

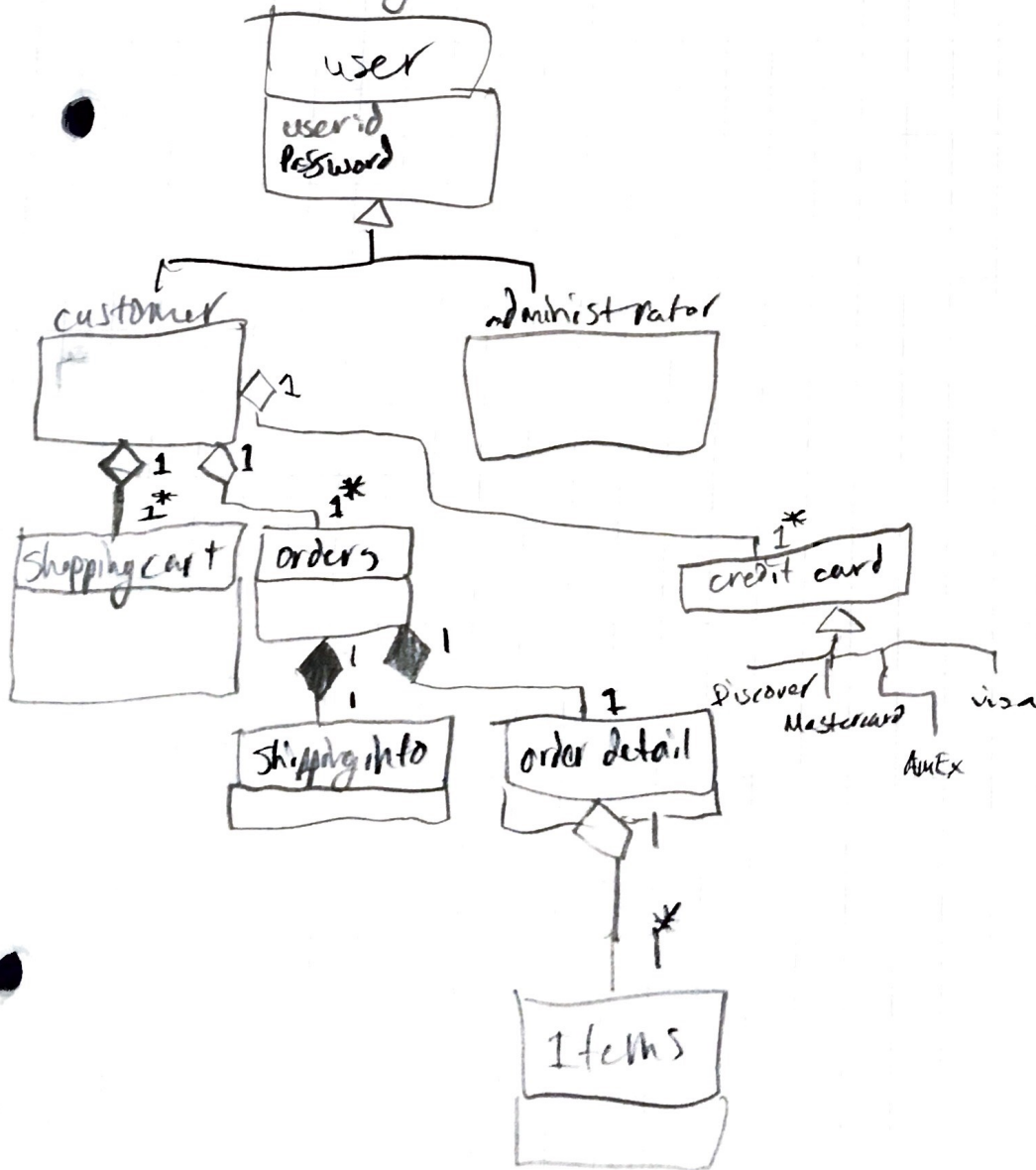
## Design:

- components E, F, & G are tested first then ~~then~~ ~~created which are~~ used to test c, d, E, and so on.
- A and B would be tested first and stubs that produce the same output as G, D, E are used
- new versions will have a higher impact early on.

