

# Midterm Review

## □ Major Topics

## Midterm Review (1)

### ❑ Introduction to testing

- Basic concepts: fault, failure, error, test case, testing, debugging, verification & validation
- The testing process: test generation, test execution, and test evaluation

### ❑ Input space partitioning

- Partition, equivalence partitioning (interface-/ functionality-based approach), boundary-value analysis

### ❑ Combinatorial testing

- Combinatorial explosion, t-way testing, pairwise testing, the IPO algorithm

## Midterm Review (2)

### □ Graph-based testing

- Basic concepts: path, simple path, prime path, test path
- CFG: basic block, syntactical/semantic reachability, node coverage, edge coverage, prime path coverage, tour, tour with sidetrips/detours
- DFG: definition/use, du-pair, du-path, all-defs/all-uses/all-du-paths coverage