COMP 222
Java / C Comparison Chart

Statement	Java	C
comment	/* comment */ // another kind of comment	
assignment	i= i+j;	
block	{ *statement 1*; *statement 2*; }	
conditional statement	**if** (*expression*) *statement* **else** *statement*	
switch statement	**switch** (x) { case 1: *statement*; **break;** … default: *statement*; }	
for loop	**for** (**int** i=1; i<=10; i++) *statement*	**int i;** /*explicity declare iteration var */ **for** (i=1; i<=10; i++) *statement*
while loop	**while** (i < 10) *statement*	
return statement	**return** ; (in a procedure) **return** x; (in a function)	
terminate a loop	break;	
function call	x=m(y,z)	
procedure call	m(y,z);	
equality and inequality	== and !=	
logical operators	&&, & (logical-and) ||, | (logical-or) ! (logical-complement)	
arithmetic operators	unary -, +, -, *, / (div), % (mod)	
string concatenation	+	/* no C equivalent */
integral types (%d, %l)	**byte** (8 bits), **short** (16 bits) **int** (32 bits) , **long** (64 bits)	**short** , **int** , **long** (machine dependent)
floating point types (%f)	**float** (32 bit), **double** (64 bit)	**float** , **double** (machine dependent)

character type (%c)	**char**	
boolean type	**boolean**	**int** (C has no type boolean)
packages/libraries	**import** java.util.Scanner;	**#include** <stdio.h>

null value	x=**null;**	#include <stdlib.h>
		x=**NULL;**

constant	**final int** MAX= 100;	#define MAX = 100;
declaration of an array	**int**[] A= **new int**[10];	**int** A[10];
declaration and creation of two-dimensional array	**float**[][] B= **new float**[10][100];	**float** B[10][100];
declaration of a string variable (%s)	String s;	**char** *s;
declaration of a multiple-field class/type	**class** r { **char** a; **int** b: }	**struct** r { **char** a; **int** b; }
declaration of a pointer variable	/* no Java equivalent. */	**int** *b;

declaration of a function	**float** a (**int** b) {
	...
	return 'X';
	}	

Input	**Scanner** scanner = new Scanner(**System.in**); **int** x = scanner.**nextInt**(); **double** f = scanner.**nextFloat**(); **String** s = scanner.next();	**int** x**; float** y; **char *z;** **scanf(**“%d”, &x); scanf(“%f”, &y); scanf(“%s”, z);
Output	**System.out.println**("The character “+c+” has ASCII value “+int(c))**;**	printf(“The character %c has ASCII value %d\n”, c, (int)c);
Garbage collection	/* automatic */	free(x);