

BTE210-C1

Group #3

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Software Solutions, LLC



**SOFTWARE SOLUTIONS**

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## Business Problem

Today, there is a high demand for coding but a low supply for that industry. According to *Beyond Point and Click: The Expanding Demand for Coding Skills* report, the programming market is growing 12% faster than the market average. Statistics on the report also indicate that jobs requiring coding skills pay \$22,000 more than jobs that don't and half of the jobs in the top income quartile (>\$57,000) per year are in occupations that require coding skills. However, most business owners have minimal coding experience and it may be expensive for small businesses to hire competent software engineers.

Small business owners have a significant problem in finding competent programmers for a one time job, being faced with the option of either hiring a programmer or using a programming company, which both incur extremely higher costs than hiring a freelance coder. Hence, our app would eliminate the need to hire a professional programmer thus reducing costs and facilitating communication, while also ensuring their quality with a programming test and user reviews.

## App Description

Codify is a platform (can be seen as a marketplace) for proficient programmers that are looking for freelance work to complete coding projects for businesses of any size. Our main target consists of small, local business that are in early stage of development and cannot afford to hire full-time software engineers, yet we are also aware and supportive of anyone using our app as long as it fulfills the needs of the business/individual.










To qualify as a Codify programmer, you have to complete a timed coding exam, which consists of a series of comprehensive coding tasks focusing on data structures, algorithmic logic, object orientation, and problem solving. You will get an option to write coding snippets in one of the most popular programming languages on the market: Java, Python, JavaScript, C++, C#, PHP, Perl, and Swift. A test score of 85% or above means you can successfully take on coding assignments and get paid to do them. The purpose of the coding challenge is to ensure we have the best talent on hand to provide our client with a quality software solution.

After registration, programmers will have access to a real-time feed of potential “jobs.” The client (i.e. business or individual) can add description tags to their request, such as #website, #JavaScript, #web, #mobile, #GUI, and #scheduler. Programmers will have the ability to accept jobs requested by customers and propose a price for their service, and customers may or may not accept their offer.

In addition, the app has a ranking/review system for programmers that clients will have to fill out based on their satisfaction with the performance of the product. They can also leave written feedback if they wish to do so. Likewise, programmers will have to rate their clients

(e.g. “Was the client easy and professional to work with?”).

### Business Model Canvas:

<b>Key Partners</b>  Freelance programmers, small, local businesses, and private contractors	<b>Key Activities</b>  Allowing programmers and clients to establish an effective and trustworthy professional relationship through our application  <b>Key Resources</b>  Mobile application and website platforms and technology infrastructure	<b>Value Proposition</b>  A platform for businesses to contact coders and hire each-other in a streamlined, trustworthy and efficient way	<b>Customer Relationships</b>  Enabling Consumer-to Consumer (C2C) Business Transactions  <b>Channels</b>  The Internet, including the mobile application and the website	<b>Customer Segments</b>  Freelance programmers, small, local businesses, and private contractors
<b>Cost Structure</b>  - An initial incentive for the coder be active in the site - The cost to build the website and the app - Marketing costs - Maintenance of the app			<b>Revenue Streams</b>  Commission every time a coder is hired for a project and advertisements	

### Technical Viability:

Our platform is technically viable due to the fact that our system will be fairly simple, being similar to existing platforms without using cutting-edge technology or extremely complex systems. Codify would include the basic technical requirements of an online marketplace, including analytics, interpretation of data, live interaction and payment integration. Our app will include Machine Learning as a form of facilitating the connection between customers and programmers suiting each project’s individual needs. Topic identification as a form of a Machine Learning System will be used in order to categorize the types of projects requested by

the customers and match them with the past projects that the coders have experience with. Customers will be with a “Recommended Coders” page, where it will list the coders that are mostly indicated to complete their project.

