

PROJECT REPORT
CHAT APP

SUBMITTED BY

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ABSTRACT

In this project creating a real time chat system with Node.js. The chat permits users to create private chat rooms that they can share with a friend. By building this project we can learn more about the cloud and its work.

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1. INTRODUCTION

This project is to build a functional real-time messaging application for developers by using modern web technologies. Unlike most chat applications available in the market, this one will focus on developers and will attempt to boost their productivity. Although we are not expecting it to have a plethora of utilities due to the limited time frame, sharing code and watching a repository will be our core features. It will be fully open-source.

1.1.OBJECTIVE

- Communication: To develop an instant messaging solution to enable users to seamlessly communicate with each other.
- User friendliness: The projects should be very easy to use enabling even a novice person to use it.

2. SYSTEM REQUIRMENTS

2.1 SOFTWARE REQUIRMENTS

3	Operating System	:	Windows 10
4	Front End	:	HTML, CSS, JavaScript, Ajax
5	Back End	:	Node js, Mongo DB
6	Code Editor	:	Notepad++, Visual Studio Code
7	Software	:	NPM Installer
8	Browser	:	Google Chrome

2.2 HARDWARE REQUIRMENTS

3	RAM	:	4 GB
4	Processor	:	1GHz or more
5	Hard Drive	:	1 TB hard disk
6	Network Connectivity	:	LAN or Wi-Fi

3. APPENDICES

3.1. SOURCE CODE

Home.html

```
<!DOCTYPE html>
<html>
<head>
<title>Create a new chat room! | Tutorialzine Demo</title>
    <link type="text/css" rel="stylesheet" href="css/stylesheet.css" />
    <link href="http://fonts.googleapis.com/css?family=Open+Sans+Condensed:300italic,300,700" rel="stylesheet" type="text/css">
</head>
<body>
<header class="homebanner">
<h1 class="homebannertext">
    <div>
        <h2>CHAT APP</h2>
    </div>
</h1>
</header>
    <section>
<div class="homesection">
<div class="node">
    
    <h2 id="chat">powered web chat</h2>
</div>
<a title="Create" href="/create" id="create">
    <div id="createbutton">
        <div id="little">Create a Private</div>
        <div id="big">CHAT ROOM!</div>
    </div>
```

```
        </a>
    </div>
</section>
```

```
</body>
```

```
</html>
```

Style.css

```
* {
    padding: 0;
    margin: 0;
}
```

```
/* ----- Body styles ----- */
```

```
body {
    background-color: #f0f1f3;
    color: #667073;
    font: 16px/1.3 'Arial', sans-serif;
}
```

```
/* ----- Header styles ----- */
```

```
/* ----- Home ----- */
```

```
.homebanner {
    height: 120px;
    background-color: #3c4446;
}
```

```
.homebannertext {
    text-align: center;
    padding-top: 35px;
    font-family: 'Open Sans Condensed', serif;
    font-weight: bold;
    color: white;
}
```

```
.homebannertext span {
```

```

        color: #d6441b;
    }

#logo {
    text-decoration: none;
    color:white;
}
#logo:visited {
    color: white;
}


/* ----- Invite ----- */


.banner {
    height: 70px;
    background-color: #3c4446;
    margin-bottom: 200px;
}

.bannertext {
    text-align:center;
    padding-top: 15px;
    font-family: 'Open Sans Condensed', serif;
    font-weight: bold;
    color:white;
    font-size:25px;
}
.bannertext span {
    color: #d6441b;
}


/* ----- Section styles ----- */


/* ----- Home ----- */

.homesection {
    text-align:center;

