

Ch.2 Understanding Class Definitions

Constructors & Assignment Statements

Class Structure (in general)

```
public class SomeClass
{
    Fields

    Constructor

    Methods
}
```

Constructors

Constructors are a special kind of method that *initialize* each object as it is created from the class. A constructor sets the default value for all *fields* in the object, which is the *default state* of the object.

Constructors have the same name as their class.

Constructors may use external parameters when they are *invoked*, or they may have no parameters.

Parameters

```
public TicketMachine(int ticketCost)
```

This *constructor* requires a single parameter, `ticketCost`, in order to create the object. A typical value for `ticketCost` might be 500 (cents).

The named parameter, `ticketCost`, is called a formal parameter, and is always associated with the constructor for this class.

The value we use, in this case 500, is called the actual parameter, and has a short *lifetime*. It will last only until the end of the constructor.

Assignment Statements

Methods, and everything associated with them, last only as long as they are running, which is a short time. Thus the parameters used with a method will not last.

Since *actual parameters* only have a short *lifetime*, we will often save their values in a location with a longer lifetime. The *fields* of a class are used for this purpose.

Assignment Statements...(2)

An assignment statement uses the assignment operator, `=`, to copy a value into a specified location, called a variable. The *data type* of the value and the variable must be the same.

The right-hand side is called an expression, as it may be more than a simple value.

variable = expression;

```
price = ticketPrice;
```

```
// in this case, both are integers
```

Assigned Work

Read pages 25-28

Create an OpenOffice Writer document, which you will use from this point forward to answer exercise questions from the text

Complete all exercises along the way (up to 2.20)

Catch up on previous work