**Business Viability:**

In essence, Codify is a marketplace—the middleman. It makes money by being the intermediary between the customer (i.e. business owner) and programmer. It charges a 20% fee off the programmer’s earnings for providing client traffic. Think about it this way: Codify is a marketplace, or in other words—an exclusive club, and programmers have to pay for the membership to keep on reaping the benefits (i.e. business owners who are willing to pay for a software solution) of the club. It is a similar business model that Uber and Lyft use to generate revenue.

The growth of the app will ultimately be determined by how technology advances in the world. Assuming the current rate, there is really bright future for Codify. Marketing and advertising efforts can also help penetrate new markets and target different consumers.

**Originality:**

There are very few apps out there that offer even similar functions as Codify. Having said that, our app is unique in that it offers the best quality work to users. We are able to achieve that by using (1) a comprehensive coding challenge before anyone is able to register as a programmer, and (2) a ranking system where clients are able to leave their designated

programmer a satisfaction score. On top of that, programmers are incentivized to do their best work because Codify offers them one of the most competitive rates on the market.

**User's Data:**

Codify involves 2 types of users: programmer and client. Besides the common data, such as full name, age, educational background, programmers will have to provide us with their routing numbers for their respective banks and social security numbers so that they can get paid appropriately and legally. Clients will have to give specifications for their request that will help programmers understand the business needs of the project better.

The app will then use the collected data for machine learning analysis to suggest jobs of similar nature to the programmer and the other way around. For example, Programmer John Doe just finished writing a fully-functional scheduling system for a local Cuban restaurant. John will then see projects similar to his previous one in his "Jobs Feed." If a clinic needs a patient-scheduling system, John will most likely come up as one of the suggested programmers for the job.

Users will also have the ability to communicate in a Chat in case they have any updates or inquiries regarding the completion of the project, serving as a mode of interaction between them.

**User Experience (UX)/User Interface (UI):**

The app aesthetics matches that of the app logo, with the main colors being black blue and white. By using a simple color palette, Codify is able to look sleek and professional, without

sacrificing functionality. Anything that is able to be interacted with has an associated button which allows users to easily assess what The app includes a menu button as well as a menu to help users navigate, whether they are a client or coder, as well as a back button if users would like to return to a previous section of the app. Clients and coders will have a slightly different user experience while using the app, as the design is different to accommodate the different tasks that the respective users will do. For example, on the coders' side there is a 'My Jobs' page, while on the clients' side their respective page is called 'My Projects'. This made it tricky to develop the app, as there is two separate sides to the app with small and large differences, but the end result is a better user experience for both type of user.

Usability testing produced mixed results, as most of the testers had problems with the app registering their inputs. It seems that the input registration problem was more of a problem with the fluid ui app then our app design, because when previewing the app through the site, it worked without any problems. We then did additional beta testing using the fluid ui website preview function and found a few flaws that our testers pointed out. One was the lack of ability to choose between coder and client when signing in. This was a problem because normally when signing into an app, it would know what type of user you are automatically, but since fluid ui does not have that functionality, we had to add a screen that lets one chose between coder and client that is not actually in the app, but is necessary to show the full extent of the app on fluid ui. Another problem that was found was the lack of back arrows and menu access buttons on a couple of the pages, which hinders functionality and ease-of-use.

**Engagement Factor:**

- Social media: We will have accounts on all major social media platforms and users will be able to interact with us and share our website page.
- Loyalty: Programmers that are more constantly active on our platform and accept to work on more projects will have a higher chance of being indicated to customers on future projects.