```

```
    margin-top:140px;
}

.node {
    padding-top: 20px;
    text-align:center;
    margin-bottom:120px;
}

.node #chat {
    font-family: 'Open Sans Condensed';
    font-weight: normal;
    color: #707368;
}

#nodelogo {
    width: 410px;
    height: 110px;
    margin-bottom: 35px;
}

#create {
    width: 300px;
    height: 100px;
    background-color: #70b1d1;
    text-align:center;
    display: block;
    margin:0px auto;
    border-radius: 3px;
    box-shadow: 0px 5px 5px #e4e8e7;
    text-decoration: none;
    margin-bottom: 70px;
    color: #eeffff;
}

#create:visited {
    color: #eeffff;
    text-decoration: none;
}

#createbutton {
    padding-top: 28px;
}

#little {
    font-weight: normal;
    font-size: 13px;
}

#big {
```



```

        font-weight: bold;
        font-size: 23px;
    }
    .tutorial{
        margin-bottom:90px;
    }
    #tutorial {
        color: #88bfd4;
    }
    #tutorial:visited {
        color: #88bfd4;
    }

/* ----- Connected -----*/

.connected {
    text-align:center;
    display: block;
    margin:0px auto;
    width: 700px;
    height: 400px;
    background-color: #ffffff;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    color: #637277;
}
.connected h2 {
    padding-top: 20px;
}
.infoConnected {
    text-align: left;
    float: right;
    margin: 65px 165px 0 0;
}
#creatorImage {
    float: left;
    margin: 90px 0 0 140px;
    width: 100px;
    height: 100px;
    border-radius: 50%;
}

#yourName {

```

```

float:left;
padding-left:10px;
width: 150px;
height: 30px;
border-radius: 3px;
box-shadow:0px 3px 3px #e3e4e6;
background-color: #f0f1f3;
border: 1px solid #d1d1d1;
border-radius: 3px;
box-shadow:0px 3px 3px #e3e4e6;
margin-bottom:20px;
overflow: hidden;
}

#yourEmail {
float:left;
padding-left: 10px;
width: 200px;
height: 30px;
border-radius: 3px;
box-shadow:0px 3px 3px #e3e4e6;
background-color: #f0f1f3;
border: 1px solid #d1d1d1;
border-radius: 3px;
box-shadow:0px 3px 3px #e3e4e6;
margin-bottom:40px;
}

#yourEnter {
float:left;
width: 110px;
height: 40px;
text-align:center;
background-color: #73b4d4;
border: none;
box-shadow: 3px 3px 3px #efedee;
border-radius: 2px;
color:white;
font-weight: bold;
font-size: 15px;
}

/* ----- Person Inside -----*/

```

```
.personinside {
    text-align:center;
    display: block;
    margin:0px auto;
    width: 700px;
    height: 400px;
    background-color: #ffffff;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    color: #637277;
}

.personinside h2 {
    padding-top: 20px;
    width: 210px;
    overflow: hidden;
}

.infoInside {
    text-align: left;
    float: right;
    margin: 65px 165px 0 0;
}

#ownerImage {
    float: left;
    margin: 90px 0 0 140px;
    width: 100px;
    height: 100px;
    border-radius: 50%;
}

#hisName {
    float:left;
    padding-left:10px;
    width: 150px;
    height: 30px;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    background-color: #f0f1f3;
    border: 1px solid #d1d1d1;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    margin-bottom:20px;
}
```

```
#hisEmail {
    float:left;
    padding-left: 10px;
    width: 200px;
    height: 30px;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    background-color: #f0f1f3;
    border: 1px solid #d1d1d1;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    margin-bottom:40px;
}
```

```
#hisEnter {
    float:left;
    width: 110px;
    height: 40px;
    text-align:center;
    background-color: #73b4d4;
    border: none;
    box-shadow: 3px 3px 3px #efedee;
    border-radius: 2px;
    color:white;
    font-weight: bold;
    font-size: 15px;
}
```

```
/* ----- Invite ----- */
```

```
.invite-textfield {
    text-align:center;
    display: block;
    margin:0px auto;
    width: 750px;
    height: 300px;
    background-color: #ffffff;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    color: #637277;
}

.invite-textfield h2 {
    padding-top: 80px;
```

```

}
.invite-textfield h5 {
    font-weight: normal;
    margin: 10px 0 35px;
}
.invite-textfield .link {
    width: 600px;
    height: 35px;
    text-align:center;
    display: block;
    margin:0px auto;
    padding-top: 15px;
    margin-bottom:120px;
    border-radius: 4px;
    background-color: #f0f1f3;
}
.invite-textfield #link{
    text-decoration: none;
    color: #637277;
}

/* ----- Left -----*/

.left {
    text-align:center;
    display: block;
    margin:0px auto;
    width: 750px;
    height: 300px;
    background-color: #ffffff;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    color: #637277;
    margin-bottom: 400px;
}
.left h2 {
    padding-top: 50px;
    padding-bottom: 6px;
}
.left h5 {
    font-weight: normal;
    margin-bottom: 100px;
}

