This is a **real time application**, demonstrate you that how **two way (bidirectional) communication** happened using **websocket** technology, as http protocol can handle only single way (single TCP connection) communication.

**This project is divided in to 3 parts/projects to understand.**

(1) Frontend.

(2) Messaging.

(3) Webservice.

**What each project contains?**

(1) **Frontend** is part where all UI related things are there.

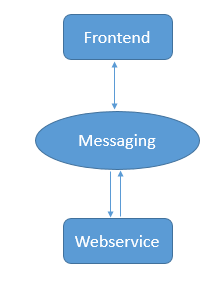
Technology used in: - **Angular5, Socket-Client.**

(2) **Messaging** act as an intermediate between Frontend and Webservice.

Technology used in: - **Node.Js, Express.Js, and Socket.io**

(3) **Webservice**, Is simple REST APIs.

Technology used in: - **PHP, MySQL and Apache2.**



**What you can lean in this project:-**

Note: Whole communication is happened using websocket only, No were HTTP protocol is used.

**Base**

* Angular reactive form validation.
* Validation on Image by Size, Extension, and MIME Type (Advanced).
* Ng-Routes.
* Ngrx-Bootstrap.
* Event-Emitter.
* Subscriber.
* Observable.
* Angular Service.
* Modular components.
* Directives.

**Main Features**

* User login.
* Signup.
* Manage logged-in user session.
* Auto login.
* Check real time user status, whether user is online or offline.
* Last seen.
* One on one Chat. (Upcoming).
* Group chat. (Upcoming).

**How to run this project:- (steps 3)**

1. **What things are required before going to setup:-**

* Node <= 6.11
* Angular CLI
* XAMPP/LAMPP (Included PHP, MySQL, phpMyAdmin, and Apache2) **(Recommend).**

**OR**

* PHP <= 6 (web service written with POD connection).
* MySQL <= 5.
* Apache2.

1. **How to setup:-**
2. Just copy and paste **2 projects(Frontend and Messaging)** as it is in one directory

(You can keep separate directory, if you want).

1. Open terminal -> cd to Frontend directory -> **npm install**
2. Open terminal -> cd to Messaging directory -> **npm install**

You’re Frontend and Messaging is ready to run, Hold on there is one more project is left to setup.

1. Now **host your Webservice**

Steps for XAMPP installed.

* + Open “**XAMPP Control Panel**” (With Admin Rights) and Start Apache and MySQL service and after that it will converted in green color if everything is normal.
  + Navigate to XAMPP installed directory (By default C:\xampp\htdocs)
  + And paste as it is in side htdocs. (you can create folder inside)
  + Inside project, you will find **“websocket.sql”** file that is database file to create schema in MySQL.
  + To import, open browser and hit this url **(localhost/phpmyadmin)**

And create one database and import inside that DB.

1. **How to run:-**

* **Checking the configuration**
  + Open Frontend/src/app/ services/ web-socket/web-socket.service.ts

And find **private url = 'http://localhost:3000';**

Make sure this is your Messaging url address, Is same as this if not then change it.

* + Open Messaging/app.js

And find **var apiUrl = "http://localhost/websocket\_apis";**

Make sure this is your hosted webservice url address, If not then change it.

* **Run your project**
  + Open terminal cd to Frontend -> ng serve

You can build prod version also and host that. (Optional)

* + Open terminal cd to Messaging -> node app.js

**Congratulation you’re done.**

**If you find any difficulties or need some help, don’t heisted to contact me.**

**Thanks**

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