Walkthroughs

Testing
- How do you know your design worked?
- What does it take for it to be said to work?

Test plan

<table>
<thead>
<tr>
<th>Data</th>
<th>What you expected</th>
<th>What actually happened</th>
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<tbody>
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- Use the data to go through the design
- The data should test events that were not part of the original specification.
  - In this module case if you find any of these note them down if you can not find a solution.
- Give your design and test data to others to run through and test.
Walkthrough - manual
- Low-tech, but very useful and powerful technique.
- Easy method
  - Print out copies of the design/code.
  - Move away from the computer.
  - Read through the code and with pen and paper simulate what is going on.
  - At each step keep a record of how variables and data changes.

Walkthrough-verbal
- Explain what your code does to somebody else.
  - The other person you explain the code to might spot the error.
  - The action of putting into words what the code should do is trigger in your mind to what was wrong - very common.

Inspection
- Walkthrough is generally the designer/programmer going through their own code, acting as the computer and finding the errors and noting down them.
- You should always do this.
- Inspections are some respects a formalised version.
  - Various forms of these.
  - Usually takes the form of a meeting, and people take on roles.
Roles
- You can create meetings to use these techniques where everybody has a role. Some possible ones of these are included below:
  - Designer – The designer/programmer of the routine under test. Usually does not say much in the meeting.
  - Tester/Inspected – person going through a finding whether it works or not.
  - Reader-person who literally reads out the design or line of code at the appropriate point.
  - Note taker – noting down the results – its very important to note down the results, comments, etc.

Roles
- This is not a definitive list, make-up, names, etc vary. Sometimes the names change, or roles are combined.
  - Avoid having the designer and the inspector being the same person.
  - The idea behind the process though is essentially the same:
    - Make a project ‘ego-free’: The project is a group activity not a solo activity of the designer.
    - To find the faults/problems early in the process before it goes outside of the project group.

Task
- In groups of three, take the “is a teenager” task, tip task and wall-follower routine and each have a go at been:
  - The designer/reader – person who wrote the solution reads out the steps of their solution.
  - The inspector/tester – takes those steps and performs-tests them. Commenting on any problems.
  - Note-taker: Notes down the comments. So at the end the group can make recommendations.