Divine Pixel & Codes
Private Limited

MongoDB, Express.Js, Angular.Js, and Node.Js Development

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Contents

Introduction

Divine Pixel & Codes is a technology consulting firm that offers end-to-end solutions, from concept and strategy, to design, implementation and support. Our specializing in Web Applications, Mobile App, Custom Software Development Solutions. To ensure the support of this development we also provide hosting and infrastructure management. We pride ourselves on keeping overheads low, we are a team of creative and happy individuals who love what we do. Excellence, Partnership and Commitment are the three hallmarks with which we approach our clients; we believe you will see this in our service.

We are a team of 42+ who are dedicated to serve the customers and have been functioning in the IT industry since 2013. DivinePNC specializes in the fields of web development and mobile application development. We engage in a massive endeavor of inventing and developing multiple web and mobile applications that are suitable for all verticals of the industry.

DivinePNC's commitment to reaching their audience with targeted mobile application will put you far ahead of your industry. We're here to help with all your mobile app needs and we have thorough analytics that are measurable for making strategic mobile marketing decisions.

We are proud to present our products which have earned reputation in the market. For us, the "customer is always right". You can always rely on us for all your web and mobile application development projects. We have a good support team who will guide you at every point in time and clarify your doubts. Contact us today at our Delhi/NCR office and convert your ideas into reality. We are here to shape your imaginations and provide Ace developments.

1. Web Development Anticipation

The corporate world has been blitzed in recent years by changes in customers' technological expectations. They expect to have access to data and commercial processes directly through personal devices smartphones, tablets and computers especially customer-facing, Web-based, and mobile apps. Corporate software users similarly assume that data and workflows will be accessible through rich, mobile interfaces on the device of their choice. This dramatic shift in user expectations has led to changes in the way that application development is performed and managed. Software development companies have pressure to release new features update very often according to the customer feedbacks.

The approach to developing business applications now totally shifted from "waterfall" to "agile methodologies". Languages, tools, and technologies used during development are key factors in making applications different from one another.

2. Web Developer

Web development tools:

Version control:	Git, Mercurial, SVN
Virtualization:	VirtualBox, Vagrant, Docker

Back-end tech:

Web servers:	Apache, Nginx
Programming language:	PHP, NodeJS, Ruby
Database:	MySQL, MongoDB, Cassandra, Redis, SQL / JSON in general

Front-end tech:

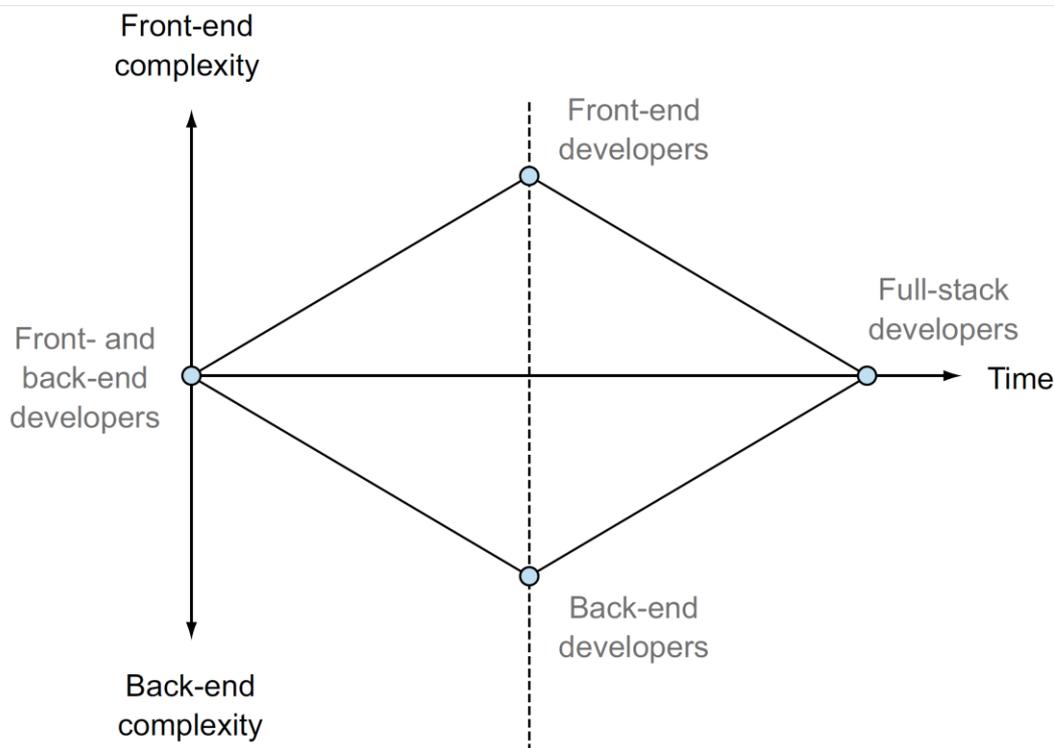|	
HTML / HTML5:	Semantic web
CSS / CSS3:	LESS, SASS, Media Queries
JavaScript:	jQuery, AngularJS, Knockout, etc.
Responsive design:	Bootstrap
	AJAX, JSON, XML, WebSocket

