# Task 4

## Explanation of Vue Concepts and Components

##### Computed Properties and Watchers

A concept used to implement complex logic and operations, as embedding substantial logic into the templates makes them bloated and hard to maintain.

##### Class and Style Bindings

A concept whereby “v-bind” is used to manipulate an element’s class list and its inline styles. This involves linking a Vue artefact such as a function or a variable to the element.

##### Conditional Rendering

A concept that utilises the conditional statements such as “v-if”, “v-else”, and “v-else-if” as attributes to elements to implement statements based on the underlying, imposed conditions.

##### List Rendering

A concept that is used to render lists of items that are properties of Vue objects into elements of a given tag. This is implemented by use of the Vue directive, “v-for”.

##### Event handling

The use of the Vue directive, “v-on” in elements to listen for DOM events and run some JavaScript when they’re triggered.

##### Form Input Bindings

The use of the “v-model” directive to create two-way data bindings on form input, text area, and select elements. It is mainly used to update data on user input events.

##### Component Basics

The concept of creating a custom tag using Vue. The custom tag is known as a custom Vue component. This component can be used in the same way as a pre-set HTML tag. The Vue component’s “props” properties are analogous to element attributes, while the “template” dictates the HTML tag governing the Vue component, itself.

##### Component Registration

The concept of registering a component scope as either global or local. When the scope is global, it can be used in the template of any root Vue instance. Meanwhile, if it is local, it could be left out of the final building, meaning there would be less JavaScript for the client to download, which can potentially improve performance.

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##### Props

Custom attributes that can be registered into a Vue component. When a value is passed to a prop attribute, it becomes a property on that component instance.

##### Custom Events

The concept of adding event listeners to a Vue component (i.e., custom Vue tag) so that it is already pre-set when used in HTML.

##### Slots

A mechanism for Vue components to allow the composing of components in a way that excludes any parent-child relationships. Slots provides an outlet for which to place content in new places or make components more generic.

##### Handling Edge Cases

The scenarios when reaching into other component instances or manually manipulating DOM elements are necessary. Examples include accessing the root instances, parent component instances, and child component instances and child elements.