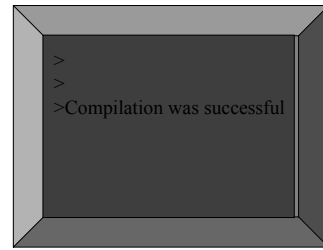
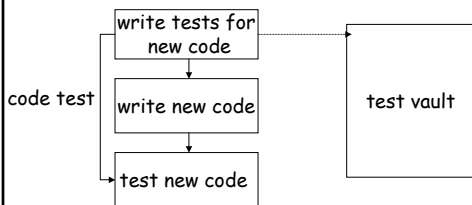


Test Plans

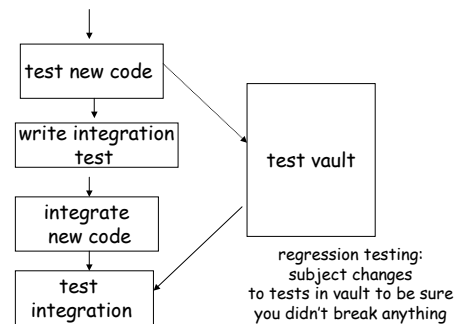


This does not mean the code is debugged!

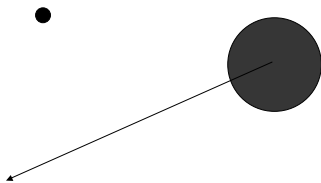
Test Driven Development I



Test Driven Development II



Unit Test for Vertex Collision



Test Cases

- You know answer ahead of time
- Tests include problem cases

Step 1

v



p_0

choose v and p_0 randomly

1. distance $< r$
2. distance $= r$
3. distance $> r$

Step 2

v



p_0

choose random vector unit w
compute path endpoints $v+(r-\delta)w$,
 $v+rw$, and $v+(r+\delta)w$

Step 3

v



p_0

throw out test case if dot product
is positive.

Step 4

v



$0 < \alpha < 1$

$\alpha \approx 1$

$\alpha = 1$

p_0

w

Step 5

v



p_0

$\alpha \approx 0$

$\alpha = 1$

w

test

- One jump positive tests
- One jump negative tests
- Two jump positive tests
- Two jump negative tests

Questions

- Are these good test?
- Are there other kinds of tests we should do?
- How can we automate testing?
 - Test generation
 - Running the tests
- How will we do regression testing?

Come up with a test plan for Prototype II.
How will you evolve the plan over the course of the project?
Implement the plan.