

## MVC and Dependency Injection

MVC (Model-View-Controller) is a design pattern used by software engineers (including PHP application designers) to communicate between the view and model using a controller. The *controller* is software that transfers any user input to the model. MVC design can be considered circular because the model, controller, and view have the ability to communicate with each other. The standard three-tier model is linear; for the Interface to receive or pass information to the data tier, it must pass the information through the business rules tier. There are many tools on the market (such as Ruby on Rails) that can assist software engineers in designing MVC applications.

*Visit [thenewboston.com](http://thenewboston.com) for a generic example of an MVC application:*

<https://www.thenewboston.com/videos.php?cat=88>

MVC and Component Based Design can use **Dependency Injection**. Dependency Injection allows the program (client) that will use a block of code (such as a class) while not know the actual implementation of the block of code. This allows for independent development, updating, testing, and reusability of modules. This is similar to the ability of the ignition of a car communicating with the starter. The ignition has little knowledge of the starter component and how it operates. It does not even know the brand of starter. The ignition merely knows to send a signal (electricity) to the starter to tell it to operate. If the starter is replaced, the ignition is unaware and unaffected by the change, as long as the starter still operates when it receives the signal. While MVC and dependency injection are advanced topics, we will explore an example of dependency injection in Chapter 4.

## Chapter Terms

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Platform or Container	GTK SDK
Smart Phone API	Facebook Canvas Platform
Facebook API	Facebook Developer's Page
AJAX	HTTP GET
XMLHttpRequest	<code>document.getElementById</code>
CSS	Conditional Statement
If Statement	Three-Tier Architecture
Interface Tier	Business Rules Tier
Data Tier	Graphical User Interface (GUI)
Objects	Verification Code
Events	Database Management System
Servers	Application Servers
Web Servers	Service
Dataset	JSON
XML	SOAP
WSDL	SQL

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