

CSE 142 Section Handout #5 Cheat Sheet

while loop (5.1)

(indefinite loops; don't know in advance how many times it will repeat)

```
while (condition) {
    statement(s);
}
```

Example:

```
int number = 1;
while (number <= 200) {
    System.out.print(number + " ");
    number = number * 2;
}
```

Relational/Logical Operators	
Operator	Description
<	less than
<=	less than or equal
>	greater than
>=	greater or equal
==	equal
!=	not equal
&&	and
	or
!	not

boolean (5.2)

(logical values of true or false)

```
boolean iLoveCS = true;
boolean minor = (age < 21);
if (minor) {
    System.out.println("Can't purchase alcohol!");
}
public static boolean bothOdd(int n1, int n2) {
    return (n1 % 2 != 0 && n2 % 2 != 0); // returns true or false
}
```

Random (5.1)

(produce random numbers)

```
import java.util.*; // for Random

// random value between 0 and 9
Random rand = new Random();
int randomNumber = rand.nextInt(10);
```

Method	Description
nextInt()	random integer
nextInt(max)	random integer between 0 and <i>max</i>
nextDouble()	random real# between 0.0 and 1.0
nextBoolean()	random true/false result

String (3.3, 4.4)

(store text)

```
String name = "P. Diddy";
System.out.println(name.length()); // 8
```

index	0	1	2	3	4	5	6	7
char	P	.		D	i	d	d	y

Method	Description
contains(str)	true if this String contains the other's characters inside it
endsWith(str), startsWith(str)	true if this String starts/ends with the other's characters
equals(str)	true if this String is the same as <i>str</i>
equalsIgnoreCase(str)	true if this String is the same as <i>str</i> , ignoring capitalization
indexOf(str)	index in this String where given String begins (-1 if not found)
length()	number of characters in this String
substring(i , j)	characters in this String from index <i>i</i> (inclusive) to <i>j</i> (exclusive)
toLowerCase(), toUpperCase()	a new String with all lowercase or uppercase letters

Fencepost Loop (4.1)

```
public static void printNumbers(int max) {
    System.out.print(1);
    for (int i = 2; i <= max; i++) {
        System.out.print(", " + i);
    }
    System.out.println(); // end the line
}
```

printNumbers(5) outputs 1, 2, 3, 4, 5

(N posts, N-1 wires between)

