CSE 142 Section Handout #2
Cheat Sheet

Primitive types (2.1)   *(kinds of data that can be used by your programs)*

Type	Description	Examples
int	integers	42, -3, 92851
double	real numbers	3.14, 2.0
char	a character of text	'a', 'X', '\n'
boolean	logical values	true, false

Expressions (2.1)   *(compute a value using arithmetic operations)*

- *precedence*: () before */% before +-
- with int, / is integer quotient and % is integer remainder
- Strings can be *concatenated* with other values

Arithmetic Operators	
Operator	**Meaning**
+	addition
-	subtraction, negation
*	multiplication
/	division
%	remainder ("modulus")

```
1 * 2 + 3 * 5 / 4             "$" + 9.0 / 4.0 + 1
2     + 3 * 5 / 4             "$" + 2.25 + 1
2     + 15    / 4             "$2.25" + 1
2     + 3                     "$2.251"
5
```

Variables (2.2)   *(pieces of memory that can store a value of a particular type)*

type name;   *declaration (creates a variable but doesn't give it any value)*
name = **value**;   *assignment (stores a value into a variable)*

type name = **value**;   *declaration/initialization (creates a variable and stores a value into it)*

```
int x;
int y = 3;
x = 1 + y * 2;       // x stores the value 7
```

The `for` loop (2.3)   *(repeats a group of statements a fixed number of times)*

```
for (initialization; test; update) {
    statement;
    statement;
    ...
    statement;
}

for (int i = 1; i <= 10; i++) {
    System.out.println(i + " squared is " + (i * i));
}
```

Nested `for` loops (2.3)   *(loops inside loops, can be used to produce complex text patterns)*

```
for (int line = 1; line <= 5; line++) {
    for (int j = 1; j <= (-1 * line + 5); j++) {
        System.out.print(".");
    }
    System.out.println(line);
}
```

```
....1
...2
..3
.4
5
```

Class constants (2.4)   *(unchangeable global values that can be seen throughout your program)*

```
public static final type name = value;

public static final int DAYS_PER_WEEK = 7;
```