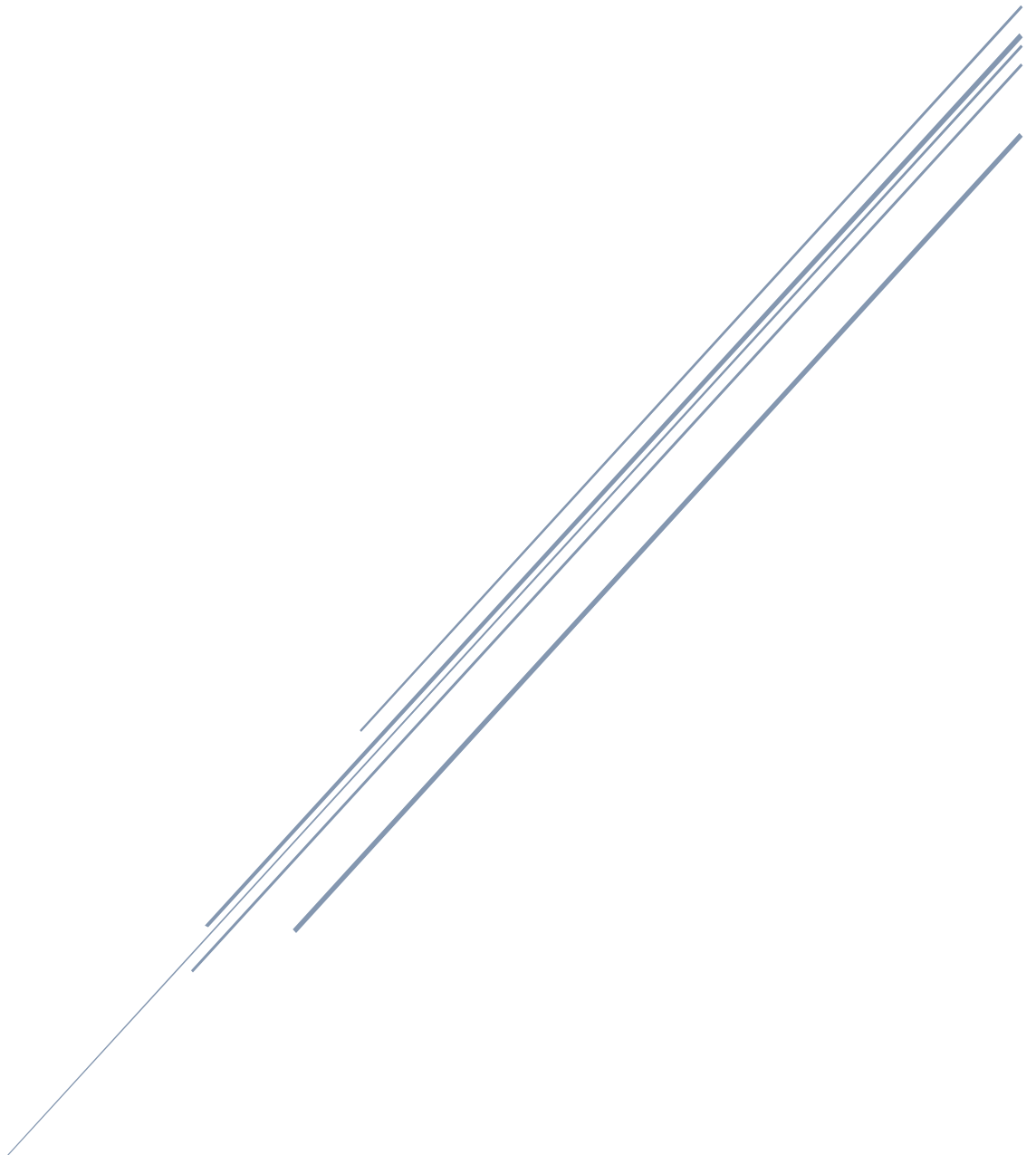


STATEMENT OF WORK & PROPOSAL

Health Insurance Network

Version 1.4



Submitted by
Muhammad Usman Zafar & Wajahat Aijaz

Table of Contents

Introduction / Background.....	2
Scope of work	2
Project objectives.....	3
Tasks.....	3
Deliverables.....	4
Wire-frames URL.....	5
Technology & Server Configuration	6

Introduction / Background

Health insurance is today's fastest growing industry which is to benefit the patients but the reality is that it is very difficult for a patient to get an approval from the health insurance company due to lack of communication between hospital management and health insurance company also the company's HR if the employee is covered by a company. Sometimes the family also suffer when they do not have the health card with them and they have to bear the expenses on their own.

So, there is a need of a centralized system which can connect all three a Hospital, Health Insurance Company and the company HR to one system so that they are synced and their efficiency is good and they are serving well to their patients.

Scope of work

HIN (Health insurance network) wants to build a web portal to connect the hospital to the Insurance Company so that the approval of expenses can be quick also company HR to manage their employees.

The Scope of this web application is that HIN will have a Super admin in the system which will view all the information present in the system also will be there for support

A Hospital representative will search a patient from the centralized database for 40+ health insurance companies by the NIC or the Policy number of the patient.

Then, he will initiate the request for expense approval called an episode, Insurance Company's representative on the other hand will receive the notification and will approve or Reject the request based on the data entered by the hospital representative.

