Final Project: Building A Full-Stack Website in Handyman Contracting Service

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**Project Title:** Building a Full-Stack Website in Handyman Contractor Service

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(To be finished upon completion of Paper)

**Abstract**

In the age of technology, when services such as Uber and DoorDash has made a strong cases for gig workers, you can get a ride or your food delivered to the front-door at the fingertips, imagine that when your pipe busted in the middle of the night, when your air condition system shut off in the heat of Texas and you know calling the handymen services companies will be very costly since these companies operates with thousand to million dollar in overhead (administrative, building, phone system cost) . With the current trend of high school’s students flocking to colleges and university, the nation is expecting a surge in demand for handymen and there could not be a better time to be a self-employed handyman right now. With the help of technology, specifically through the web interface, client can now contact local handymen and order a specific service (plumbing, carpentry, electrical,…) with each handyman carefully considered and highly rated by other customers. Handymen, now you can be your own boss without worrying about the overhead costs, just a small percentage will be charged for each time service performed and you get paid by customers.

**Acknowledgement**

I would like to express my most sincere gratitude to my project mentor Dr. Kenneth Oberhoff for providing his guidance, suggestions, and encouragements throughout the course of this project

Also, I would like to thank all my peers in the class for their feedbacks and suggestions during and after presentations throughout the course.

**Chapter 1: Introduction and Describe Project Problem**

1. **Introduction**

With technology on the rise, our world is seeing services like Uber, Lyft, DoorDash and Airbnb… We are witnessing the success coming from enterprises that give their contractors flexibility, ownership, independence. These corporations’ success did not stem from the fact that they delivered very agile, robust, and effective technological products, but rather the first and foremost they ask themselves the very simple yet necessary question: Will my customers want this product? It is not difficult to come up with this question from a business mindset, but from the technological mindset, people tend to measure things with its “coolness” rather than its capability of delivering revenue and competitiveness. If the technology’s revenue is equivalent to the “coolness” of product, then there would not be hundreds of applications from the biggest technology companies in the world ended up in the dumpsters or be left discontinued.

Knowing how to combine these two mindsets is the secret behind the success of 2020’s technology enterprises. Demand and Sustainability are crucial.

According to Bureau of Labor and Statistic, there will be a 4% increase (60656 jobs) of general maintenance and repair workers within the next 10 years, along with 59000 jobs for electricians, 15072 for HVAC workers,… With the current pace, trades workers will be in high demand for a foreseeable future.

While there are demand for trades workers, the current service delivery mode has not progressed much with limited technology usage, for example, if you want to have something fixed in your house, you have to make a call to the local trade shop’s phone number and wait. What if there is an app where you can reach directly to one of the verified contractors with experience, transparent pricing and been reviewed by our previous customers. The app, unlike many companies operates 24/7 and if the workers choose to be available 24/7, you would not be having to worry about a busted pipe at 9 PM at night. While Uber, Airbnb, and DoorDash are significantly improving our lives. An application that can make the process of delivering a service much more efficient.

1. **Project problem**

In this project, I will deliver a web application that customers can use to find local trades workers and request their services, customers can also view trades workers experience of work and the workers’ previous customers’ reviews, as well as viewing service workers’ business info and average charge price per hour. Through this application, instead of calling the laborer’s company to request service and wait, customers can reach the laborer directly and the service will be performed and billed through the application and the application will handle the laborer’s payment. Thus eliminating the overhead cost for an administrative, accounting, sales and marketing, instead more focus will be in the laborer’s performance, the customer’s satisfaction and the growth of the network of services provided.

