Code/doc inspections

- Most teams have some mechanism for checking each others' code and documents for correctness and standards

- Might be informal, everyone gets another team member to look over their code/document before treating them as "done"

- Might be highly formal, with a team of people assigned specific duties/roles during inspection, with review and approval processes to be followed

- Might be carried out during a group meeting, or 'asynchronously' through shared documents, email, etc

What to inspect

- Really, anything can be inspected – code, documents, data files, images, ... anything that needs to be checked

- Inspection takes time/resources, so might prioritize which items get full inspection, which ones get less formal peer review

- One key issue is deciding how 'big' an item to inspect – asking folks to inspect a 10,000 line program isn't really effective, usually aim for something a person could go through carefully in an hour or so

When to inspect

- When to inspect an item is a bit tricky
- having several people read through something greatly increases chance of catching a defect that the author might not have found for ages, so it's helpful to do it early
- But inspecting too early means a whole bunch of people all find the 'easy' defects the author could clean up easily anyway
- Pre-reqs for inspection might include things like 'must compile cleanly', 'must be in standardized format', etc

Inspection team

- Common to have 3-5 people involved in an inspection, each gets assigned roles (often multiple roles per person)
- Author: whoever created the item under inspection
- Moderator: acts as coordinator/overseer, makes sure processes are being followed, keeps discussions on topic
- Reader: for inspection meetings, actually reads item line by line, keeping track of where we are so far
- Scribe: formally writes/records down group decisions as we make them
- Inspectors: just lookin for flaws, usually have specific focus areas

Inspection roles

- Having everyone look for everything often results in some areas being overlooked, so usually each inspector given specific priorities, areas, or perspective to use

- Perspectives might be as newbie user, as power user, as support staff, as maintainer, as paying client, etc – inspect the item with an eye to issues impacting those you represent

- Sometimes focus is more techical – you look for pointer problems, you look for interface problems, etc

Recruiting inspectors

- Generally we want a mix of perspectives on the inspection team

- Probably at least one other developer from same team, who has good understanding of the relevant code/docs

- Probably a developer from outside the team, for fresh perspective, independent view

- Possibly someone from testing or support, for yet another distinct perspective

Synchronous inspections

- If inspection is being carried out in a group meeting

- Make sure everyone has materials, knows their role and what the objectives of the inspection are

- Give everyone adequate time to review material prior to meeting time/date

- During meeting, proceed line by line through item, pause for discussion when anyone brings up issue, record group decisions on possible issues

- Follow up after meeting, give everyone copy of inspection summary, see if anyone has corrections or add-ons

Asynchronous inspections

- Much the same idea, but everyone communicating through shared documents, email, chat, etc

- Still need to collate discussion and summarize decisions on each point, moderator might still need to keep discussions from drifting off topic

- Still need to follow up with summary, seek corrections or add-ons

Inspection results

- For items regarded as issues, several possibilities on how to deal with them

- Simple fixes: author supposed to fix them, check in with moderator afterward

- Complex fixes: author needs to check in with some other inspection team members as well, to confirm all is ok

- Major issues: author might have to come back and go through whole inspection again

- Investigative issues: some things might need further investigation before settling on how they should be dealt with

It's not personal

- Inspections are meant to find defects so they can be fixed
- Finding defects is better than not finding them
- Not meant as a personal criticism of author
- Inspectors should be professional, not make it personal
- Author should be professional, not take things personally
- Moderator needs to help keep tone professional