A. MongoDB

1. install mongoDB Community Server from https://www.mongodb.com/download-center#community
(.msi file Default installation)

        https://docs.mongodb.com/manual/tutorial/install-mongodb-on-windows/

2. install adminMongo tool from https://www.npmjs.com/package/admin-mongo:

   Navigate to folder & install adminMongo:

```
git clone https://github.com/mrvautin/adminMongo.git && cd adminMongo
```

   Install dependencies: `npm install`

3. Start application: npm start or node app

   Visit `http://127.0.0.1:1234` in your browser

   Add a connection (Connection string: mongodb://127.0.0.1)

   Connect to the connection and create your database and collection:

Database: chat / Collection: messages

```
{
    "messages": [
        {
            "sender": "George",
            "content": "Hi..."
        },
        {
            "sender": "Evgenia",
            "content": ":)"
        },
        {
            "sender": "George",
            "content": "How are you now?"
        }
    ]
}
```

B. Node & Express

1. In an new folder run:

```
npm init ("main": "server.js")
npm install express --save
npm install mongodb --save
```

2. Create server.js file and add some code to create a server that sends data from your database:

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

app.use(function(req, res, next) {
  res.header("Access-Control-Allow-Origin", "*");
  next();
});

app.get('/', function(req, res) {
    var db = {};
    var MongoClient = require('mongodb').MongoClient;
    MongoClient.connect('mongodb://127.0.0.1', function(err, client) {
        db.collection = client.db('chat').collection('messages');
        db.collection.findOne({}, function (err, doc) {
            if (err) {
                console.LogError(err);
            } else {
                //console.log(doc);
                res.status(200).json(doc);
            }
        });
    });
});

app.listen(3500);
```

3. Run the file with:

```
npm start
```
or
```
node server.js
```

C. React Client

1. In a new folder create a react App.js that fetches data your server:

```
import React, { Component } from 'react';
import './App.css';

class App extends Component {
    componentDidMount() {
        document.getElementById('get-chat-button')
                .addEventListener('click', this.getChat);
    }

    getChat = () => {
        fetch("http://127.0.0.1:3500/")
        .then(result => result.json())
        .then(result => {
            let chatDiv = document.getElementById('chat-div');
            chatDiv.innerHTML = '';
            let chat = '';
            result.messages.forEach(message => {
                chat+= message.sender + ': ' + message.content + '<br>';
            });
            chatDiv.innerHTML = chat;
        })
        .catch(error => {
            console.log(error);
        });
    }

    render() {
        return (
            <div>
                <input
                    id="get-chat-button"
                    type="button"
                    value="Get Chat"/>
                <div id="chat-div"/>
            </div>
        );
    }
}

export default App;
```

2. Run the app with:
   npm start
and visit it in http://127.0.0.1:3000/