```

```

#leftImage {
    float: left;
    margin: 90px 0 0 140px;
    width: 100px;
    height: 100px;
    border-radius: 50%;
}
.nickname-left {
    width: 40px;
    overflow: hidden;
}

/* ----- Too many People -----*/

.toomanypeople {
    text-align:center;
    display: block;
    margin:0px auto;
    width: 750px;
    height: 300px;
    background-color: #ffffff;
    border-radius: 3px;
    box-shadow:0px 3px 3px #e3e4e6;
    color: #637277;
}
.toomanypeople h2 {
    padding-top: 100px;
    padding-bottom: 8px;
}
.toomanypeople h5 {
    font-weight: normal;
    margin-bottom: 100px;
}

#room:visited {
    color: #88bfd4;
}

/* ----- No Messages ----- */

.nomessages {

```

```

        text-align:center;
        display: block;
        margin:0px auto;
        width: 750px;
        height: 300px;
        background-color: #ffffff;
        border-radius: 3px;
        box-shadow:0px 3px 3px #e3e4e6;
        color: #637277;
        margin-bottom: 400px;
    }
    .nomessages h2 {
        padding-top: 50px;
        overflow: hidden;
        padding-bottom: 6px;
    }
    .nomessages h5 {
        font-weight: normal;
        margin-bottom: 100px;
    }
    #noMessagesImage {
        float: left;
        margin: 90px 0 0 140px;
        width: 100px;
        height: 100px;
        border-radius: 50%;
    }
    #img {
        float: left;
        margin: 90px 0 0 140px;
        width: 100px;
        height: 100px;
        border-radius: 50%;
    }
    .info {
        text-align: left;
        float: right;
        margin: 65px 60px 0 0;
        width: 405px;
        overflow: hidden;
    }
    .nickname-chat {
        overflow: hidden;

```

```
}
```

```
/* ----- Chat Screen ----- */
```

```
.image {  
    clear:both;  
    float:left;  
    height: 160px;  
    width: 80px;  
    text-align:center;  
    overflow: hidden;  
}
```

```
.image img {  
    float: left;  
    width: 80px;  
    height: 80px;  
    border-radius: 50%;  
}
```

```
.body {  
    text-align:center;  
    width: 40%;  
    display: block;  
    margin:0px auto 650px;  
    background-color: #ffffff;  
    color: #637277;  
}
```

```
.chats {  
    list-style-type: none;  
    margin-top:10px;  
}
```

```
.me {  
    clear:both;  
    float:left;  
    margin-bottom:10px;  
}
```

```
.you {  
    clear:both;
```



```

        float:right;
        margin-bottom:10px;
    }

    .you .image{
        float:right;
    }

    .chats .me p {
        text-align:left;
        float: left;
        display: inline-block;
        margin-left: 20px;
        margin-bottom:30px;
        padding: 25px 34px;
        min-width: 160px;
        min-height: 10px;
        max-width: 510px;
        background-color: #FFF;
        border-radius: 3px;
        box-shadow: 0px 3px 3px #E3E4E6;
        color: #637277;
        line-height: 1.4;
        word-wrap: break-word;
    }

    .chats .you p {
        text-align:left;
        float: left;
        display: inline-block;
        margin-right:20px;
        margin-bottom:30px;
        padding: 25px 34px;
        min-width: 160px;
        min-height: 10px;
        max-width: 510px;
        background-color: #FFF;
        border-radius: 3px;
        box-shadow: 0px 3px 3px #E3E4E6;
        color: #637277;
        line-height: 1.4;
        word-wrap: break-word;
    }

    .image b {

