

Class 09

Nested Loops

Model for nested loops

```
SET UP OUTER LOOP {  
    OUTER LOOP ACTIONS  
    SET UP INNER LOOP {  
        INNER LOOP ACTIONS  
    }  
    MORE OUTER LOOP ACTIONS  
}
```

Nested loops - comments

- Usually the nested loops are for loops, but they could be while loops
- OUTER LOOP ACTIONS will repeat from time to time, whereas INNER LOOP ACTIONS will repeat all the time
- A clue that suggests using a nested loop is that there are two categories of action frequency

Example 1 (from last class)

- Goal: Print 5x5 grid of *s

```
*****
```

```
*****
```

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*****
```

```
*****
```

Example 2

- Goal: Print a triangle of *s

*

**

Example 3

- Goal: Print a triangle of *s

*

**

Example 4

- Goal: Print a triangle of *s

**

*

Example 5

- Goal: Print a triangle of *s

*

**

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Example 6

- Goal: Print an X of *s

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