SimpleCTO's Guide to Web Applications

Best Practices on How to Design, Hire, and Manage the Development of a Software Product

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"Software is eating the world" -Marc Andreessen

In today's world of tech giants, unicorns, and stories of rags to riches, one thing is clear - embrace technology or be left behind. Specifically, the widespread adoption of the internet has enabled an unprecedented level of communication and sharing. As such, entrepreneurs all around the world are seeking new ways to create and capture value in this rapidly expanding industry.

How does someone without a technical background proceed? How do Marketers, MBAs, Sales people, and those with other skillsets successfully launch a software product?

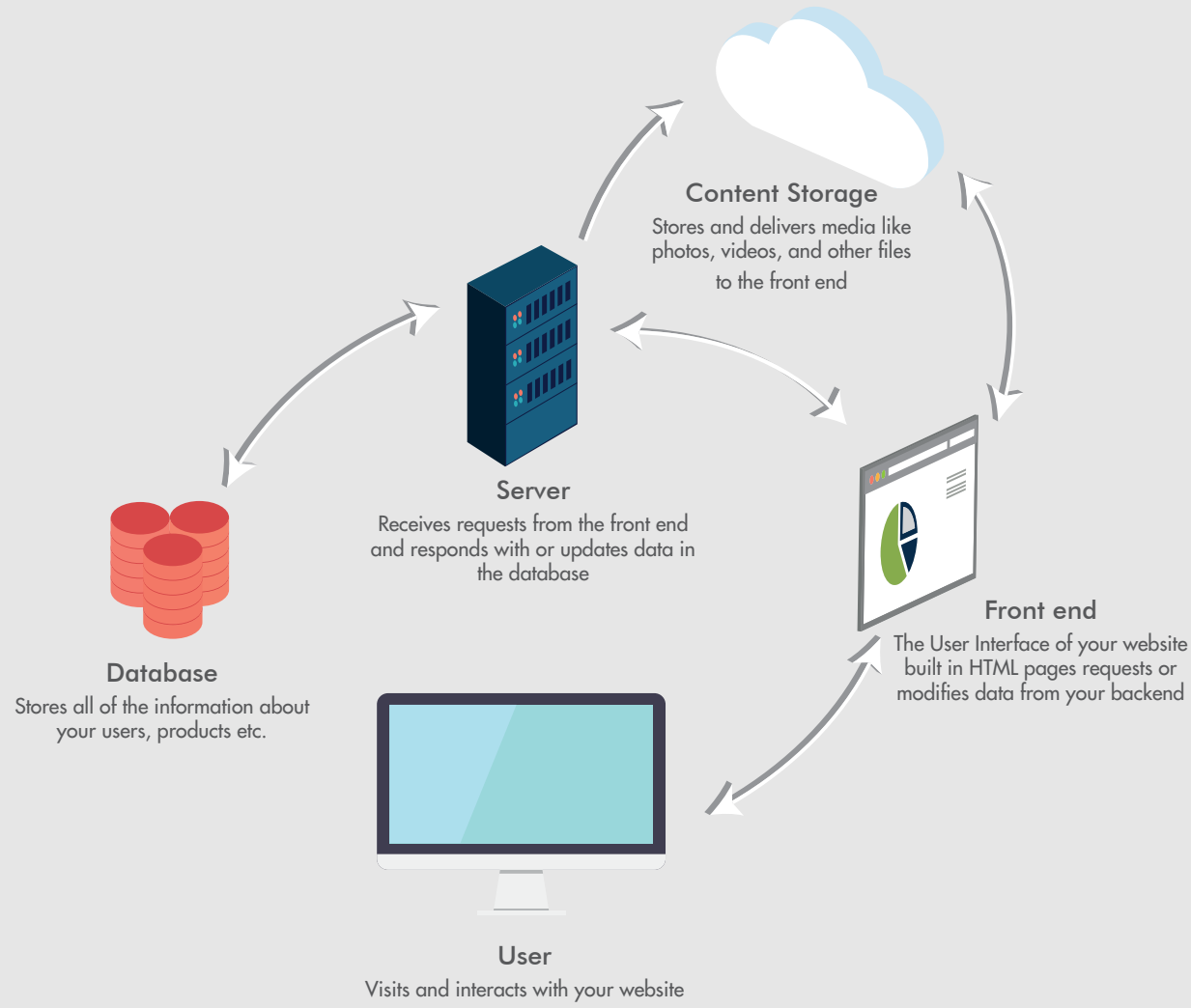
That's the question we aim to answer at SimpleCTO. And we truly believe that any entrepreneur, of any background can start a software business and succeed.

