

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

Lecture: Symbolic Execution

In-Class Exercises

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1. Symbolically execute the following program, assuming that the input y maps to α and z maps to β . Give the possible symbolic results, along with the guard for each result.

```
int foo(int y, int z)
```

```
    int w := y;
```

```
    if (y > 0)
```

```
        w = y * 2;
```

```
    if (w < 2)
```

```
        z = z + 1;
```

```
    return w + z
```