

**MINI PROJECT
(2019-20)**

Medical Based Web Application

MID-TERM REPORT



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Contents

Abstract	3
1. Introduction	4
1.1 General Introduction to the topic	4
1.2 Hardware and Software Requirements	5
2. Problem Definition	6
3. Objectives	7
4. Implementation Details	8
5. Progress till Date & The Remaining work	
6. Some Screenshots	
7. References	

Abstract

In this we will make a web based medical website for management purpose and helping peoples. Over time, problems meant to be solved by software engineering have grown more and more complex. Today, development model where designer, implementer and maintainer of enterprise class software is one and the same person throughout application's life cycle is mostly unthinkable. Designing Web-applications is considerably different for mobile computers (handhelds, Personal Digital Assistants) than for desktop computers. The screen size and system resources are more limited and end-users interact differently. Consequently, detecting handheld-browsers on the server side and delivering pages optimized for a small client form factor is inevitable. The authors discuss their experiences during the design and development of an application for medical research, which was designed for both mobile and personal desktop computers. The investigations presented in this paper highlight some ways in which Web content can be adapted to make it more accessible to mobile computing users. As a result, the authors summarize their experiences in design guidelines and provide an overview of those factors which have to be taken into consideration when designing software for mobile computers

Introduction

1.1 General Introduction to the topic

There are many definitions for E-Health until now but still there is no consensus on one common definition. This is because of its ubiquitous and dynamic nature. The E-health information are widely used with different meanings and purposes. In our work, we develop the E-health application mostly used for diabetes patient.

There are many benefits to different people such as doctors, patients, etc. For example, doctor's orders can be placed electronically, which avoid wrong elucidation of hand wrote orders. And with the help of E-health, most doctors reduces the time of locating and reading patient health information.

To the patient, 5 they can begin to be gradually aware of the importance of self-care management. Moreover, it is also convenient for maintaining only with some experts in medical and application developers.

The pharmacy management system serves many purposes, including the safe and effective dispensing of pharmaceutical drugs. During the dispensing process, the system will prompt the pharmacist to verify the medication they have filled is for the correct patient, contains the right quantity and dosage, and displays accurate information on the prescription label. Advanced pharmacy management systems offer clinical decision support and may be configured to alert the pharmacist to perform clinical interventions, such as an opportunity to offer verbal counseling if the patient's prescription requires additional education in the pharmacy.

1.2 Hardware Requirements

- Memory [4GB RAM (or higher)]
- Intel core i3 64-bit Processor (or higher)
- Disc space : 20GB (3GB for database files + enough GB for shared documents , individual)
- Network card requirement

1.2 Software requirements

- Git package
- Visual Studio Code as IDE
- OPERATING SYSTEM :Windows 7 (or higher)
- DATABASE : MySQL or PostgreSQL
- FRONT-END :HTML,CSS,JAVASCRIPT,BOOTSTRAP4
- BACK-END : JAVA or PHP

Objective

In this project , we are going to make a website where medical store owners can log in to our site through their respective mobile numbers and can manage their database of products . Also, they can generate e –bills and print them

Design a system for better patient care.

Provide top management a single point of control.

Billing.

Up-to-date factual information.

Necessary for day to day tasks.

Increase Awareness.

Implementation Details



Part1: To build a Hyperledger Fabric network using Amazon Managed Blockchain.