Web Application Architecture

The challenge with building a software product is that every idea is different from the next. What's required for one idea may be completely different from another. So where do we start?

Fortunately, the vast majority of software ideas are actually surprisingly similar under the

Web Application Architecture Diagram:



DEVELOPMENT BREAKDOWN

SPRINT 1	
Backend	
Initial Application Setup	2 hours
Database Migrations	2 hours
Authentication	8 hours
Users (Travelers)	10 hours
Users (Locals)	12 hours
Items	10 hours
Hosting/Deployment	8 hours
Frontend	
Homepage	8 hours
Users (Locals) Sign Up	8 hours
Users (Locals) Profile	8 hours
Users (Travelers) Sign Up	8 hours
Users (Travelers) Profile	8 hours
QA and Debugging	16 hours
Total Development	108 hours

SPRINT 2	
Backend	
Item Rental	6 hours
Payment Integration	12 hours
Messages	8 hours
SSL/Security Setup	8 hours
Frontend	
Procedure Search/Sort	24 hours
Item Creation	6 hours
Image Lightboxes	6 hours
Messages Frontend	8 hours
QA and Debugging	16 hours
Total Development	94 hours

Project Total: 202 hours

Finding Developers

Excellent work, you're now ready to start looking for the right development team to build your software. Teams can range from one-man shops to global organizations with hundreds on staff. Prices can also range from the low thousands to a few hundreds of thousands. Finding the right team is all about finding a team you can trust. While a general rule of thumb is that you will receive higher quality software the more you pay, it's not always true in the below $25,000 price range.

Look for a development team who has your company's interests in mind, and will be communicative with you so you're always in the loop with the development process. The last thing you want is to waste your time and money with

a developer who doesn't spend the time to figure out the specifics of the software you want built.

There are many excellent developers out there, and conversely there are dishonest developers and agencies out there as well. By reading this document, you now have a greater understanding of the underlying process involved in developing your application. With this knowledge you have a better chance of knowing whether or not a developer's claims are realistic or not. While this knowledge will help you navigate the development landscape, **the surest way to find a good developer is through a recommendation** from a trusted source.

APPENDIX

1. MVC Architechture - Google Chrome https://developer.chrome.com/apps/app_frameworks
2. RESTful Web Services: The basics http://www.ibm.com/developerworks/library/ws-restful/
3. Why Use Ruby on Rails? A Senior Dev Explains the Benefits https://www.toptal.com/ruby-on-rails/after-two-decades-of-programming-i-use-rails
4. AngularJS 2.0 Status and Preview http://ng-learn.org/2014/03/AngularJS-2-Status-Preview/
5. A Relational Database Overview https://docs.oracle.com/javase/tutorial/jdbc/overview/database.html
6. Rails Hosts: Amazon AWS vs. Digital Ocean vs. Heroku vs. Engine Yard https://www.airpair.com/ruby-on-rails/posts/rails-host-comparison-aws-digitalocean-heroku-engineyard
7. HTTP to HTTPS | What is a HTTPS Certificate - SSL https://www.instantssl.com/ssl-certificate-products/https.html

Database Models

Based on the functionality of ShareSpace the database will use the following relational models to represent user interactions. These are the tables that will be used in the database:

User (type: Local)

- Email
- Password
- First Name
- Last Name
- Photo
- Location
- **Messages**
- **Items**
- **Reviews**

User (type: Traveler)

- Email
- Password
- Name
- Photo
- Biography
- Location
- **Reviews**
- **Rentals**

Item

- Type
- Name
- Photos
- Location
- Price
- **Reviews**

Sample Script

For your convenience, you may use the following sample script when contacting developers and development agencies.

“Dear [the developer or agency’s name],

How are you? I’m writing to see if you’re available to help me develop the software for a company I’m starting. The software is a typical modern web application where locals can rent items to travelers via a marketplace. I have already broken down the development into sprints with the specifications and technology stack required for the application.

The software will be built on Ruby on Rails and React for the frontend. We estimate the project should take around 200 hours from start to finish. Please let me know if you’re available and I can send over the project specifications along with more detail of the project.

Thank you very much,
[Your name]”

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