**Website Link:** <https://owenturtle99.wixsite.com/mysite>

**Kickstarter Campaign Link:**

[https://www.kickstarter.com/projects/1085954570/1844597069/preview?ref=pbuild\\_dashboard#project-preview](https://www.kickstarter.com/projects/1085954570/1844597069/preview?ref=pbuild_dashboard#project-preview)

**Member Contribution:**

- Moises Arkalji: FluidUI, Final Report
- Azim Kadirov: original app idea and layout, name of app, putting together Final Report, FluidUI
- Rafael Oliveira: FluidUI, Kickstarter Campaign, Final Report
- Barbara Queiroz: FluidUI, Kickstarter Campaign, Final Report
- Owen Turtle: Website, FluidUI, Final Report (user experience)



**Conclusion:**

The app project gave me the opportunity to learn and experience first-hand what it is like to come up with and deploy a business solution in a team setting. I learned how to take on a project from its very birth to the last stage of development. To complete the project successfully, we implemented different project management techniques, including but not limited to planning, work breakdown structures, segregation of duties, and sequence completion. In addition, I was able to learn how technology is or can potentially be used to increase efficiency of small- and large-scale businesses, thereby driving profits to the top. It was fascinating to see what modern technological advances can do and where they are used. I was especially intrigued by the concepts of Machine Learning, Data Science, and Predictive Analytics. Information surrounds us and there is no escaping from this riveting idea. It is important to at least understand how these tools can affect and even manipulate us without our knowing. Overall, the project was a really cool experience to put everything I learned in class to practice (*Kadirov, Azim*).

Throughout the course of this project, I was able to immerse myself in the industry of Business Technology, which I had little knowledge previously. I mainly learned the basics of what goes on behind the complex process of a startup and specifically of a mobile application. It was a gratifying experience to see the simple idea of an app “come to life” by being able to design the app and interact with it, as if it were an actually available. This project made me realize that I will be more encouraged to develop and execute my thoughts and ideas. This experience also allowed me to understand more about the capabilities of technology and how it makes common goals easier to be achieved through its processes such as Topic Identification

as a part of Machine Learning. Finally, working as a team in the midst of the industry of Technology to develop a new project was also a learning endeavor, as all of us contributed in a certain manner to concretize our idea. (*Queiroz, Barbara*)

I have learned a great deal by participating in this project regarding business and technology. By immersing myself in a startup project, I've had valuable experience on the ins and outs of developing a new product with a team, having to decide which steps our company would take in order to theoretically be successful. I've also learned more about technology, its limitations, potentials, and ways to make products more efficient, user friendly, and consequently more successful. In conclusion, this project has been an extremely interesting and fruitful experience and I feel like I've learned a lot from it while also being able to put into use previous knowledge and knowledge I had gained on this class (*Oliveira, Rafael*).

This project was surprisingly fun and rewarding to do, since this is the first time working on any sort of technology development. I think what I got the most out of this project, especially compared to other projects that I have had to do previously, was the importance of communication and teamwork with your team. In no other project was the amount of work overwhelming enough that I felt that I had to rely on my group, but for this project it was necessary to work split the work and trust in your group members to get the work done. I think that is a testament to this project, as it helped me not only with my team building and communication skills, but it forced me to let go of control and trust in my team, which only made me feel more confident in our group. Additionally, I found the in-depth process of app development that this project provided very intriguing, rewarding, and ultimately extremely helpful to have under my belt moving forward (*Turtle, Owen*).

This project made such an impact in my life. Creating an app as a first impression looks like it is something easy to do. In the process I've realized the difficulties creating an app such as having to think in every single possibility to make the app project user friendly. Working in group was a challenge because we had to achieve a consensus. This project improved my knowledge of business technology and group working (*Arkalji, Moises*).