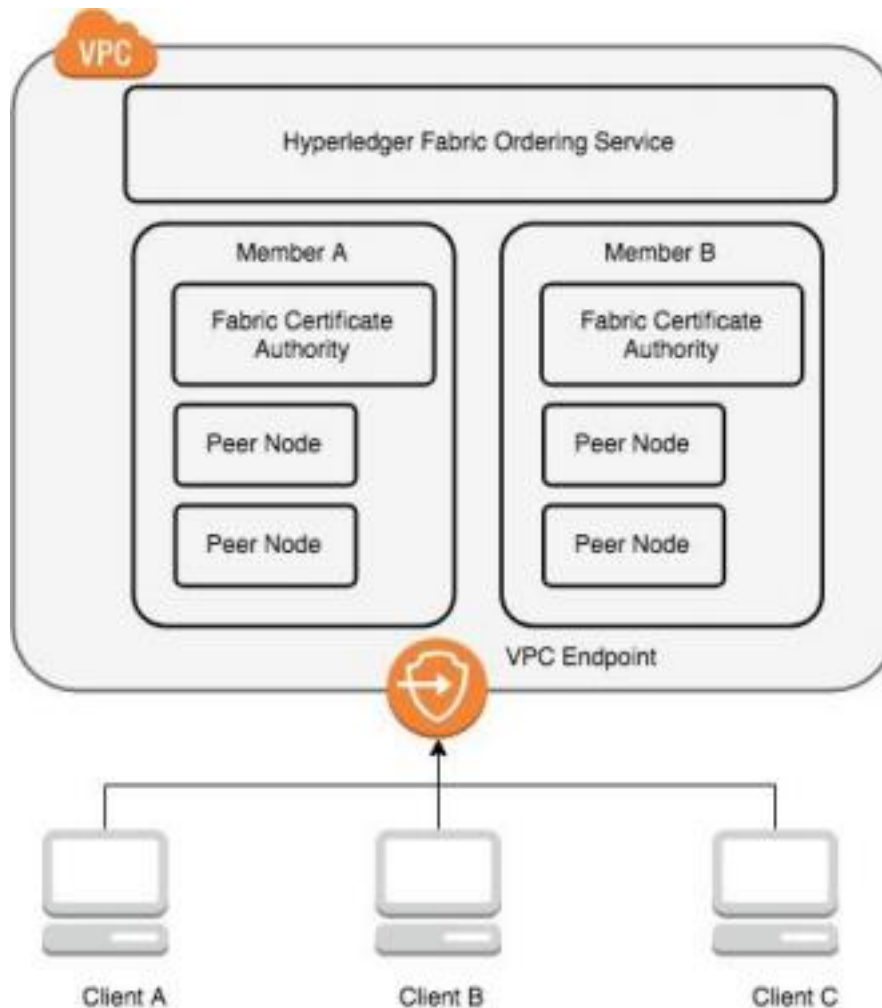
With the use of AWS Management Console, we have created a network to add members to our Blockchain organization.

Now with the help of Managed blockchain now we have created an admin User Id and Password automatically for all the members in the network.

After Fabric network and member, now we will create a Fabric Peer node are where Fabric smart contracts execute (for example, chaincode). Peer nodes also contain the Fabric ledger, which consists of two parts: a journal that holds a cryptographically immutable transaction log (or “blockchain”) and a key-value store known as the world state that stores the current state of the ledger.

Now we have a single peer at the end of the process and we will invite more members using Managed Blockchain CLI or API.

Creating a Hyperledger Fabric client node in a VPC



Part 2: Deploy business logic in the form of chaincode to the Fabric network.

Part 3: Deploy a RESTful API that uses the Hyperledger Fabric Client SDK to interact with the chaincode.

Part 4: Deploy Node Js application that uses the functionality exposed by the RESTful API.

The user interface application is a Node.js/Angular application that calls the API provided by the RESTful API server. It does not use the Hyperledger Fabric Client SDK nor does it have any connectivity to the Fabric network. Instead, each action in the application invokes a corresponding REST API function.

It's also worth noting that all application data is owned by the Fabric network. Besides the images displayed in the gallery, all data is retrieved from the Fabric world state database via the RESTful API and the Fabric chaincode. The application provides functionality that allows donors to track how their donations are spent and includes the following functions:

- Donors can review each nonprofit organization, donate funds to them, and rate them.
- Donors can view the items that each nonprofit has spent funds on and can see how much of

each donation was used to fund each spend item.

- Donors can track the donations that they have personally made.

Part 5: To use Front end web-development -: HTML , CSS, and Javascript.

- . HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content

For creating sign up form we use the form tag in html and all its attributes.

CSS is used to add style to our web page, like we can apply colors, background-color, border , Fonts, etc to our web page.

Progress

1.) Part 1 is completed

Build a Hyperledger Fabric blockchain network using Amazon Managed Blockchain.

- Create the Hyperledger Fabric blockchain network
- Check the network is AVAILABLE
- Create the Fabric client node
- Prepare the Fabric client node and enroll an identity
- Update the configtx channel configuration
- Create a Fabric channel
- Join your peer node to the channel
- Install chaincode on your peer node

- 2.) Part 2 is completed

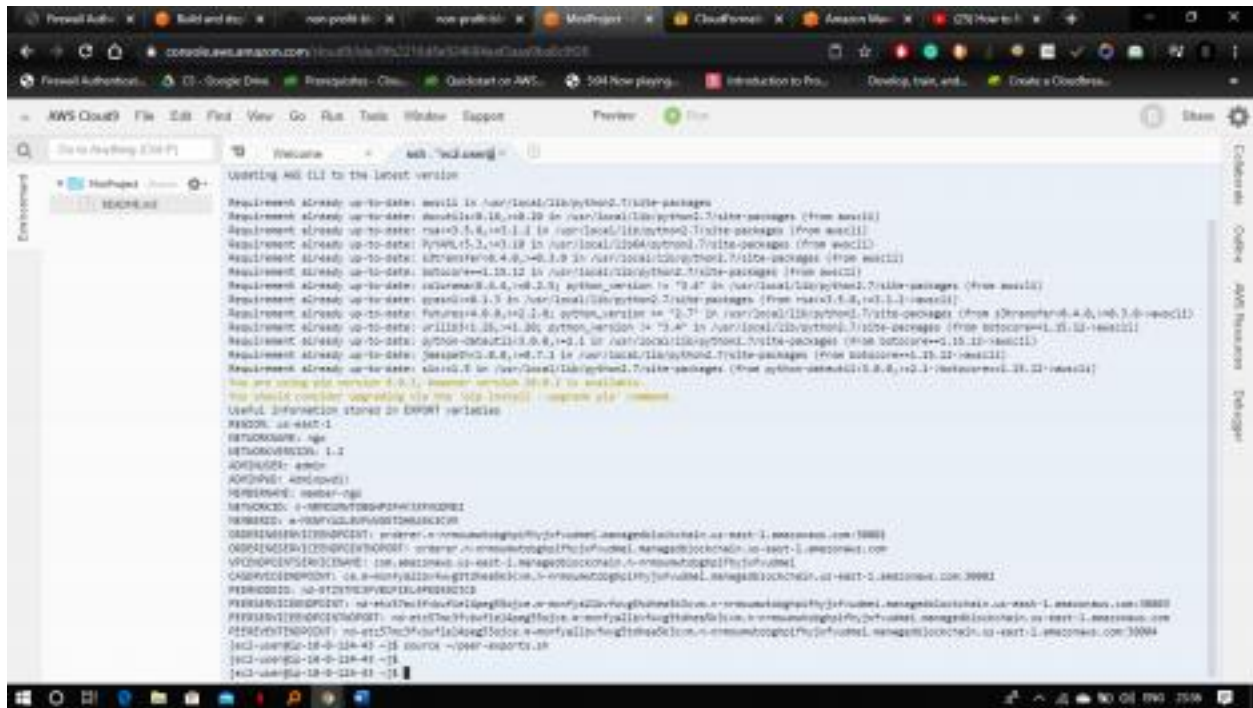
- Copy the chaincode into the CLI container •