Design:

Converting website design into front-end code
UI
UX

The developer separated as front-end and back-end developer. While the back-end developers were focused on the mechanics behind the scenes, the front-end developers focused on building a good user experience. As time went on, higher expectations were made of both camps, encouraging this trend to continue. Developers often had to choose an expertise and focus on it.

As libraries and frameworks introduced and started to become popular in developers on both the front and back ends. As frameworks and library were designed to make a developer life easier, lowering the barriers to entry. A good library or framework abstracts away some of the complexities of development, allowing you to code faster and requiring less in-depth expertise.

Continuing with the trend for frameworks, the last few years have seen an increasing tendency for moving the application logic away from the server and into the front end. Think of it as coding the

back end in the front end. Some of the more popular JavaScript frameworks doing this are AngularJS, Backbone, and Ember.
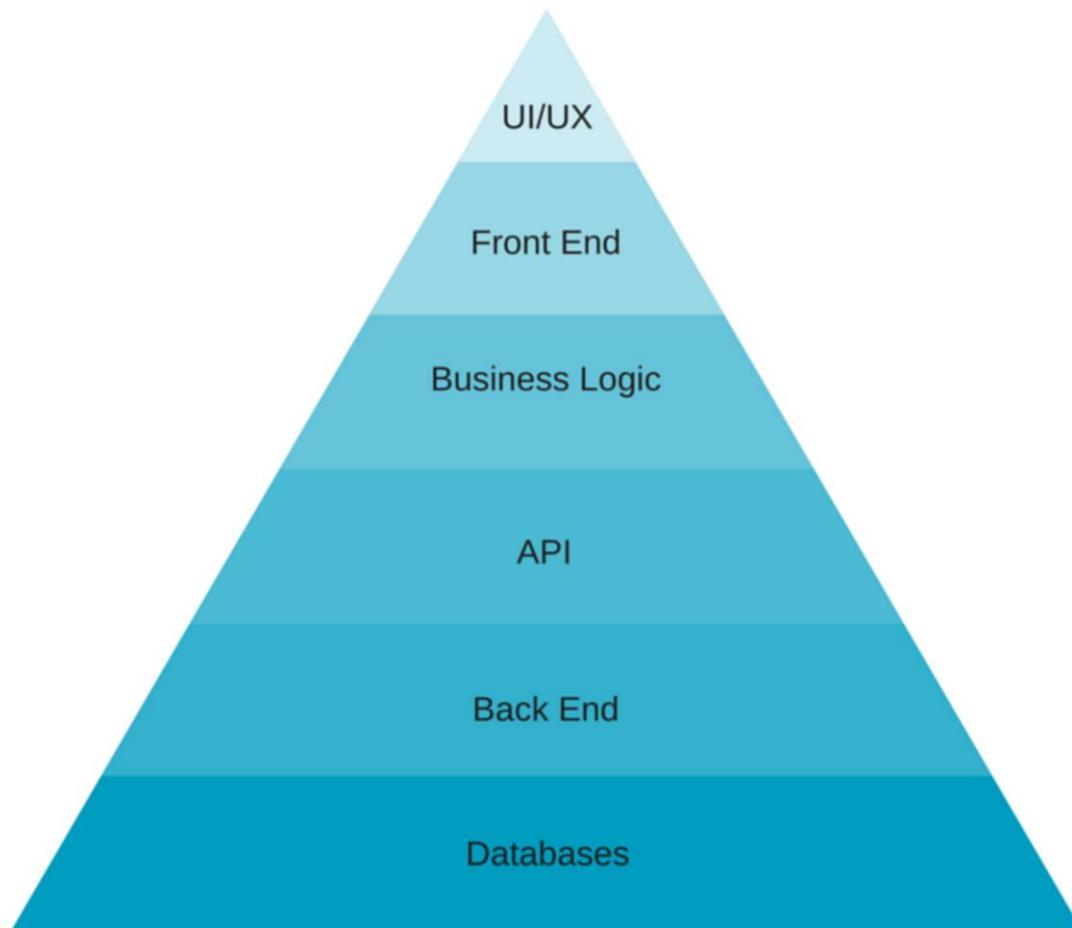