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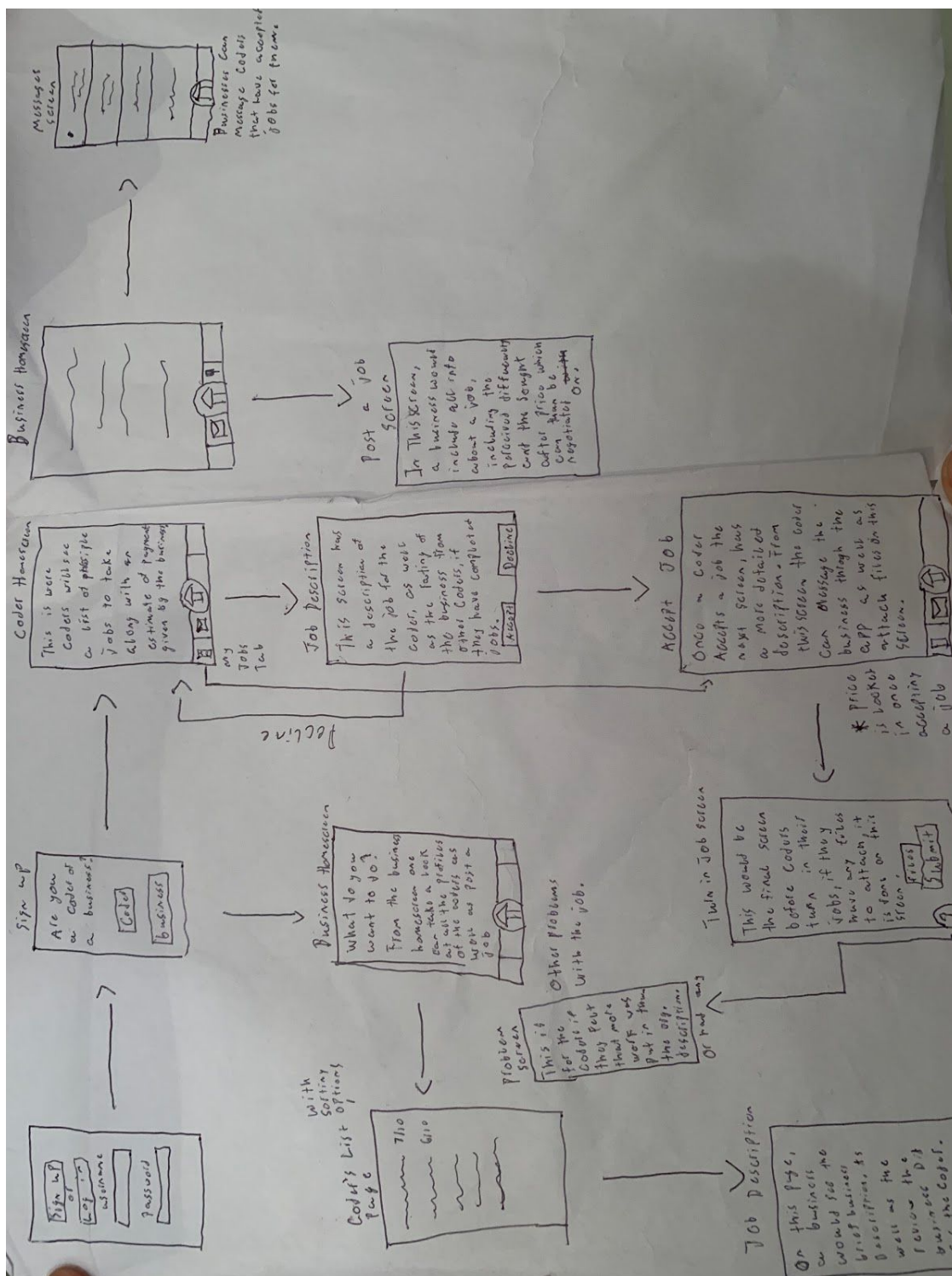
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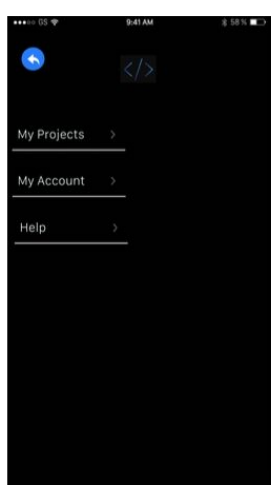
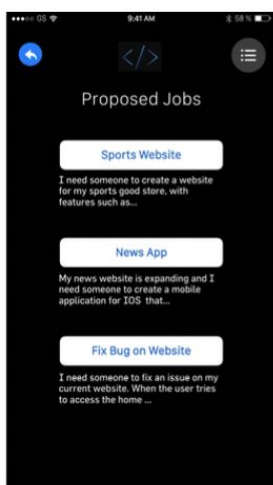
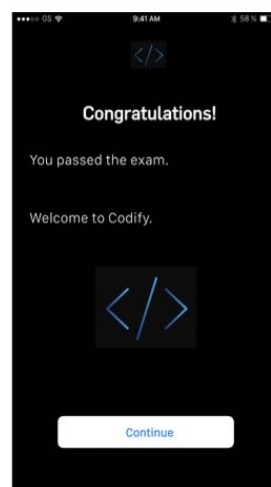
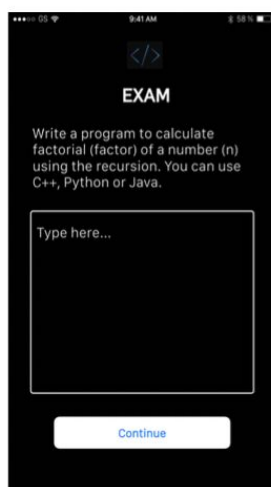
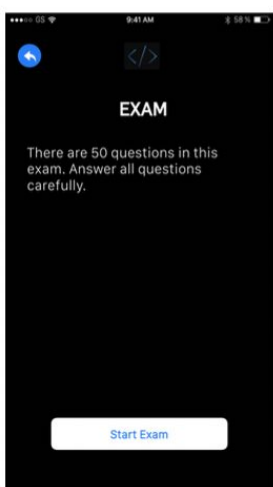