```

```

        overflow: hidden;
        display: block;
        clear: both;
        padding-top: 7px;
    }

    .image i{
        font-size: 12px;
        line-height: 1.2;
        display: block;
        opacity: 0.8;
        padding-top: 4px;
    }

    /* ----- Footer styles ----- */

    footer {
        position:fixed;
        bottom:0;
        left:0;
        width:100%;
        padding-top: 30px;
        background-color: white;
        height: 130px;
    }
    #chatform {
        width:700px;
        margin: 0 auto;
        background-color: white;
    }

    #message {
        width: 550px;
        height: 80px;
        display: block;
        float:left;
        margin: 0 auto;
        background-color: #f9f9f9;
        border: 1px solid #cccccc;
        border-radius: 2px;
        padding-left: 20px;
        padding-top: 20px;
        resize: none;
        font:inherit;
    }

```

```

        color:inherit;
    }

#submit {
    width: 110px;
    height: 60px;
    float:right;
    text-align:center;
    background-color: #73b4d4;
    display: block;
    margin: 0 auto;
    border: none;
    box-shadow: 3px 3px 3px #efedee;
    border-radius: 2px;
    color:white;
    font-weight: bold;
    font-size: 17px;
    outline: none;
    cursor:pointer;
}

```

App.js

```

var express = require('express'),
    app = express();

// This is needed if the app is run on heroku:

var port = process.env.PORT || 8080;

// Initialize a new socket.io object. It is bound to
// the express app, which allows them to coexist.

var io = require('socket.io').listen(app.listen(port));

// Require the configuration and the routes files, and pass
// the app and io as arguments to the returned functions.

require('./config')(app, io);
require('./routes')(app, io);

console.log('Your application is running on http://localhost:' + port);

```

Package-lock.json

```
{
  "name": "NodeChatSystem",
  "version": "0.0.1",
  "lockfileVersion": 1,
  "requires": true,
  "dependencies": {
    "accepts": {
      "version": "1.3.7",
      "resolved": "https://registry.npmjs.org/accepts/-/accepts-1.3.7.tgz",
      "integrity": "sha512-I180Qs2WjY1JIBNzNkK6KYq1VMTbZLXgHx2oT0pU/fjRHxEp+PEfEPY0R3WCwAGV0tauxh1h0xNgIf5bv7dQpA==",
      "requires": {
        "mime-types": "~2.1.24",
        "negotiator": "0.6.2"
      }
    },
    "after": {
      "version": "0.8.1",
      "resolved": "https://registry.npmjs.org/after/-/after-0.8.1.tgz",
      "integrity": "sha1-q11PuIP1loFtNRX495HAr0ht1ic="
    },
    "array-flatten": {
      "version": "1.1.1",
      "resolved": "https://registry.npmjs.org/array-flatten/-/array-flatten-1.1.1.tgz",
      "integrity": "sha1-m19pkFGx5wczKPKgCJaLZ0opVdI="
    },
    "arraybuffer.slice": {
      "version": "0.0.6",
      "resolved": "https://registry.npmjs.org/arraybuffer.slice/-/arraybuffer.slice-0.0.6.tgz",
      "integrity": "sha1-8zshWfBTKj8xB6JywMz70a0peco="
    },
    "base64-arraybuffer": {
      "version": "0.1.2",
      "resolved": "https://registry.npmjs.org/base64-arraybuffer/-/base64-arraybuffer-0.1.2.tgz",
      "integrity": "sha1-R030qfLaJ0Bd8xWM0x2zw81GoVQ="
    },
    "base64id": {
      "version": "0.1.0",
      "resolved": "https://registry.npmjs.org/base64id/-/base64id-0.1.0.tgz",