2.1 Full-Stack Developer

We are returning to a new era of complexity due to the rise of mobile computing. As coupling the application code to the front end like this really starts to blur the lines between traditional front-end and back-end developers. One of the reasons that enterprises like to use this approach is that it reduces the load on the servers, thus reducing cost; make application fast, quick UI/UX, minimize in total number of screens.

Now have a new trend of full-stack developers, the term "full-stack developers" means a developers who are comfortable build both the front end and the application logic behind it as databases, PHP, HTML, CSS, JavaScript and everything in between. Turn your Photoshop designs idea into a full functional application code.

Being considered unicorns due to their rare expertise and versatility, Full-Stack Developer are in high demand for large companies and Startups alike, from Facebook and eBay to Munchery.

2.1.1 Full-Stack Developer Skillset:

UI/UX

Front End

Business Logic

API

Back End

Databases

2.1.2 Benefits of full-stack development

1. Common language, better team efficiency with less resources

2. Extensive code reuse

3. High performance and speed

4. Less software development cost

Rather than specializing in one area of expertise, a full stack developer is skilled in all stages of web development, and employers are starting to realize the benefits of hiring a one man development team. Why hire a front, back, and UI developer when you can hire one full stack developer, and pay only one salary?
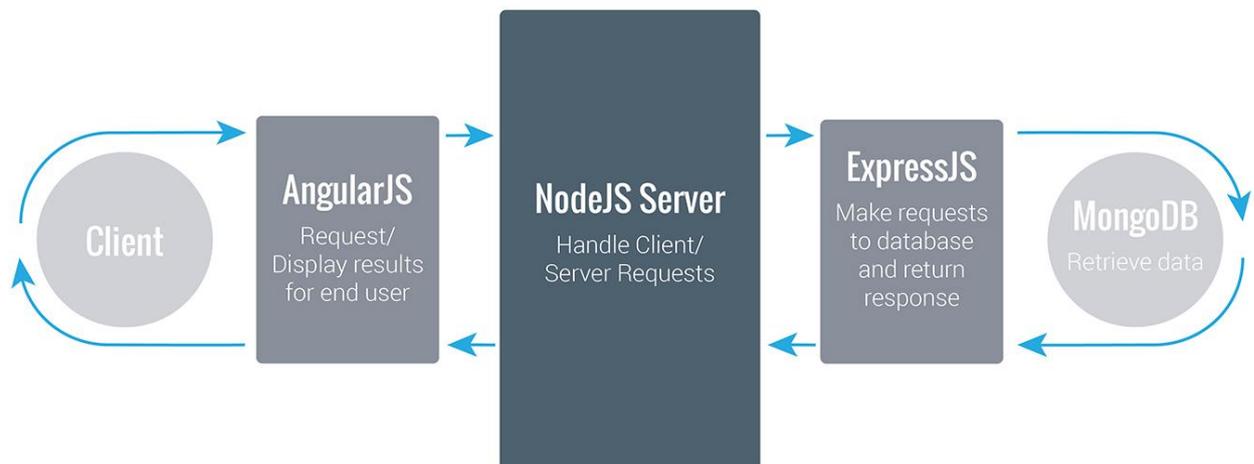
By speeding up the software development process, DivinePNC has the potential to deliver customer-facing value quickly. Applications that make a business competitive flow to the end user in a faster timeframe, keeping the business in the lead.

