

→ A WebApp analysis model is driven by information contained within use-cases that have been developed for application. The analysis model for webApps has four

analysis activities -
Content analysis, interaction analysis, functional analysis and configuration analysis where each of these contribute for creation of comple analysis model.

i) Content analysis :- It identifies the full spectrum of content to be provided by webApp content includes text, graphics & image, & video and audio data.

ii) Interaction analysis - This describes the manner in which the user interacts with the webapp.

iii) functional analysis - It defines the operations that will be applied to webApp content & describes other processing function that are independent of content but neccessary to the end-user.

iv) Configuration Analysis - It describes the environment & infrastructure in which the webApp resides.