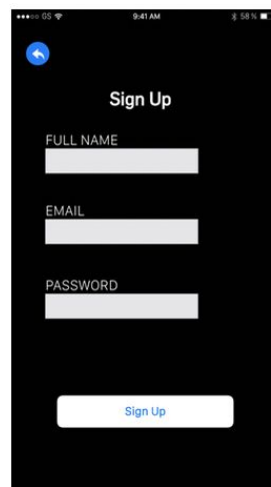
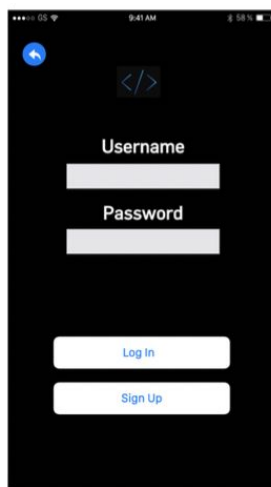
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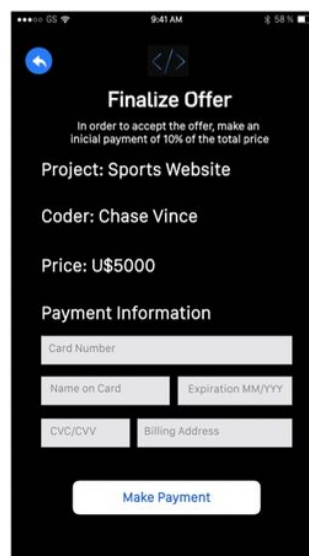
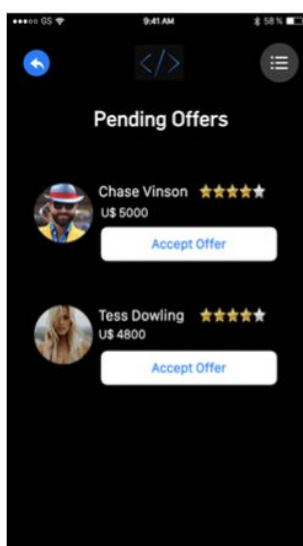
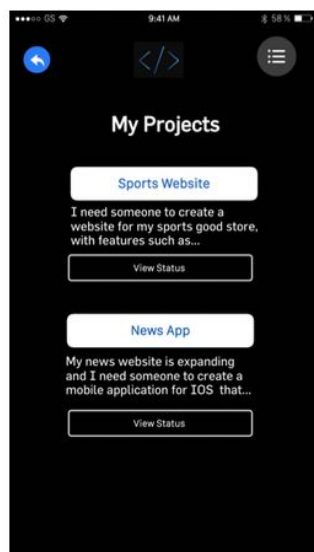
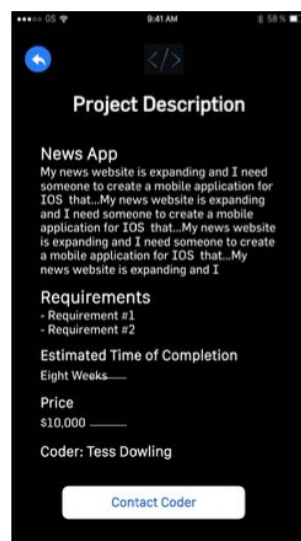
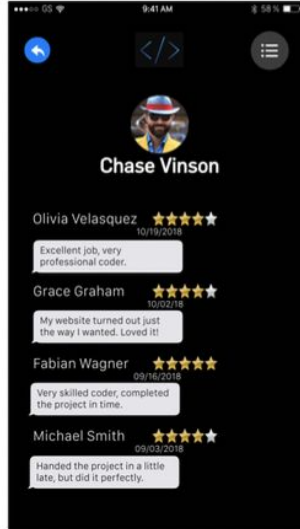
