Chapter 6

Loops enable us to do something multiple times.

Loops enable us to execute a statement repeatedly.

There are three kinds of loops, and each is good for different kinds of tasks.

The while loop executes a statement repeatedly as long as some condition is true.

while (exp) stmt



Exercise: write the factorial function with a while loop.

public static long fact(int k) { // fill this in }

public static long fact(int k) { int result = 1;while (k > 1) { result *= k; k - - : return result;

The do-while loop executes a statement *at least once* and then repeatedly as long as some condition is true.

do stmt while (exp);



(Why might we want a dowhile loop?)

for loops are often used to iterate through ranges or collections.

(The for loop is the most confusing.)

for (stmt_{init}; exp; stmt_{iter}) stmt_{body}



Remember: if, switch, while, dowhile, and for are all statements and thus can be nested.

Example statement nesting

Exercise: write the factorial function with a for loop.