**Tools Proposal**

Front-end: VueJS (HTML, CSS, JavaScript)

Architecture: Model-View-Control (MVC)

Back-end: NodeJS, GraphQL, JWT Authentication, Docker, REST API

Database: MongoDB

Version Control: Git, GitHub

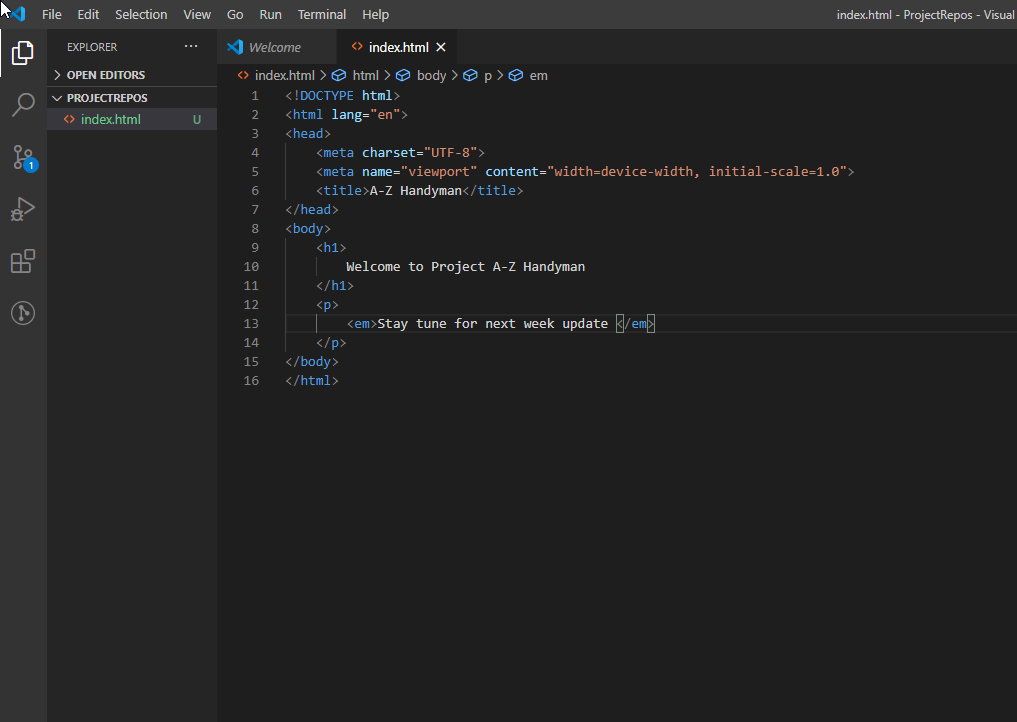
Deployment: AWS for Student

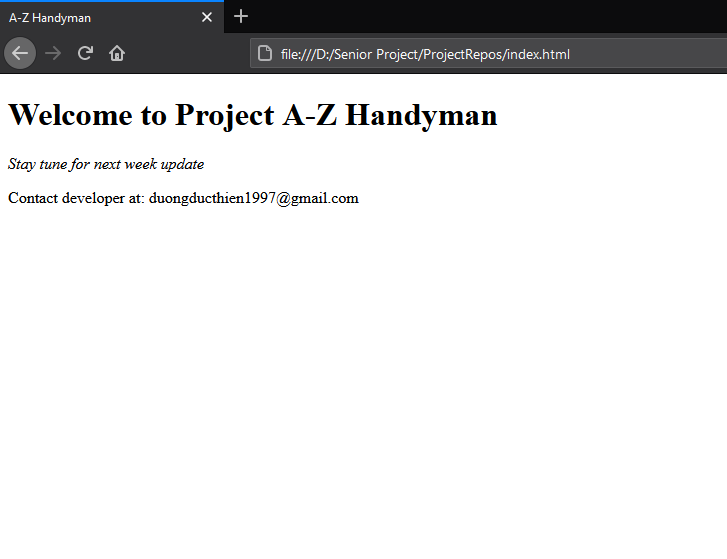
\*Tools proposed may change due to availability, developer’s knowledge or time constraint

**Week Zero-Incubating**

**Progress Made:**

* Drafted project proposal, idea forming
* Researched for the tools that fits the purpose of project
* Created Development Environment





* Sought Resources for Training Purpose (Online Courses for each tool)
  + **Training Resources:**

<https://www.udemy.com/course/vuejs-2-the-complete-guide/>

<https://www.udemy.com/course/nodejs-the-complete-guide/>

<https://learndocker.online/>

https://aws.amazon.com/training/

* Develop agenda for next week’s progress:
  + Complete front-end pages and routes architecture
  + Building Landing Page
  + Initiate Git Repository for tracking code progress