

Salesforce Lightning

Lesson 02: Introduction to Lightning Components

Lesson Objectives

At the end of this lesson you will be able to understand:

- Lightning Component Framework
- Why use Salesforce Lightning Components
- Where do we use Salesforce Lightning Components
- Open Source Aura Framework
- Lightning Component Architecture



Lightning Component Framework

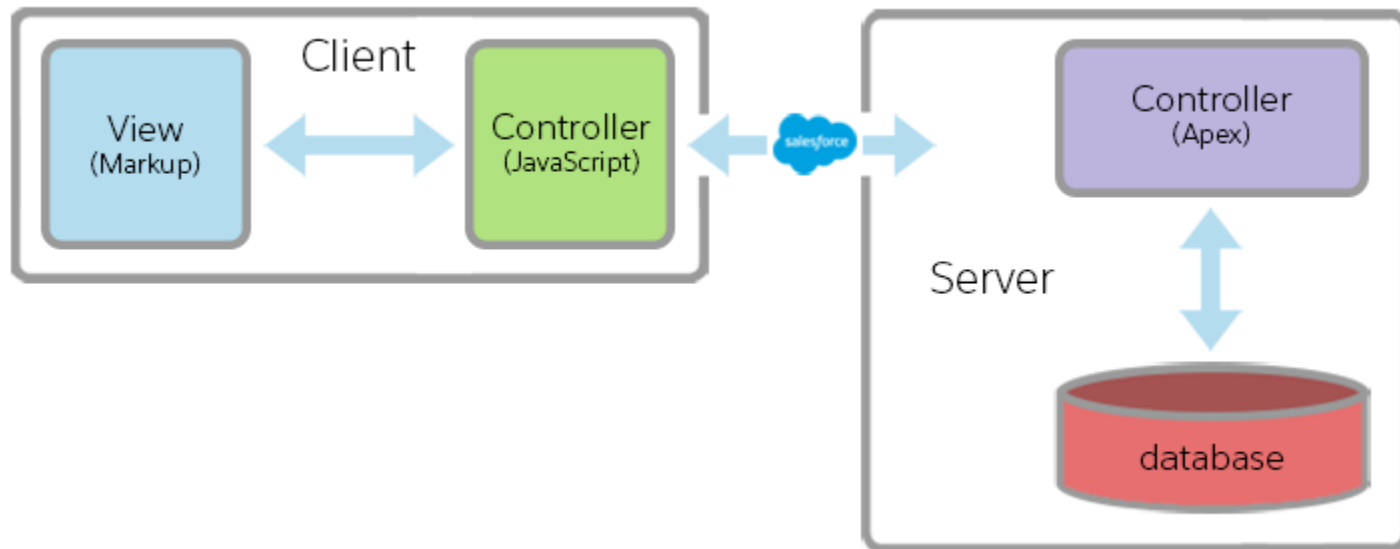
- **Salesforce Lightning Component Framework**
 - is a User Interface (UI) framework
 - developed to create dynamic Salesforce web applications for mobile and desktop devices
 - Modern framework for building single-page applications with dynamic, responsive user interfaces for Salesforce.com apps
 - Components are the self-contained and **reusable units** of an app
 - The framework supports partitioned multi-tier component development that bridges the client and server.
 - It uses **JavaScript on the client side** and **Apex on the server side**.
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- Lightning components have .cmp extensions.
 - Lightning components are based on the concept of web components.
 - It uses Apex, JavaScript, HTML and CSS to build Salesforce lightning app.

