SED Lecture 16
Introduction to Software Testing

Objectives

- To understand the change in mindset required to discover faults as a tester, by contrast to constructing SW as a designer and implementor.
- To be able to outline the main steps of a software test plan.

Key Points

1. The purpose of testing is to discover faults in a program or design. Doing this requires you to think differently.
2. Every test has a test purpose. We gather evidence (e.g. program outputs for given inputs) in order to show that, under certain assumptions, the program or design does not contain any faults related to that purpose.
3. Terminology. You should know the following terms: system under test (SUT), test case, white box tests, black box tests, test driver, test stub, error, fault and failure.
4. The process of testing code is traditionally organized bottom up, first testing individual units, then their integration and then the full system (function and performance). Finally, clients are involved in acceptance and installation testing.

Core reading

Bruegge & Dutuoit, 11.1 & 11.2 Intro and Overview, 11.3 Testing Concepts, 11.4.5 system testing 11.5 managing testing

Sommerville (7th ed) 22 verification and validation,

Pressman (5th ed) 17.1 testing fundamentals, 17.2 test case design 18.1 a strategic approach to SW testing

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