

# CS 4501/6501: In-class 9

## Graph Coverage Criteria for Source Code

19-Oct-2017

### Names:

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**Purpose:** Apply graph coverage criteria to program source code

**Instruction:** Work with your neighbors in groups.

For this exercise, you will choose one of your relatively small, simple program or method (in any language of your choice).

- Create a Control Flow Graph (CFG) representing your program source
- List all basic blocks the nodes represent
- Annotate each edge (branch) with applicable predicates / conditions
- Annotate defs and uses on the graph. Note: you may choose to create one copy of the CFG and include all the information or create two copies of the CFG (one with information on nodes and edges and one with information on defs and uses)
- List all DU-pairs
- List all DU-paths. Reminder: DU-paths must be "def-clear"
- (optional) Apply one of data flow coverage criteria: All-Defs, All-Uses, or All-DU-paths

### Submission

Submit your exercise to Collab. Each group submit only **one** copy. Be sure to include all names.