Lightning Component Framework

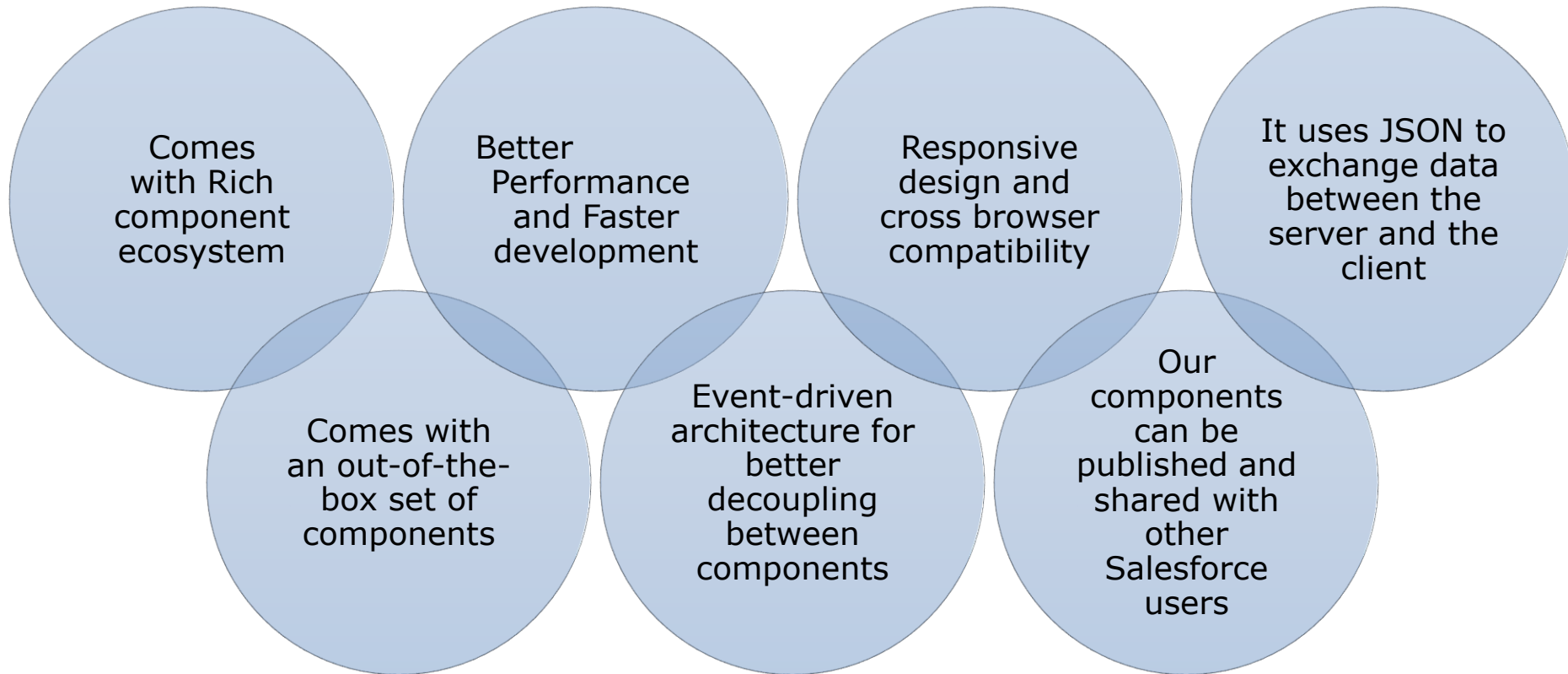


Salesforce Lightning Component framework

- A component can contain other components, as well as **HTML**, **CSS**, **JavaScript**, or any other Web-enabled code.
- This enables you to build apps with sophisticated UIs.



Why use Lightning Components?



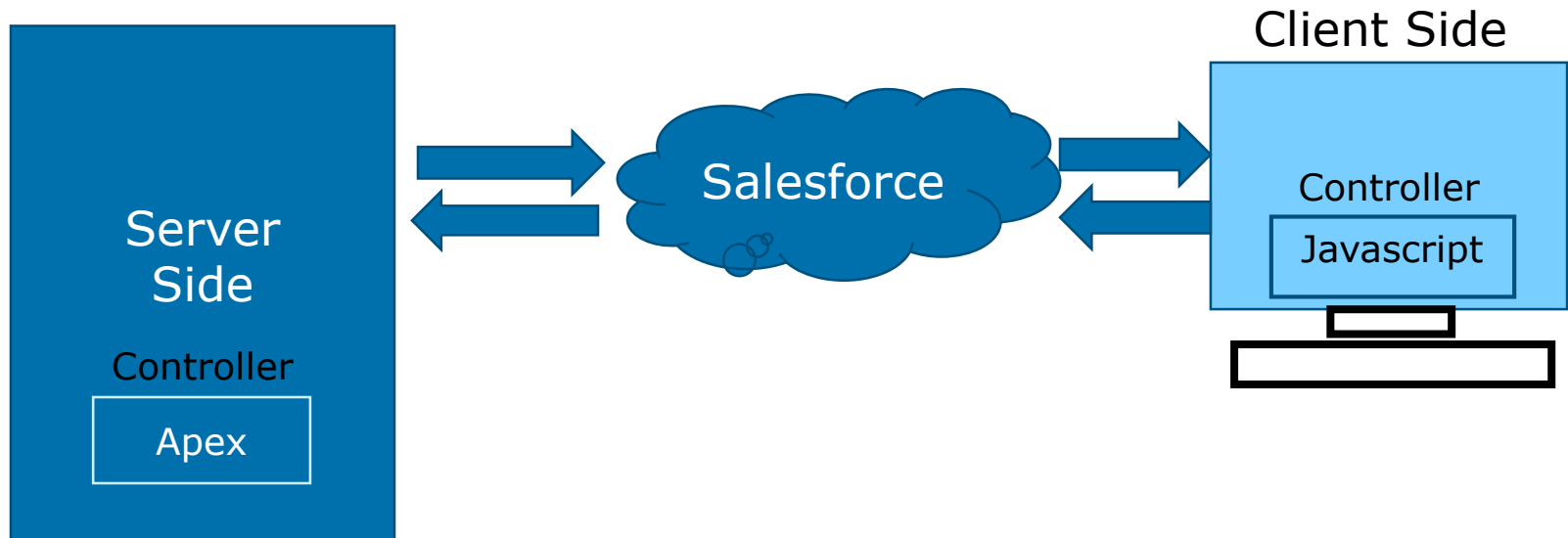
Where can we use Lightning components?