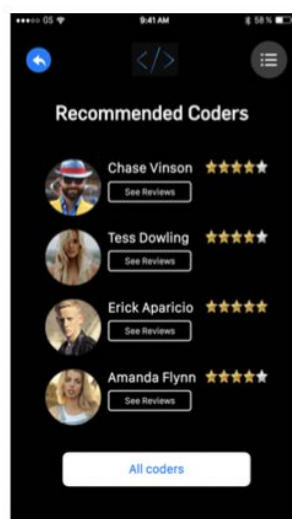
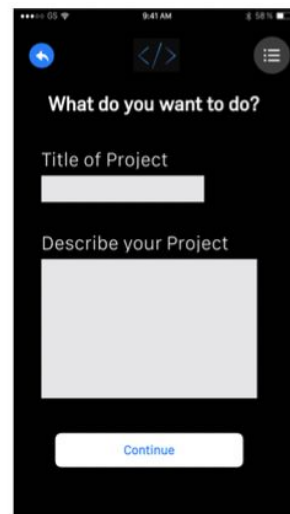
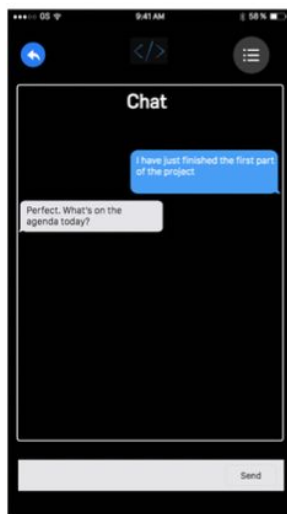
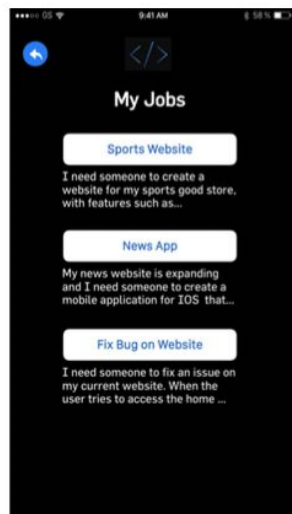
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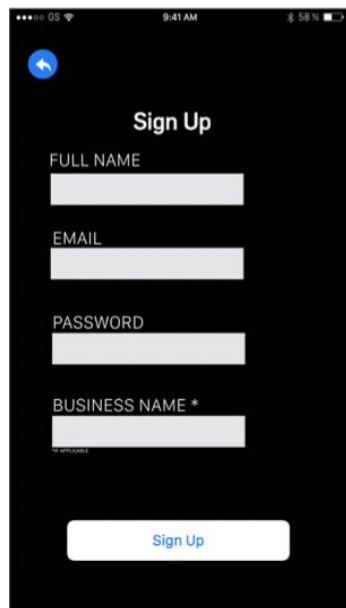
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## Attachment B







