Contextual typing is also useful for writing out object literals. As the programmer types the object literal, the contextual type provides information that enables tools to provide completion for object member names.

Section 4.19 provides additional information about contextually typed expressions.

1.6 Classes

JavaScript practice has at least two common design patterns: the module pattern and the class pattern. Roughly speaking, the module pattern uses closures to hide names and to encapsulate private data, while the class pattern uses prototype chains to implement many variations on object-oriented inheritance mechanisms. Libraries such as 'prototype.js' are typical of this practice.

This section and the module section below will show how TypeScript emits consistent, idiomatic JavaScript code to implement classes and modules that are closely aligned with the current ES6 proposal. The goal of TypeScript's translation is to emit exactly what a programmer would type when implementing a class or module unaided by a tool. This section will also describe how TypeScript infers a type for each class declaration. We'll start with a simple BankAccount class.

```
class BankAccount {
    balance = 0;
    deposit(credit: number) {
        this.balance += credit;
        return this.balance;
    }
}
```

This class generates the following JavaScript code.

```
var BankAccount = (function () {
    function BankAccount() {
        this.balance = 0;
    }
    BankAccount.prototype.deposit = function(credit) {
        this.balance += credit;
        return this.balance;
    };
    return BankAccount;
})();
```

This TypeScript class declaration creates a variable named 'BankAccount' whose value is the constructor function for 'BankAccount' instances. This declaration also creates an instance type of the same name. If we were to write this type as an interface it would look like the following.