# Responsive

## Description

Responsive websites respond to the user device’s screen layout and size and change the layout of the elements on the webpage automatically. They differ from the alternative “adaptive” approach, where the appropriate UI layout is chosen from a selection of custom-made designs for each screen size.

## Benefits

Responsive layouts are valued because they can produce a functioning and screen-fitting webpage design even on unusual, fringe case screen sizes. When executed properly, websites made this way can look as though they were designed especially for the user’s device. The responsive approach also has the advantage of requiring less individual designs be created by the UI designer.

## Drawbacks

The natural issue with responsive layouts is that on unusual screen sizes, elements can arrange themselves in unintuitive and unintended ways, and the UI may become unintuitive or inaccessible.

## Testing

A responsive UI design needs to be tested on many different screen sizes to ensure proper functionality and layout. Resolving issues that arise from using a responsive layout can prove difficult without

A responsive web UI design can be achieved easily with a framework like Bootstrap, where elements automatically rearrange based on their proximity to a specific screen size. Bootstrap picks a design from several made by the designer and applies it to the target device. It will apply the design that most closely matches the target device’s screen size. In this way, it combines the responsive approach and the alternative adaptive approach.

# Adaptive

## Description

Adaptive Design uses static layouts based on breakpoints that don’t respond once they’re initially loaded. Adaptive web design is different from responsive design in that there isn’t one layout that always change but instead there are serval distinct layouts for multiple screen sizes.

## Benefits

Adaptive is easier when it comes to efforts used while coding but adaptive design is not the best when it comes to performance. Adaptive site is easier to create and it is perfect for smaller size business and audience since it would keep the slower load times or lower flexibility from being an issue.

## Drawbacks

Adaptive design offers design which is suited to all the screen size wherefore it makes the loading very slow as it loads all the possible screen layouts for the development. Time and resources consumed in loading the layout makes adaptive websites slower to load which in return makes them less SEO friendly. In order to get high performance from adoptive web design you need to have a wide expanse of research done on devices and this won’t end here as with the advent of every new gadget launch you need to start the development again.

## Testing

Beside testing each CSS files with the corresponding layout there isn’t much testing to be done with adaptive design but adaptive design demand a lot of attention with maintenance that no one have found a decent solution to yet.