2.2 MEAN Stack

The MEAN stack is comprised of four main technologies, with a cast of supporting technologies:

MongoDB: The database

Express: The web framework
AngularJS: The front-end framework
Node.js: The web server

2.3 Super MEAN Stack
AngularJS, Node.Js/Express, MongoDB, plus SASS, Babel/ES6, Bootstrap

3. NODE.JS

Node.js is an open-source, cross-platform JavaScript runtime environment for developing a diverse variety of tools and applications (server-side web applications). Although Node.js is not a JavaScript framework, many of its basic modules are written in JavaScript, and developers can write new modules in JavaScript.

Node.js makes it easy to build a network or other event-driven application servers. Node.js is cross-platform applications can be run within the Node.js runtime on a wide variety of platforms (Microsoft Windows, Linux, OS X, FreeBSD, IBM AIX, IBM Systemz and IBMi). Using Node.js provides an event-driven architecture and a non-blocking I/O API designed to optimize an application's throughput and scalability for real-time web applications. It uses Google V8 JavaScript engine to execute code, and a large percentage of the basic modules are written in JavaScript. Node.js contains a built-in library to allow applications to act as a stand-alone web server.
Get high performance apps with our Node.js development services it help you to transform your business that can handle large amounts of data.

4. AngularJS

AngularJS is a complete JavaScript-based open-source front-end web application framework mainly maintained by Google. It concur the challenges encountered in developing single-page applications.

4.1Why AngularJS?

HTML is great for declaring static documents, but it falters when we try to use it for declaring dynamic views in web-applications. AngularJS lets you extend HTML vocabulary for your application. The resulting environment is extraordinarily expressive, readable, and quick to develop. Add Some Control advance things that AngularJS Offer…

- Data Binding

- Controller

- Plain JavaScript

- Deep Linking

- Form Validation

- Server Communication

- Directives

- Reusable Components

- Localization

- Testable

5. Express.Js

Express.js is an open-source, cross-platform, server-side, web and mobile application framework for Node.js. It is designed for building web applications. Express is a minimal and flexible framework that provides a robust set of features for web and mobile applications. Let's you create complex applications quickly.

Language:	Written in JavaScript
Express builds:	Single-page, multi-page, and hybrid mobile and web apps
	Common back-end functions for web applications
	APIs (application programming interfaces)
Templating engines:	Express comes with two templating engines, Jade and EJS, which facilitate the flow of data into a website structure.
MVC pattern:	Express supports the Model-View-Controller architecture, a really helpful way to build websites in a model-driven format
Platform:	Node.js

6. MongoDB

MongoDB is a free and open-source cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with schemas. MongoDB allowing applications to take full advantage of the new features in ES6.

6.1 Main Features

- General purpose database

- High availability.

- Scalability

- Aggregation

- Load Balancing

- Native Replication

- Security

- Advanced users management

- Automatic failover

- Zero downtime upgrades.

- Monitoring

7. SASS

Sass is the most mature, stable, and powerful professional grade CSS extension language in the world. Sass is completely compatible with all versions of CSS. Sass boasts more features and abilities than any other CSS extension language out there. It helps reduce a lot of the repetition and maintainability challenges of traditional CSS.

