# COMP 3711

# (OOA and OOD)

# Software Testing 6
# Pre and Post Processing
### (chapter 6)

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# Preprocessing and Post Processing

1. Preprocessing for an automated suite of tests puts the environment into the state needed to run the test case

2. Postprocessing puts the environment in some known state after the test suite has been run

# Pre-processing Tasks

1. Create / Remove
   - Build database, populate it with data
   - Remove data from a database or files…
   - Remove files altogether
   - EG: Test to see if DB record created, delete record

# Pre-processing Tasks

2. Check
   - Everything as should be?
     - EG: Enough disk space, files present?
     - Operating system version?
     - LAN is operational?
   - …

# Pre-processing Tasks

3. Reorganize
   - Concerned with copying or moving files
   - EG: Move master copy of a data file so it won't get corrupted by the test
   - …

# Pre-processing Tasks

4.  Convert

    - Long term storage of data may not be in the form needed by the test case

    - EG:  Convert compressed data to desired format for test

    - ...

# Post-processing Tasks

1. Delete
   - Delete files, database records that were created as part of the test
   - If test fails need this data to analyze, but if it passes we don't need most of the data
     - EG: Screen images, variable values...

# Post-processing Tasks

2. Check
   - Did things happen that were supposed to?
     - EG: File got deleted? created? changed?

# Post-processing Tasks

3. Reorganize
   - Moving the test artifacts to permanent locations
     - EG: Files and other test results may be created in different locations
     - It is easier to do test failure analysis if the data files are in one location
     - Don't want the results to be overwritten by other tests

# Post-processing Tasks

4. Convert
   - Putting output in more useful format
     - EG: Database data to test
     - Platform-dependant to platform-independent

   - If a post-processing task fails, the test fails

# Task Characteristics

1. Many tasks must be done every time suite is run
   - Significant amount of work
2. Tasks come in groups
   - Essentially same task performed many times at once – copying large groups of files
3. Many tasks are the same or similar
   - Tests for particular system will require similar physical set-up
4. Amenable to automation

# Difference between Automated Tests and Automated Testing

**Manual Process**

Automated Testing  ▮ (red)
Automated Tests   ▮ (dark teal)
Neither           ▮ (light blue)

Select/identify test cases to be run
Set up test environment
- create test environment
- load test data

Repeat for each test case
- set up test prerequisites
- execute
- compare results
- log results
- clean up after test case

Clean up test environment
- delete unwanted data
- save important data

Summarize results
Analyze test failures
Report defects