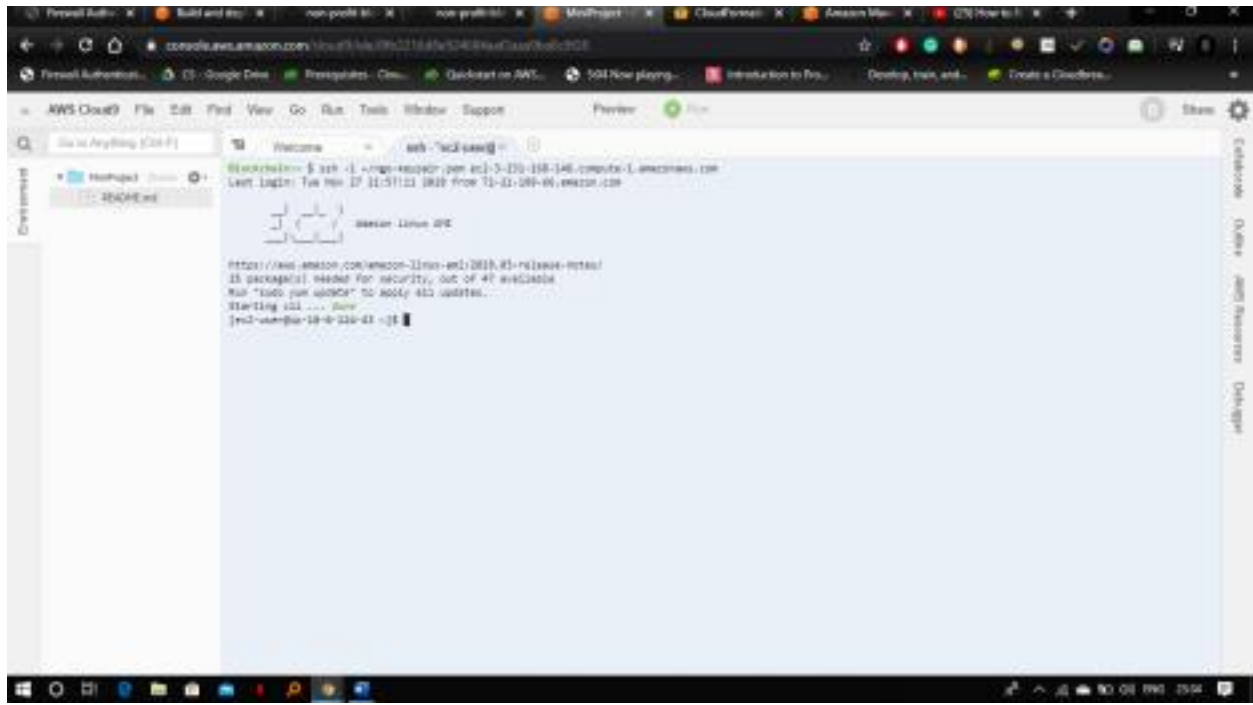
Install the chaincode on your peer

- ## Query the chaincode

- Invoke a transaction
- Query the chaincode

SCREENSHOTS





Example

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

Example

```
<form action="action_page.php" style="border:1px solid #ccc">
  <div class="container">
    <h1>Sign Up</h1>
    <p>Please fill in this form to create an account.</p>
    <hr>

    <label for="email"><b>Email</b></label>
    <input type="text" placeholder="Enter Email" name="email" required>

    <label for="psw"><b>Password</b></label>
    <input type="password" placeholder="Enter Password" name="psw" required>

    <label for="psw-repeat"><b>Repeat Password</b></label>
    <input type="password" placeholder="Repeat Password" name="psw-repeat" required>

    <label>
      <input type="checkbox" checked="checked" name="remember" style="margin-bottom:15px"> Remember me
    </label>

    <p>By creating an account you agree to our <a href="#" style="color:dodgerblue">Terms & Privacy</a>.</p>

    <div class="clearfix">
      <button type="button" class="cancelbtn">Cancel</button>
      <button type="submit" class="signupbtn">Sign Up</button>
    </div>
  </div>
</form>
```

References

- <https://www.investopedia.com/terms/b/blockchain.asp>
- <https://aws.amazon.com/blogs/database/build-and-deploy-an-application-for-hyperledger-fabric-on-amazon-managed-blockchain/>