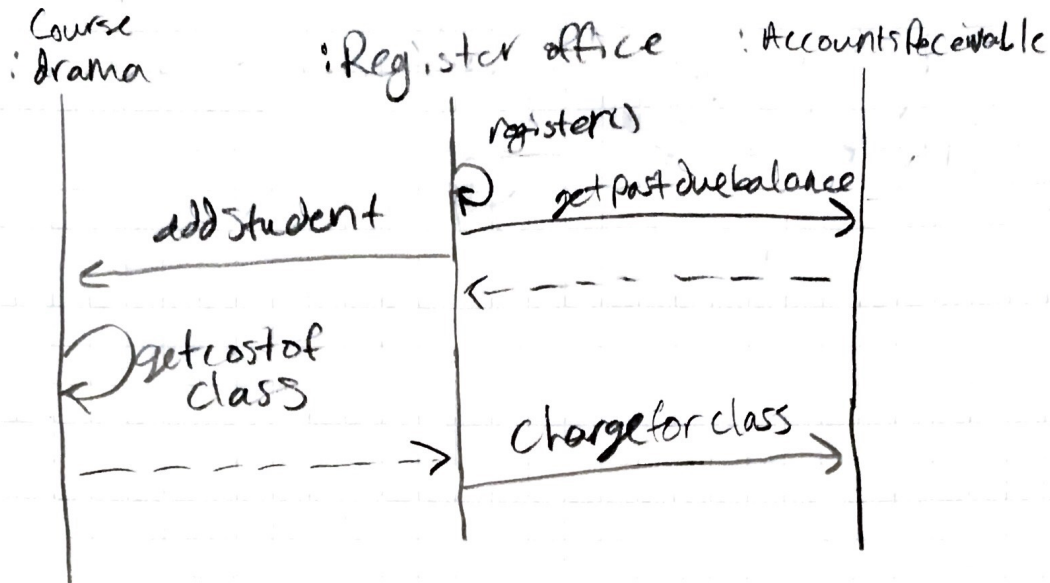
## D&S

- used in bottom-up to simulate upper level modules
- used in top-down to simulate modules in lower levels
- open source testing framework for java

## Class Diagram:



## Sequence Diagram:



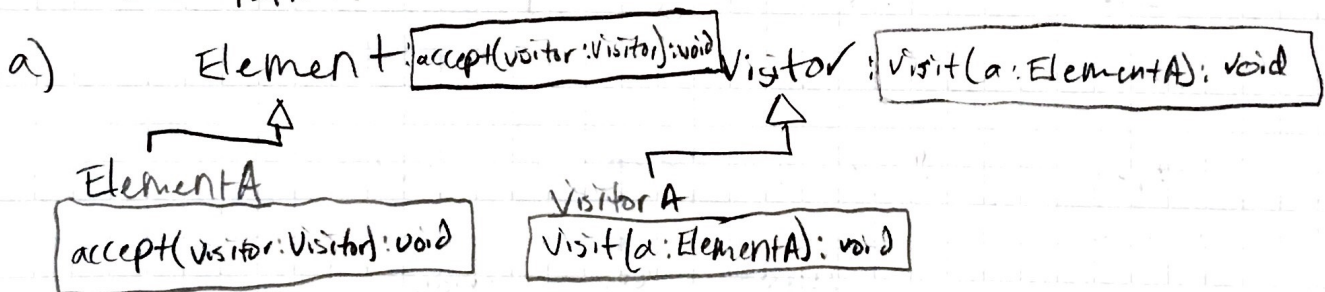
## Dependency Injection:

// game logic constructor

```
GameLogic (VolleyComm c)
{ c = c; }
```

// wow!

## Visitor pattern:



- b) Arithmetic: Visitor can visit e.g. NumExp
- NumExp has accept visitor method.  
used to find value of entire program.

- c) It makes it easier to change logics of operation and to add new items with accept method.

## Testing

- a) Check program correctness for ages 18 & 65, find the test subjects in question and make sure they like the program
- b)  $C = 19$ ,  $C = 21$ ,  $C = 20$ .

## Automated Testing ?

2.3

2.4: Because it takes time and money to run tests and it makes it possible to develop more quickly.

2.5: B box

- Equivalence partitioning: Input domain data is divided into different equivalence data classes, this reduces the total tests needed.
- Boundary value analysis: Identify errors at the boundaries of input domain data because that's where most problems occur.
- State Transition testing: Tests the discrete states that a system ends up in.

2.6 code coverage:

- Statement coverage: check executable lines that have already been completed.
- Branch coverage: Requires all code blocks and execution paths to be completely tested.



## Ethics:

- a) The first thing I always do when I have to make a tough decision is fly to Jackson Hole see the wife and kids. Then I would ask God if he's ok with it.
- b) 10, assist colleagues and coworkers and support...
- c) ?

3.2

- a) yes
- b) reading peoples email messages.

3.3 Tell some one in the administration and don't look at other peoples grades.

4.1: workers work on an approved list of tasks called the backlog. workers implement one thing at a time.

- 4.2 :- Waterfall model :- sequential approach.
- must plan and schedule all activities before begin working
  - useful when requirements are well understood and unlikely to change during development.
  - Iterative: Build small portions of all features across all components
    - useful to release a project w/ initial scope and add more later
  - Agile: Build small portion of each feature one-by-one and gradually add features.
    - useful when requirements change rapidly.
- 4.3. It would depend on timeline, requirements and how often the requirements will change.