Sign Up

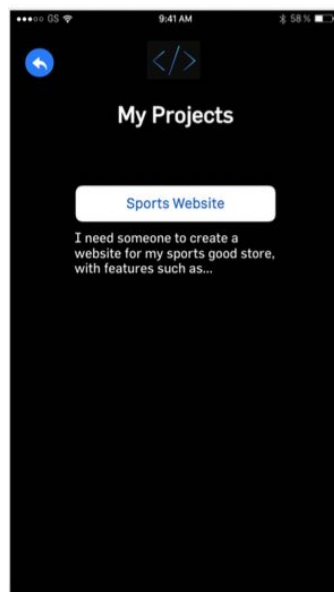
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EMAIL

PASSWORD

BUSINESS NAME \*

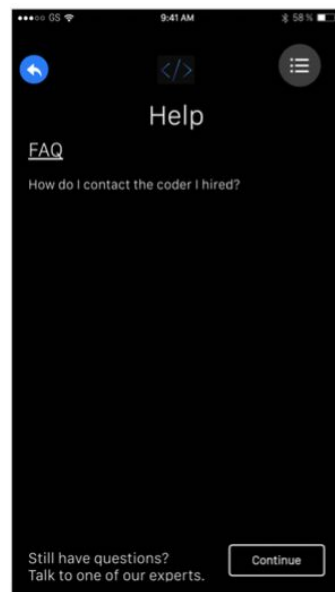
Sign Up



My Projects

Sports Website

I need someone to create a website for my sports good store, with features such as...

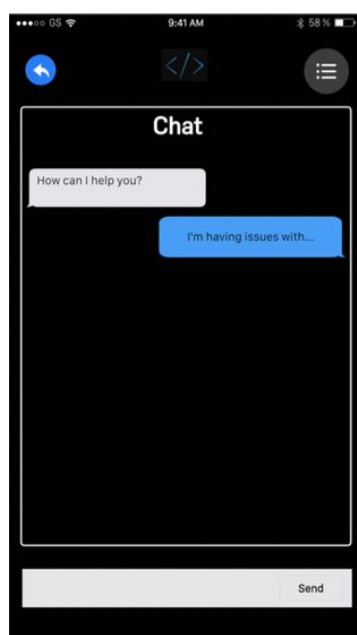


Help

FAQ

How do I contact the coder I hired?

Still have questions? Talk to one of our experts. Continue

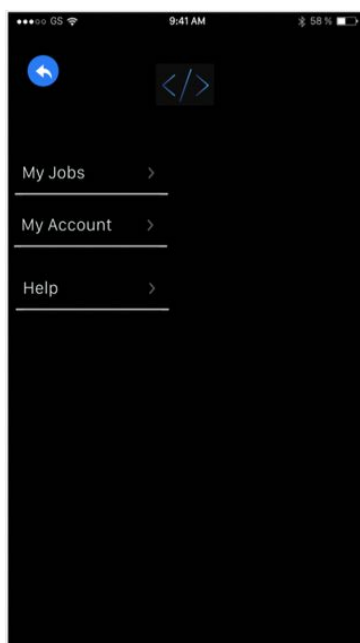


Chat

How can I help you?

I'm having issues with...

Send



My Jobs

My Account

Help



## Attachment C

