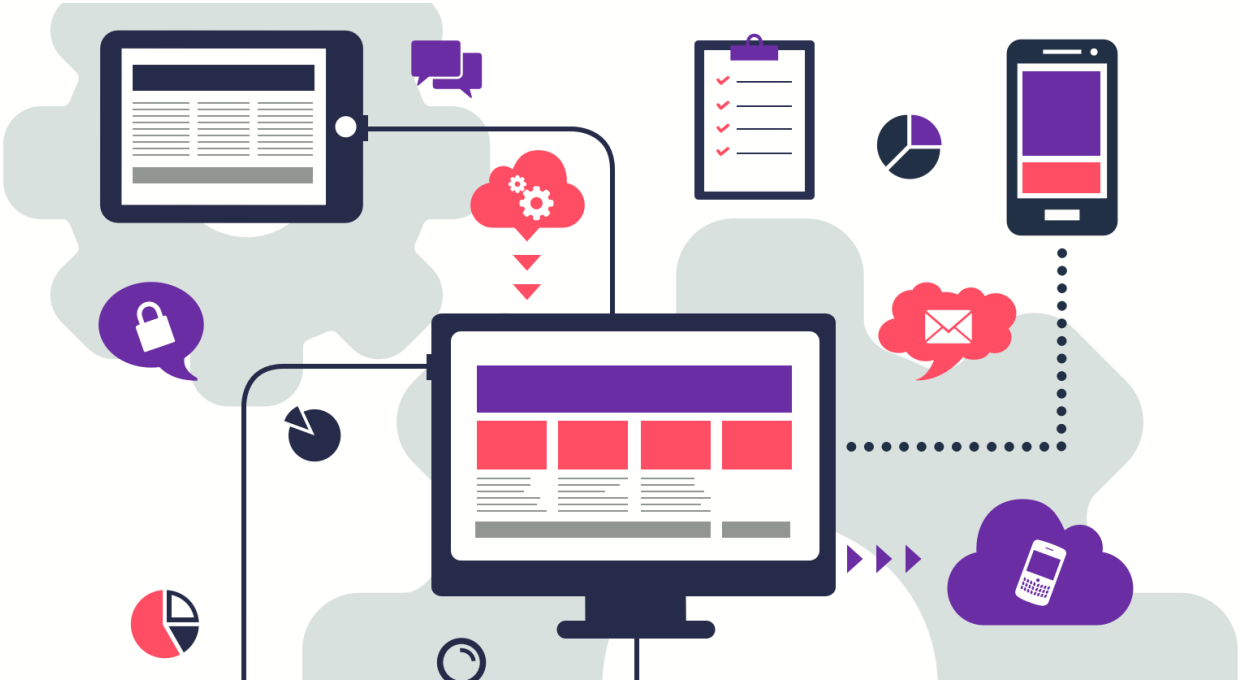
Impact of Hybrid & Reactive Applications on Web UI

By Ajit Joundal



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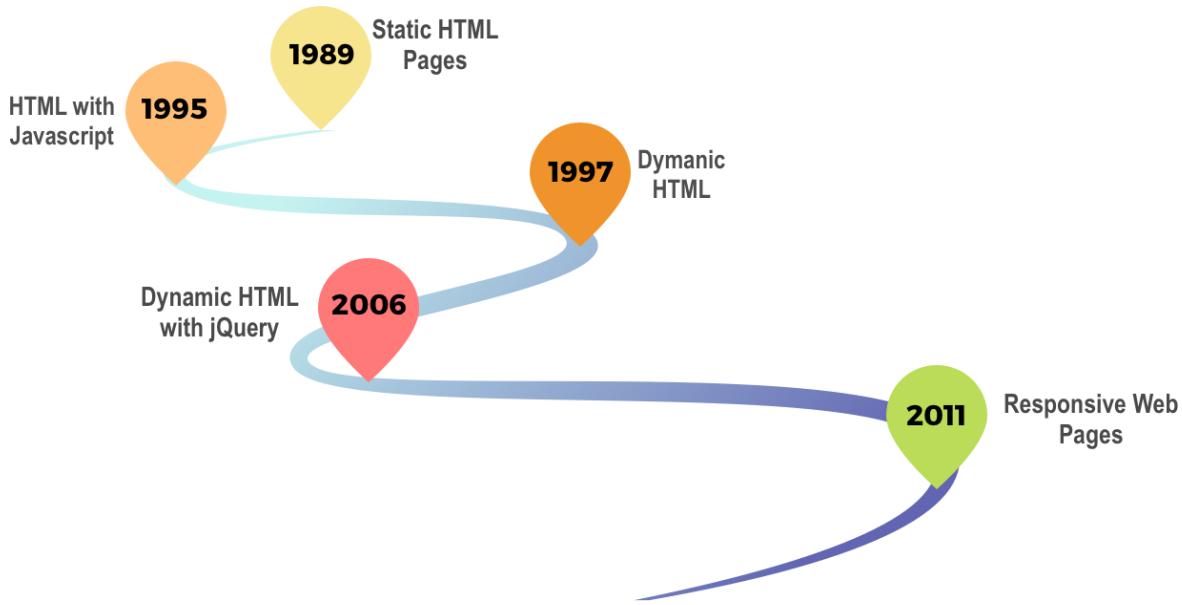
User Interface (UI) is the part of design that deals with the interaction between application and user. There are three subtypes in this:

1. Batch Interface - At the starting people use Batch Interface to interact with applications.

2. Command-line User Interface - This interface is worked with predefined textual commands. It is basically a series of request - response transactions.

3. Graphical User Interface - Here, user has graphics to make the transactions. This is the most user-friendly interface.

Journey of the Web



What are Hybrid Applications?

NATIVE applications are specifically platform dependent. These application are designed by considering specific devices and are installed only on those devices.

WEB applications are platform independent and are accessed through browsers.

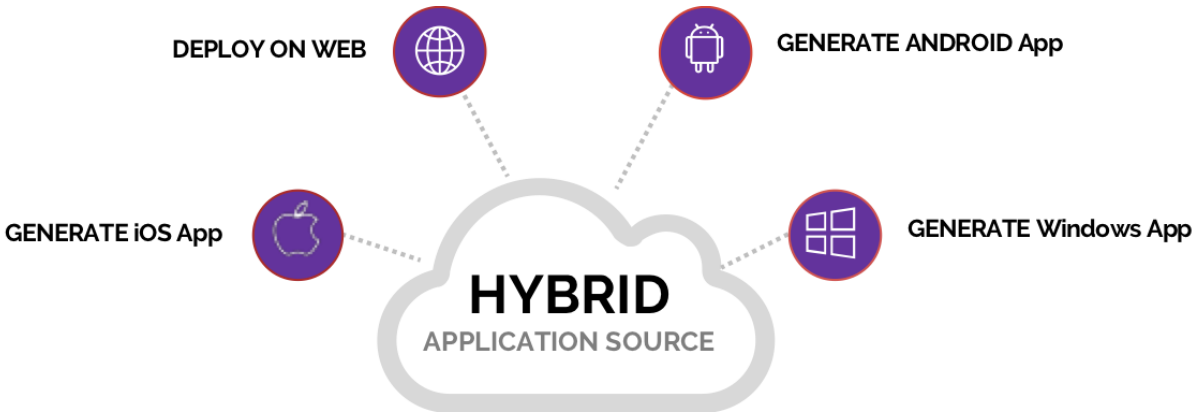
With the rapid growth in mobile devices market, mobile users and app users, programmers realized the benefits of multi-platform application development because of which hybrid application concept got introduced.

HYBRID applications are created using technologies that support browsers as well as mobile devices. Hybrid mobile applications are installed on devices and are accessed through browsers. Instagram is an excellent example of Hybrid application which works on multiple platforms.

The source code written for Hybrid applications shares same source code to generate the mobile app and to access the application on browsers.

Hybrid application is basically a single version of the app that functions across many devices and platforms.

Simply put, it is the combination of a native app and a web app.



Advantages of Hybrid apps

- **Development Cost and Time**

  As same source code is used for multiple platforms the development cost and time is reduced.

- **Integration**

  When compared to native apps, hybrid apps are easy and reduce the integration issues for developers. They also support messaging, camera and GPS.

- **Support for offline mode**

  Hybrid apps support saving data offline which helps to load application quickly. It partially saves users' required information to access data in case of poor or no Internet connectivity.

- **Responsive Design**

  Hybrid applications uses design frameworks like ionic that supports responsive design that fits in all devices and browsers.

Limitations Hybrid apps

- **Native Feel**

  Hybrid apps do not have a native feel. It has native container but the content is html, css itself.

- **Speed**

  Hybrid applications are slower in speed as compared to native application.

Reactive Application

The system which is message and/or event driven is called as reactive system. Reactive applications are loosely coupled and flexible to build. Reactive programming updates the UI when value is emitted from server. In the source code we need to create data streams for click events, events and http requests. Once a particular asynchronous event occurs, the UI is updated.

Why Reactive Programing?

- Programmer can take a break from handling callback events.
- It is easier to handle asynchronous events.
- Reactive libraries like RxJS provide lot of operators that make programmers' life easy.
- With reactive programming, handling complex threading work becomes simple.

For scenarios involving limited resources, we go for Hybrid application approach. Along with resource sharing it saves the time to develop applications. The saved resources and time ultimately reduce the costs for application development.

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