```

```

    "integrity": "sha1-As4P3u4M709ACA4ec+g08LG/zj8="
  },
  "better-assert": {
    "version": "1.0.2",
    "resolved": "https://registry.npmjs.org/better-assert/-/better-assert-1.0.2.tgz",
    "integrity": "sha1-QIZrnhueC1W0gYlDEeaPr/rrxSI=",
    "requires": {
      "callsite": "1.0.0"
    }
  },
  "blob": {
    "version": "0.0.2",
    "resolved": "https://registry.npmjs.org/blob/-/blob-0.0.2.tgz",
    "integrity": "sha1-uJVivWmUr5W6HoEhVVNjM6ojzyQ="
  },
  "body-parser": {
    "version": "1.19.0",
    "resolved": "https://registry.npmjs.org/body-parser/-/body-parser-1.19.0.tgz",
    "integrity": "sha512-dhEPs72UPbDnAQJ9ZKMNTp6ptJaionhP5cBb541nXP1W60Jepo9RV/a4fX4XWW9CuFNK22krhrj1+rgziFNCsw==",
    "requires": {
      "bytes": "3.1.0",
      "content-type": "~1.0.4",
      "debug": "2.6.9",
      "depd": "~1.1.2",
      "http-errors": "1.7.2",
      "iconv-lite": "0.4.24",
      "on-finished": "~2.3.0",
      "qs": "6.7.0",
      "raw-body": "2.4.0",
      "type-is": "~1.6.17"
    }
  },
  "bytes": {
    "version": "3.1.0",
    "resolved": "https://registry.npmjs.org/bytes/-/bytes-3.1.0.tgz",
    "integrity": "sha512-zavxEouZMouAqQ8RULFA6Jm6GtbqZaL5V7qL+Dw8tux3ApzYk4z4W4YX0R1wY51E8G5SsJ3NsQqNU0SvWQ==",
    "requires": {
      "zauLjrfCG+xvoyaqlOV8bLVXXNGC4JqlxFCutSDWA6fJrTo2ZuvLYTqZ7aHBLZSM0opbwv8f+wZcVzfV
      TI2Dg=="
    }
  },
  "callsite": {
    "version": "1.0.0",

```

```
    "resolved": "https://registry.npmjs.org/callsite/-/callsite-1.0.0.tgz",
    "integrity": "sha1-KAOY5dZkvXQDi28JBRU+borxvCA="
  },
  "commander": {
    "version": "0.6.1",
    "resolved": "https://registry.npmjs.org/commander/-/commander-0.6.1.tgz",
    "integrity": "sha1-+mihT2qUXVTbv1DYzbMyDp47GgY="
  },
  "component-bind": {
    "version": "1.0.0",
    "resolved": "https://registry.npmjs.org/component-bind/-/component-bind-1.0.0.tgz",
    "integrity": "sha1-AMyIq33Nk4l8AA1lGx06jh5zu9E="
  },
  "component-emitter": {
    "version": "1.1.2",
    "resolved": "https://registry.npmjs.org/component-emitter/-/component-emitter-1.1.2.tgz",
    "integrity": "sha1-KWU8nU9qmOZbSrwjRWpURbJrsM="
  },
  "component-inherit": {
    "version": "0.0.3",
    "resolved": "https://registry.npmjs.org/component-inherit/-/component-inherit-0.0.3.tgz",
    "integrity": "sha1-ZF/ErfWLcrZJ1crmUTVhnbJv8UM="
  },
  "content-disposition": {
    "version": "0.5.3",
    "resolved": "https://registry.npmjs.org/content-disposition/-/content-disposition-0.5.3.tgz",
    "integrity": "sha512-Ex007741kE0bIAEV9kDo50o+79VCUdEB6n61zKgGwupcVer1hrj3qGAfwq8G6uBJjkqLrhT0qEYFcWng8z1z0g==",
    "requires": {
      "safe-buffer": "5.1.2"
    }
  },
  "content-type": {
    "version": "1.0.4",
    "resolved": "https://registry.npmjs.org/content-type/-/content-type-1.0.4.tgz",
    "integrity": "sha512-E4mAC2k9SPK3m0UuWz9Tg17uEHh9JqFTH5Xrm7K+YOuIX180q/z2E7yKwY8QpXhT8y2Z1YRqW12x6a7BhPXA==",
  },
}
```

```
"cookie": {
  "version": "0.4.0",
  "resolved": "https://registry.npmjs.org/cookie/-/cookie-0.4.0.tgz",
  "integrity": "sha512-+Hp8fLp57wnUSt0tY0tHEXh4voZRDnoIrZPqlo3DPiI4y9lwG/jqx+10m94/W6ZaPD0Ubnj0t/99w66zk+1lXg=="
},
```

