MODUL 11
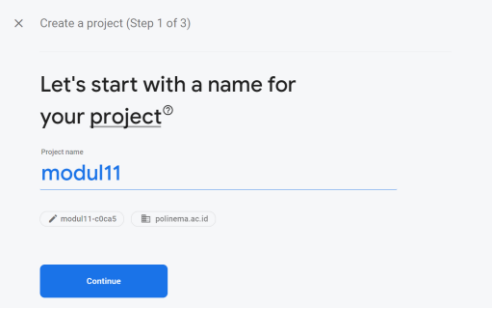**FIREBASE LOGIN**
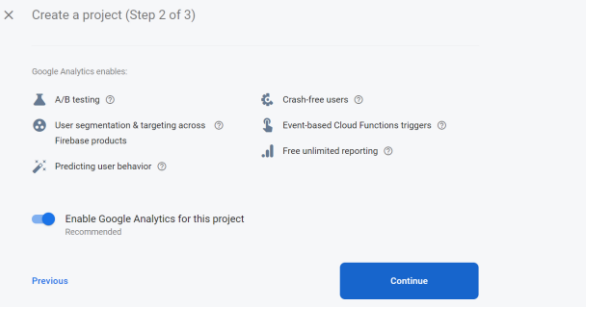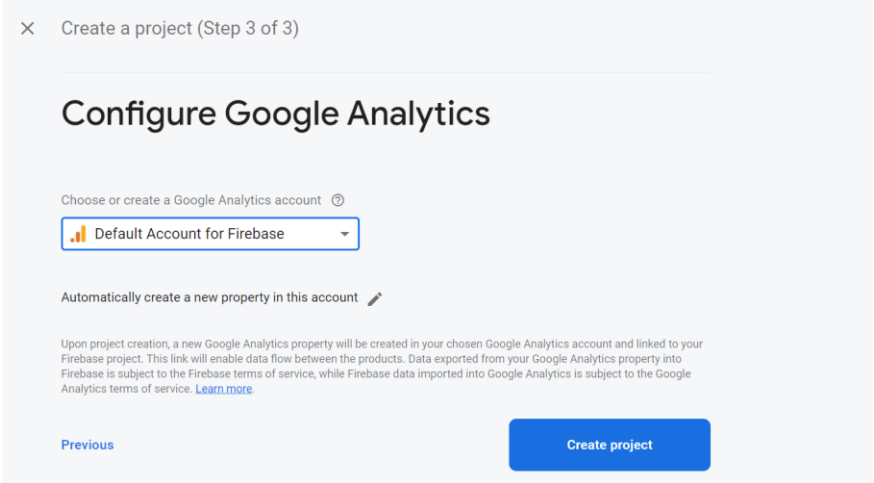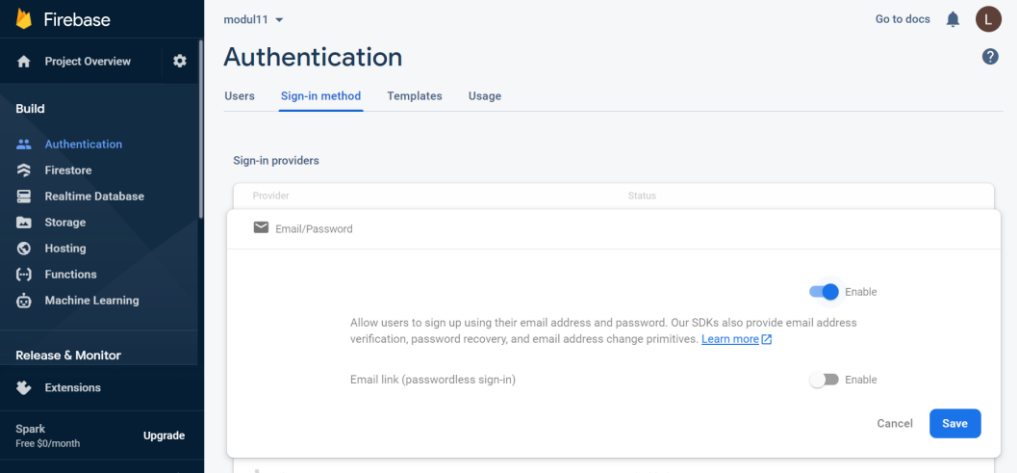