We can use components in many different contexts

- Lightning Experience and Salesforce1 App
- Lightning Pages
- Community Builder
- Lightning Apps
- In Visualforce Pages
- Any App with Lightning Out (Beta).
- To create stand-alone apps that are hosted on Salesforce.

Lightning Component framework

- **Client Side:** Which is handled by JavaScript
- Salesforce Cloud to connect both server and client side
- **Server Side:** Which is handled by Apex Controller



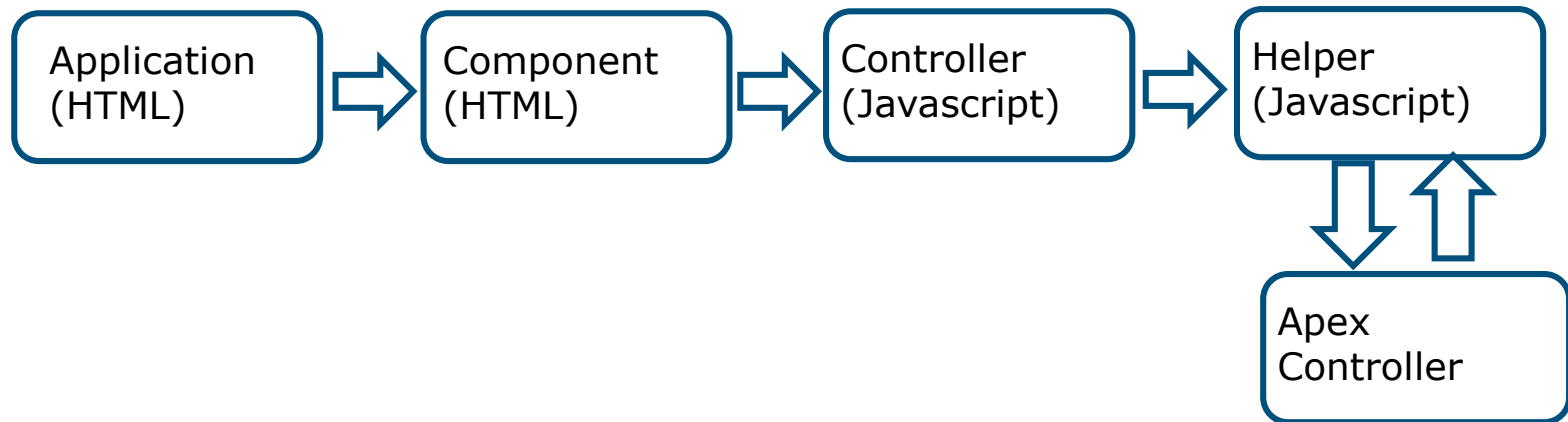
Open Source Aura Framework

- Salesforce Lightning Component Framework is built on Open Source Aura Framework
- Using Aura component enables to develop dynamic web pages:
 - with scalable lifecycle to support building apps designed for growth
- Aura Components are reusable components
- Usage of Aura Components can range from single line to complete app
- Aura Component has multi-tier partitioned component that connects the server and client
- it uses the responsive design

Lightning Component Architecture

Lightning component architecture consists of:

- lightning application,
 - component,
 - controller,
 - helpers and
 - Apex controller
-
- Lightning components are based on open source UI for web development.



Components of Lightning Component Architecture

Lightning application:

- Standalone pages containing many lightning components.
- Markup code used in the lightning application
- Use developer console to create lightning applications

Lightning Component:

- These are Markup components present in the application
- Consists of helper(JS), Controller (JS), Style(CSS), Documentation, SVG, Re-Renderer and Design
- It can have HTML+ Aura Component supported by Salesforce
- Lightning component can be created in developer console
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Controller (JavaScript):

- Controller is a resource made up of JavaScript which defines functionality of all components in the action
- Clicking the controller link present in the component will create controller.js file
- JavaScript is used for controller

Components of Lightning Component Architecture

Helper(JavaScript):

- Helper is another JavaScript resource which helps to connect both Apex side and Application side.
- It is like controller we will have the link to create the helper which will give Helper.js file

Apex Controller:

- Apex Controller is a custom Controller which implements all the logic of the page
- This is apex class which doesn't have argument constructor for the output
- Apex Classes is similar to Java classes where it defines functions of code

Summary

- Lightning Component can contain other components, HTML, Javascript or CSS
- It uses Open source aura framework
- Component architecture is made up of:
 - Lightning application
 - Lightning component
 - Controller (Javascript)
 - Helper (Javascript)
 - Apex Controller





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