When the approval has been made by the insurance company hospital will then start the treatment and they can also apply for an extension in the middle of the treatment and for that they need to send another approval of type extension to the insurance company, while sending the request hospital representative can also view the tariff which they have with the respective insurance company to minimize the risk of rejection.

Health insurance representative will receive the extension request and perform the relevant task.

In case of rejection hospital representative have to resubmit the request by correcting the errors from the previous request which will be mentioned by the health insurance representative.

When the treatment is complete the hospital representative will mark the patient as discharge, in that case the episode gets completed and it is now ready to be claimed and will start appearing on the claims list and a hospital representative is now able to provide all the details that are required to claim the expenses from the Insurance Company.

Health Insurance Company on the other hand can approve or disapprove a claim request, on disapproval they will ask the hospital to provide more details of they can ask for correction if there is any

Both users will have the functionality to communicate through a message center feature within the web application.

Both users will have their dashboards with different widgets which would show the stats for the specific interval and also filter the data in the patient data grid.

Hospital representative can view the previous data for a client and also be able to view the card and remaining balance of the patient and the limit the patient is entitled to while applying for a new episode.

Health insurance Representative can manage the tariff for different hospitals and also view the existing tariff.

Health insurance officer will have the capability signup new Clients (individual / corporate) he will also be responsible to approve disapprove the addition, deletion and modification requests submitted by the company HR (Corporate Client)

Company HR will have the capability to view their company and employees data they will have the option to export the data into the excel sheet and modify the data and import into the system and send it for approval to the insurance company. They can also view in the list that which employees are under treatment.

HIN admin will have the capability to communicate all users through the message center, this functionality will also be there for other roles with limited scope which is listed below:

- 1- Hospital representative can communicate with
 - a. HIN Admin
 - b. Health Insurance Representative
- 2- Health insurance Representative can communicate with
 - a. HIN Admin
 - b. Company HR
 - c. Hospital representative
- 3- Company HR can communicate to
 - a. HIN Admin
 - b. Health Insurance Representative
- 4- HIN Administrator
 - a. All Roles

There would be a card print functionality which would benefit the users to print their card if they are lost or out of reach as card holder is not in town.

Project objectives

The objective of this project to reduce the hurdles in the current manual process so that patients do not suffer for a long annoying process of insurance approvals where some time due to the volume of the large number of approval request an insurance representative is often unavailable for call, but by the online system he would be efficient and he would have all the data in one place and by having this facility his response time would drastically improve.

Tasks

There are following tasks in the scope:

- 1- Server Setup and administration
- 2- Web application development
- 3- 3 months support after the project has gone live.

Deliverables

There are following deliverables in the project scope:

- 1- HIN Admin's Portal
 - a. Searching capability
 - b. Notifications (of all kind)
 - c. View patient information
 - d. Communicate with each and every role to provide support
 - e. Manage patient database and view all information in the system.
 - f. Manage Tariff
 - g. Manage Subscription
 - h. Billing Dashboard
 - i. Add/Edit/View information for Insurance company
 - j. Add/Edit/View information for Hospital
- 2- Hospital Representative's Portal
 - a. Dashboard
 - i. Widgets for viewing information and filtering the data
 - ii. List of new Applications
 - iii. Chat
 - b. Claims
 - c. Search Patient Feature
 - d. Apply for new/extension episode
 - e. Discharge
 - f. View tariff
 - g. Past approvals
 - h. Message Center to be connected with HIN and Insurance Representative
- 3- Insurance Representative Portal
 - a. Dashboard
 - i. Widgets for viewing information and filtering the data
 - ii. List of new/extension requests
 - iii. Quick message widget
 - b. Approve / Reject the new/extension episode
 - c. View Patient Data
 - d. Signup new Clients (Individual / Corporate)
 - e. Approve the Addition deletion requests by the Company HR
 - f. Manage Tariff
 - i. View Hospital tariff
 - ii. Modify Hospital tariff
 - g. Export functionality with advance filter
 - h. Export import patient data
 - i. Download user card.

- 4- Company HR Portal
 - a. View employee data
 - b. Apply for addition, updating or deletion of company and/or employee data.
 - c. Export and import employee data
 - d. Communicate with HIN and Insurance Company.
- 5- Common Functionality
 - a. Message Center
 - b. Card Print functionality
 - c. Notification System
 - d. User management for HIN

Wire-frames

Wire-frames URL: https://7g39sv.axshare.com/home_page.html

Technology & Server Configuration

Following Technologies Would be used in the Application:

Language	PHP 7.2
Framework	Yii 2.0
Search	ElasticSearch
jQuery	3.3.1
MQ	RabbitMQ
Database	MySql
Architecture	MCV
Design Patters	Singleton, Factory, Abstract Factory
Web services	RestFULL
API Authentication	JWTtoken

Following Server configuration is suggested at the beginning

Suggested Server Configuration (AWS)	
Family	General purpose
Type	t2.large
ECUs	Variable
vCPUs	2
Physical Processor	Intel Broadwell E5-2686v4
Clock Speed	2.3 GHz
Memory (GiB)	8
Instance Storage (GB)	EBS only
EBS-Optimized Available	-
Network Performance	Low to Moderate
IPv6 Support	Yes
Processor Architecture	64-bit

Intel AES-NI	Yes
Intel AVX	Yes
Intel Turbo	Yes
Operating System	Ubuntu 18.08
Webserver	Nginx / Apache