

**17-355/17-655/17-819: Program Analysis**

**Lecture 15, Axiomatic Semantics and Hoare-style verification**

**In-Class Exercises**

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1. Generate a verification condition for the following program:

```
x := 0
y := 2
whilex+y=2 y > 0 do
  y := y - 1;
  x := x + 1
{ x != 0 }
```

2. Generate a verification condition for the following program and postcondition:

```
r := 1
i := 0
while i < m do
  r := r * n;
  i := i + 1
{ r = nm }
```