JEFRi Executive Summary

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1 JEFRi

JEFRi, the Javascript Entity Framework Runtime, is a suite of technologies to make development easy. JEFRi provides a comprehensive approach to building data-centric software programs. JEFRi lets developers focus on what's important — the business data, the business logic, and the business' presentation. With these core pieces, JEFRi also provides an extensible framework that provides common, off-the-shelf modules to meet many shared business needs, including authentication, access control, data reporting, internationalization, and much more.

2 The Future of Frameworks

JEFRi builds on a concept of an entity model, a concept that has had growing support from a variety of established industry players, including Hibernate on Oracle's Java platform, and Microsoft's .NET Entity Framework. Entity Frameworks encourage programs to write in the language of the business' problem domain. Instead of referencing table 3, column 5 against table 6, column 2, entity frameworks let the developer write code to get a list of all the client's brands. By being so much more expressive than an access database, JEFRi lets developers spend time on the hard problems your buiness faces.

3 Truly Multiplatform

Further, JEFRi makes it trivial to migrate to another platform or vendor in the future. Written in Javascript, JEFRi runs in every browser, on every mobile phone, and in a rapidly growing number of backend platforms. With Microsoft's announcement of Windows 8's heavy reliance on HTML, Javascript, and CSS to power the core of the user interface, there is no better time to encourage developers to pick up Javascript and a solid Javascript framework. The knowledge will serve developers on nearly every platform available today.

4 Tools of the Trade

JEFRi makes use of conceptual Entities, descriptions of things in a business model. An entity could be a customer in a CRM, or a blog post for a website. These entities are connected with relationships, describing how all the business' data works together. The customer will have many contact cards, while a blog post has a single author. The JEFRi modeling tool makes it easy to quickly and correctly express a variety of possible descriptions of the business' data, and automatically creates all the necessary information for persisting that data in any database system, from a free MySQL installation, a powerful Oracle database, or on Amazon's S3 cloud services.

5   Rapid Prototyping

JEFRi comes with a series of libraries to rapidly prototype working applications from a JEFRi model. The data binding modules will take a JEFRi model and provide a complete web application, including pages, forms, and dynamic requests, automatically. This code itself is well-formatted and easy to style as is, but is also completey customizable to fit any design or workflow necessary. This lets developers focus their attention on areas needing special work, while levraging existing code to fill in non-critical sections of the application. With the JEFRi modeler and JEFRi binding, developers can create a fully-functional, customized CRM system in under a week.

6   Mobile Powered

Because modern Android and Apple devices utilize fully-featured web browsers, JEFRi applications can be run on mobile devices with no change to the application's code. If an application needs to leverage more features of the mobile platform, JEFRi makes it easy to replace only the pieces that change with the mobile platform, primarily the layout and design of the user interface. Beyond replacing mobile-specific code, JEFRi can make use of a variety of underlying technologies and aggressive caching to transparently move on and off data networks, while using the application to its full functionality. This can be very handy when a user suddenly finds themselves lost, without a data connection.

7   Secure, Reliable, Scalable

JEFRi has features to verify and secure any communication between different JEFRi devices. This allows for very fine-grained control over what bits of data are available to different users of the application from different devices. JEFRi is built on solid practices, designed from the ground up to serve as a framework to answer the challenges of the rapidly growing computing environment. JEFRi is able to take advantage of both cloud computing and mobile platforms, while still running on your desktop PC. With a test suite and full continual integration, JEFRi continues to grow in features while maintaining a stable core for future development.