CS 482, Spring 2009
Assignment #1
V is for Vendetta

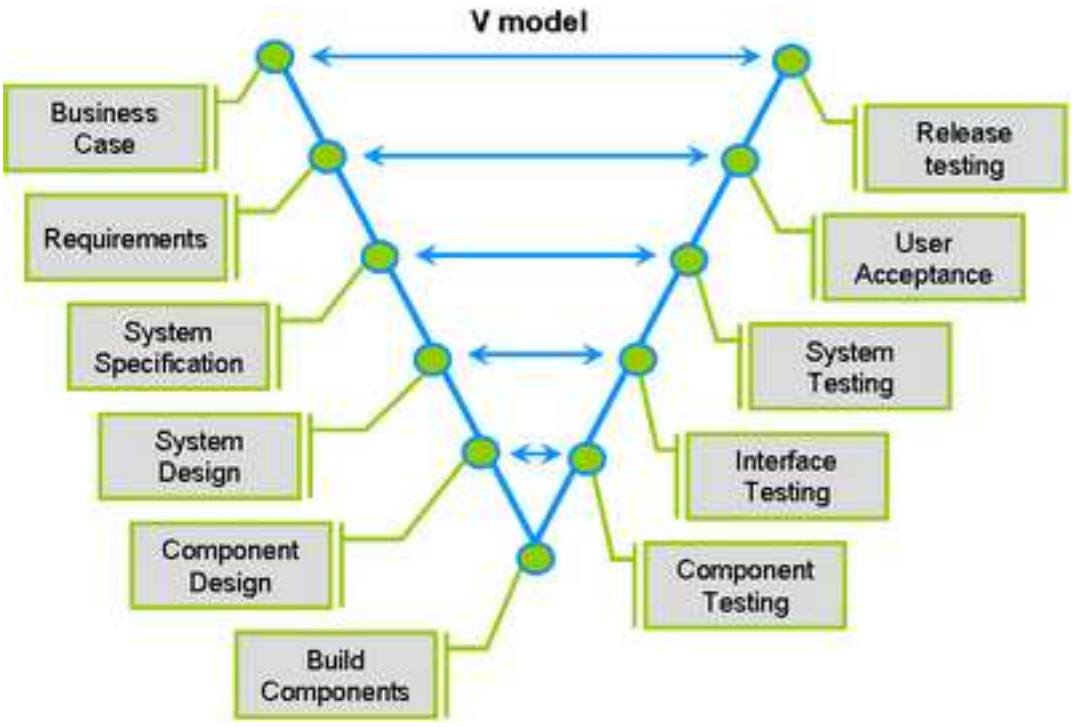
Due 1/21/09, in class

Background

Here is the problem (and no I don't care that you can solve it in 2 minuets using some ad-hoc process).

> Mr. Krabs has asked Sponge Bob to write software for a new remote order take-away business. Seeing as to how you are Sponge Bob's friend, you have offered to help. Mighty kind that. The program will have two parts: a *front-end* that accepts orders and a *back-end* that records their processing them.
>
> In more detail the front-end accepts from a customer (sitting comfortably in his or her own house) the number of Krabby Pattys and the number of drinks that they want. It then reports the total cost and waits for confirmation before sending in the order.
>
> The back-end maintains a queue of orders from the front-end. It shows each in turn to Sponge Bob. Once the order is filled, by cook Sponge Bob, it is checked off. The back-end shows a running total of gross income after each order is checked off.

Model to be used



Assignment

For each step in the *V* model write a paragraph, a program, or a test suite (as appropriate). To get you started, here are the first two

Business Case (What are Sellenger friends do)

(objective)	Mr. Krabs would like to increase revenue.
(affordability)	He has excess cooking capacity (he can work Sponge Bob harder) and so no new fixed costs exist.
(benefits)	Customers will not have to wait in the queue for their order.
(risks)	Customers may prefer to enjoy the find ambiance of the restaurant and thus not want to order take-away from home.

Requirements

These are described above in the Background section.

For the remaining steps in the *V* model, you will work either in a group of two: Group 1 Johns and Group 2 non-Johns, or as a collective of four. Group 1 will be responsible for the front-end and Group 2 for the back-end.

Your task is to complete, *in the following order*, the remaining *V*-model steps. First, the collective should do the System Specification and the System Design. Then split into your groups to write the Component Design, Component Tests, and Interface Tests. Next, the collective should write the System (Integration) Tests. Then, and only then, each group should build its Component. Finally, Mr. Krabs (your customer) will do the Acceptance Testing (starting with "`front-end | back-end`"); however, for this assignment the collective should write two acceptance tests and describe at least one issue related to Release Testing.

What to hand in

(1) Typed 2-up prose, tests, or code as appropriate for each step in the model.

Notes

(1) **Fight the urge** — Write out the design and tests *before* writing a stitch of code.

(2) This is not an interface assignment, so you can print to the screen and accept input directly from the keyboard.

(3) For this assignment you must write in `C`.

(4) System Testing will take place on a Linux Box.

(5) Check out `http://www.coleyconsulting.co.uk/testtype.htm`.

(6) If you have not seen the title movie then consider it homework.
After viewing, answer the question "did *V* do any planning?"

(7) If you have not seen a Sponge Bob episode, may I suggest you start with
`http://www.youtube.com/watch?v=XVbDXPUX9vA`
⋯ consider this homework too.