Config.js

```
var express = require('express');

module.exports = function(app, io){

  // Set .html as the default template extension
  app.set('view engine', 'html');

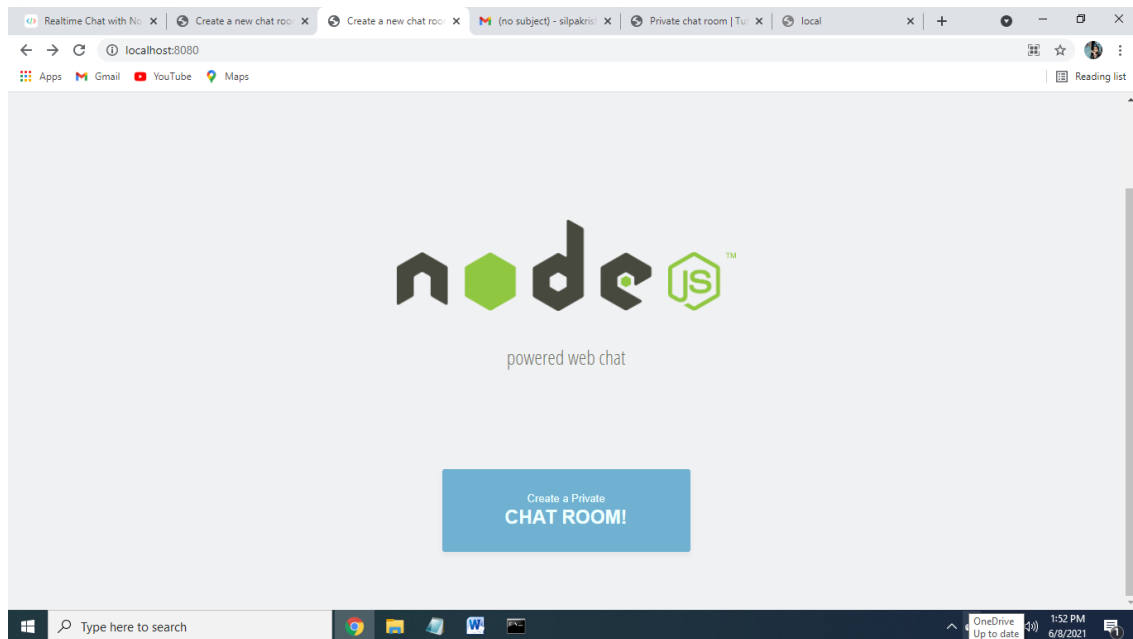
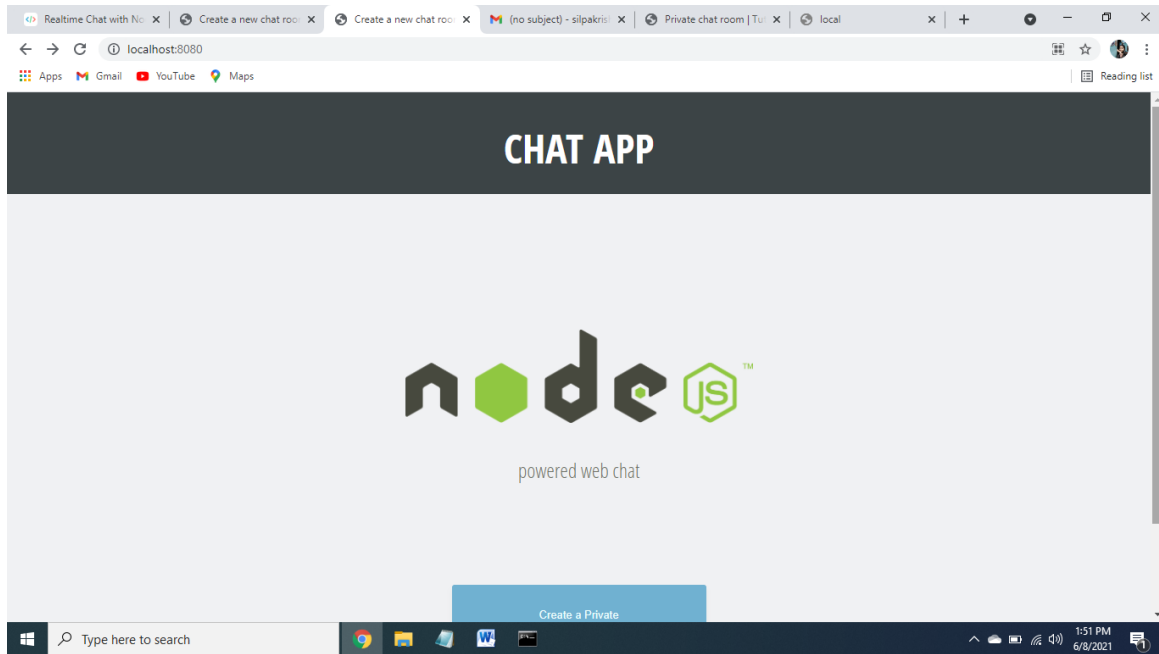
  // Initialize the ejs template engine