8. ES6

ECMAScript (or ES)is a scripting-language based on JavaScript, which now tracks ECMAScript. It is commonly used for client-side scripting on the World Wide Web. Other implementations of ECMAScript include JScript and ActionScript.

9. API Services

API Services will always do everything possible to provide the fast and on-site service that you deserve. We're committed to you and your business and you'll always be treated with the utmost professionalism and efficiency. APIs has allowed web communities to create an open architecture for sharing content and data between communities and applications.

In this way, content that is created in one place can be dynamically posted and updated in multiple locations on the web:

Photos can be shared from sites like Flickr and Photobucket to social network sites like Facebook and Myspace.

Content can be embedded, e.g. embedding a presentation from Slide Share on a LinkedIn profile. Content can be dynamically posted. Sharing live comments made on Twitter with a Facebook account, for example, is enabled by their APIs.

Video content can be embedded on sites served by another host. User information can be shared from web communities to outside applications, delivering new functionality to the web community that shares its user data via an open API. One of the best examples of this is the Facebook Application platform. Another is the Open Social platform.

Upload the filed under: API services which let other News board provider can have the access to our stories or magazine available in our server. Communication of our API towards other API services depends on the requirements from client's end.

We should have a study to find the most commonly used API server, which lead us to have a easy, fast and secure access of your product.

10.   Development Cost

10.1   Development Cost Factors

Generally, there are a number of factors that contribute to the costs of an application development. They include:

- Application platforms and environment

- Use of native programming language

- Use of development technology

- Third party API Integration

- Customizations vs using standard application widgets and convention

- Customized UX and UI elements

- Number of design layouts and their complexity

- Support for multiple screen resolutions

- Inclusion of handoff features

Although this is not an exhaustive list of factors that can contribute to the costs of an application development, it does show the prime factors that all businesses will need to consider. While there will be a number of specialists on the development team the general costs per hour falls into the range. To understand the overall costs of an application development, businesses must also have an understanding of the cost components and drivers that go into the project.

Factors such as having an application that requires a back-end server build or integrated APIs versus an app that is completely standalone can mean drastic cost and complexity differences.

10.2   Cost Components and Drivers

A software development project can yield a simple or highly complex software in terms of its functionality. Regardless of the chosen path, there are still many cost components that will make up the overall project, which include:

- Planning, Research, and Discovery

- Scope Definition

- User Experience and Visual Design

- Features

- Infrastructure

- Web Portal or CMS to Manage Application

- Cloud Services

- Testing & Deployment

11.   Conclude

Regardless of the scope and complexity of a web app development is a major investment of time, money, and vision. Determining the purpose from a company and user perspective is crucial to everything that follows. In order to define these aspects, DivinePNC partners with each business to develop a custom approach to mobile app development that fits the needs of the business and the project.

Every app development project starts with understanding the business on a micro level as well as its place within the business' market vertical. Only then can the right customized solution be created to fit the needs and budget of the business and its vision. Whether it's a single project or development of a application strategy, DivinePNC brings a broad palette of services to bear in order to ensure the project's ultimate success.

Our skilled and highly experienced consultants can provide:
- Concept Outline and Strategy Support

- UX & Design Support

- Development and Optimization Support

- Quality Assurance & Launch Support

- Monitoring and Insight Support

- Evaluation and Analytics

At DivinePNC, we have an expert developer that can make use of it to design your desired web application and guaranteed you 100% satisfaction.

12.   List of Abbreviations (Or) Symbols

SASS   Syntactically Awesome Stylesheets

MEAN   MongoDB Express AngularJS Node.js

CRUD   Create Read Update Delete

CSS   Cascade Style Sheets

HTML   Hyper Text Markup Language

JSON   Java Script Object Notation

JWT   JSON Web Token

SPA   Single Page Application

OS   Operating System

CDN   Content Delivery Network

MVC   Model–view–controller

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