

# Chapter 14

## Model View Controller Frameworks for Mobile View Website

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### **ABSTRACT**

*Websites have evolved over the past few years utilizing a variety of programming languages and frameworks. There were other developers working on them concurrently. Developers deploy their projects utilizing a number of design patterns to handle these sophisticated web apps, which makes the code simpler and easier to work with. They are well known for using the model view controller approach. Model, view, and controller, or MVC, are the three components that make up an application in accordance with the MVC architectural pattern. Each of these parts is made to address particular facets of application development. This chapter focuses on MVC for mobile device website viewing. The various sections of this chapter address the introduction to MVC, MVC components, the architecture pattern, several techniques used to implement the pattern in the project, and an example of MVC architecture. Towards the end of the chapter, the advantages and disadvantages of MVC are examined.*

### **INTRODUCTION**

The creation of web applications has advanced significantly since the world wide web's inception. Today, a variety of technologies and programming languages can be used to build web applications, but due to the world wide web's explosive growth,

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these technologies were unable to keep up. Many players tried to develop novel and unusual technologies, mostly to enhance user experience and aid web application developers in creating quicker and more potent websites. Some of these technologies, such as Microsoft Silverlight and Java Applets, have played significant roles in web development but have suffered significant usage declines in recent years. On the other hand, numerous technologies, like JavaScript, Flash, and XML, have developed from being insignificant toys to being strong and vital components of the modern web ecosystem. Today's web environment uses HTML and CSS to convey data to consumers, and JavaScript is used for interactivity. These systems are referred to as "front-end" or "client-side" systems. Contrarily, "back-end" or "server-side" technologies refer to methods for processing and storing data (Subari et al.,2021). The fact that web technologies are being employed more frequently to create various complicated applications has led to another issue. The critical point to take away from this is that an application must clearly distinguish between appearance, logic, and data storage. The model-view-controller (MVC) design is presently receiving the most attention, even though there are a few application design paradigms and patterns that can help with this problem. MVC programming implements this three-way combining to organize tasks relating to the application domain (its model), the display of the application's state (its view), and the user's interaction with the model as well as the view (the controller).

## **THE MVC PATTERN AND LITERATURE OVERVIEW**

The MVC was invented by Trygve Reenskaug in 1978 or 1979, when he was visiting a scientist at Xerox Palo Alto Research Center (PARC). According to the first reports on MVC, it is named "Thing Model View Editor," but it was quickly modified to "Model View Controller."

The primary reason for creating MVC was to provide user control over complex data sets. The MVC practice evolved in response to time and demand. Because it was created before web browsers, the MVC pattern was initially used as an architectural pattern for graphical user interfaces (GUI). MVC is now used to create web applications. Ruby on Rails, Laravel, Zend Framework, CherryPy, Symphony, etc. are a few web frameworks that leverage the MVC idea (Dey, 2011).

The architecture that offers several views of the same data is known as the MVC design pattern. It splits the application objects into three classes: the Model class, the View class, and the Control class. It also distinguishes between the data layer and the expression layer. The business and data logic are handled by the Model class, the display logic by the View class, and the control processing by the Control class. Three different types of logic are used by MVC to create control and display

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