  app.engine('html', require('ejs').renderFile);

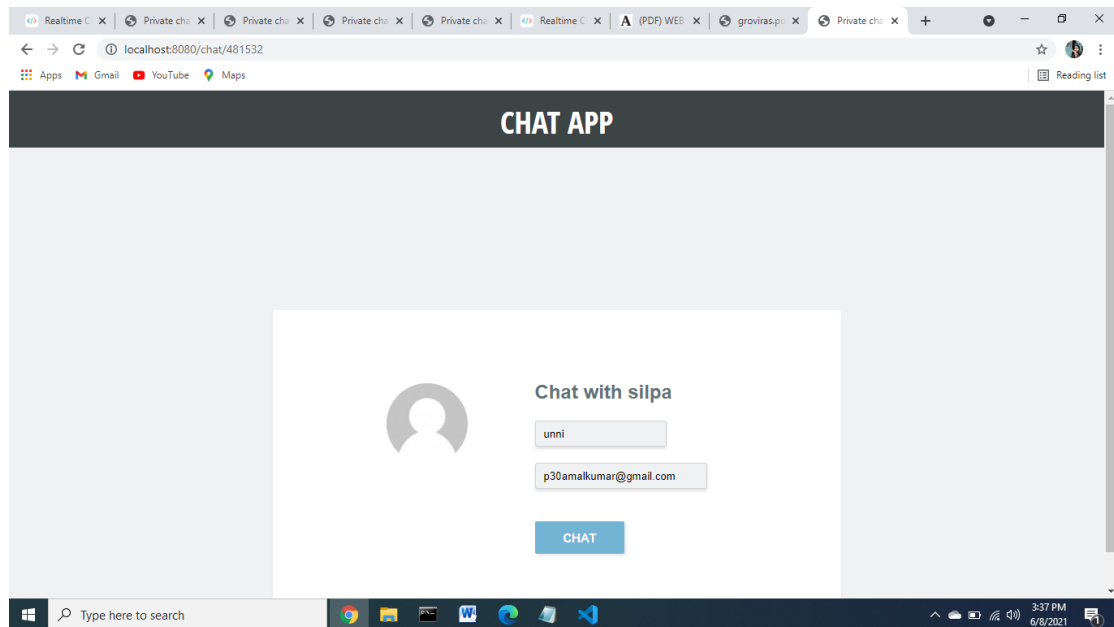
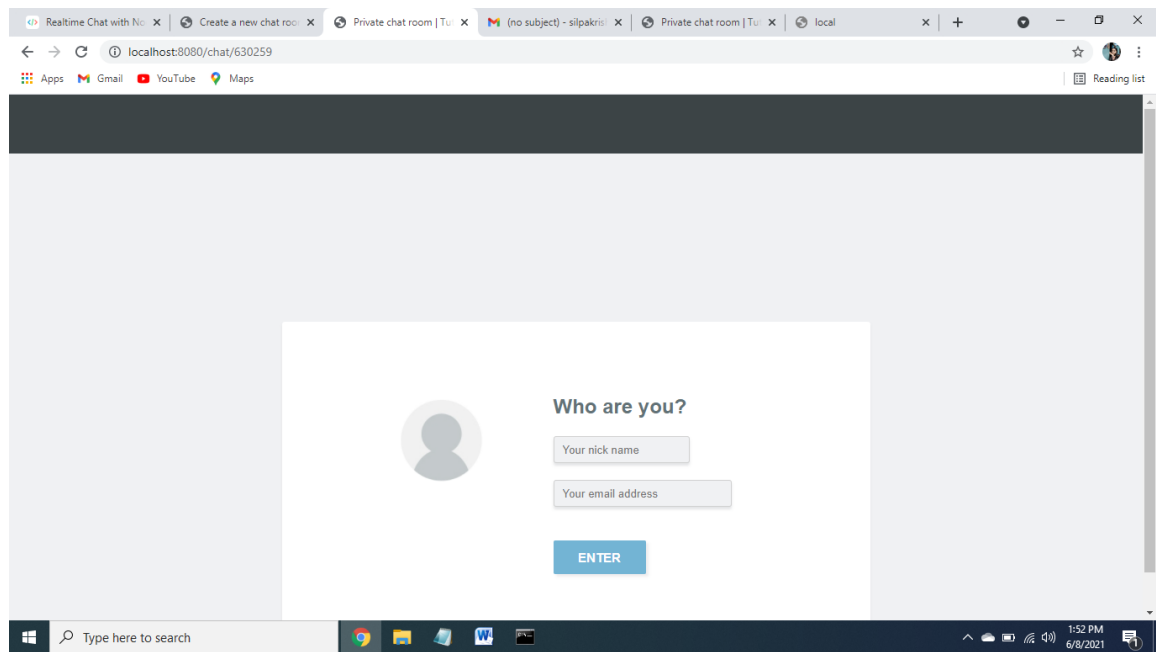
  // Tell express where it can find the templates
  app.set('views', __dirname + '/views');

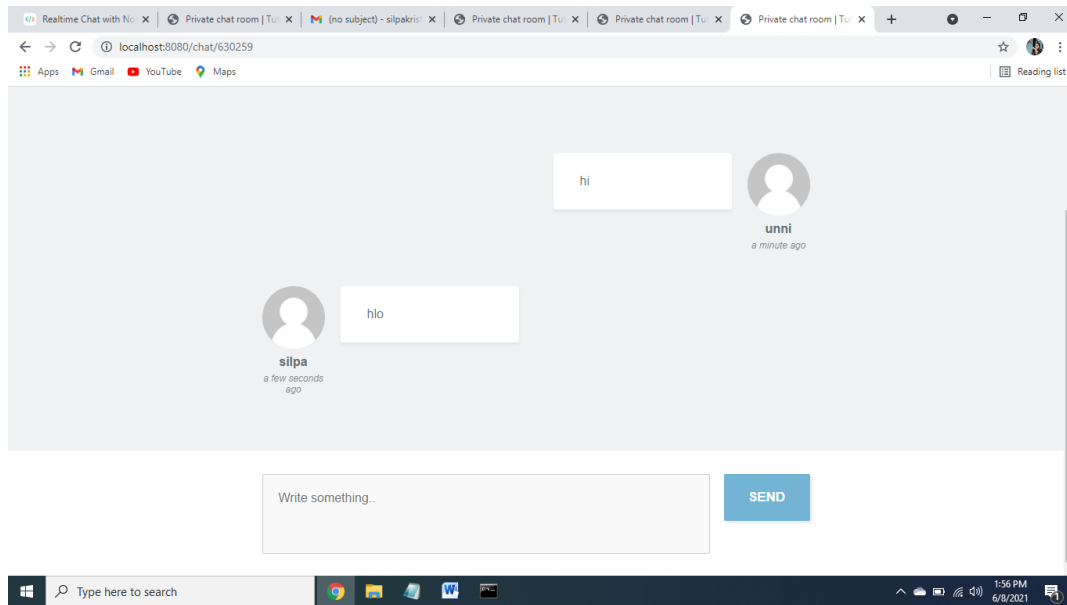
  // Make the files in the public folder available to the world
  app.use(express.static(__dirname + '/public'));

};
```

3.1 SCREENSHOTS







4. CONCLUSION

This project is used for chatting purpose. This application is capable of communicating with two or more persons.

5. REFERENCE

- <https://geeksforgeeks.com>
- <https://stackoverflow.com>