PEMROGRAMAN BERBASIS FRAMEWORK

Disusun oleh:
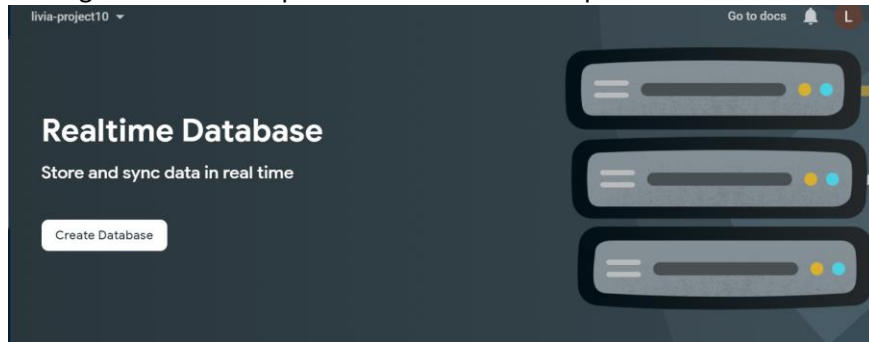**Livia Yurike Khuril Maula**
D4 TI – 3F / 15
NIM : 1841720025

POLITEKNIK NEGERI MALANG
JURUSAN TEKNOLOGI INFORMASI
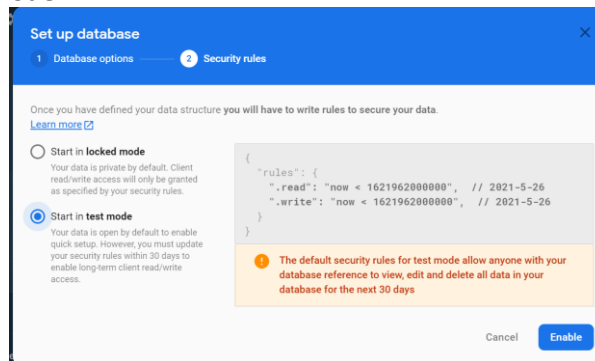**PROGRAM STUDI D4 TEKNIK INFORMATIKA**

APRIL 2021

Langkah Praktikum :

No	Keterangan
1.	Setting Firebase Console Login ke firebase console dan add a new project. Pilih authentification dan pilih tab menu Set up sign in method Buat Project baru Continue Ganti dengan "Default Account for Firebase" Pilih Authentification dan pilih tab Set up sign in method, pilih **Email/Password** dan **enable**

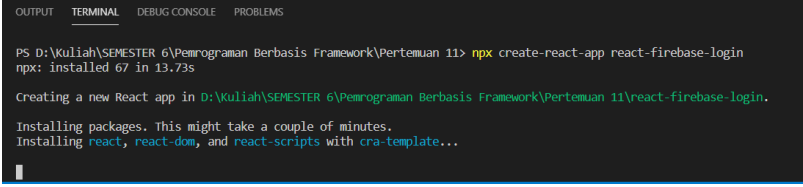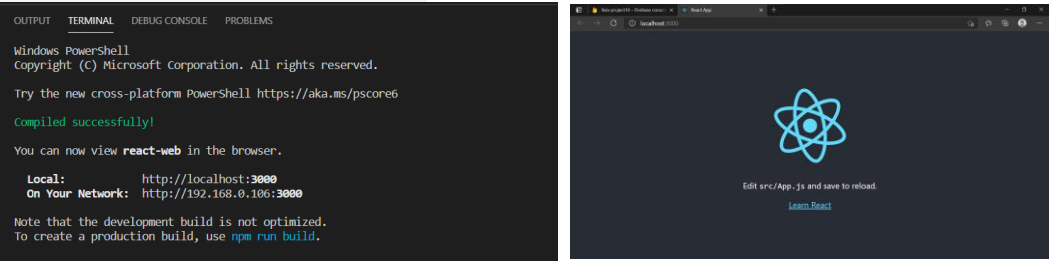| 2.	Setelah enabling athentification pilih menu Database dan pilih create database
3.	Select **Start in test mode**
4.	PIlih Done
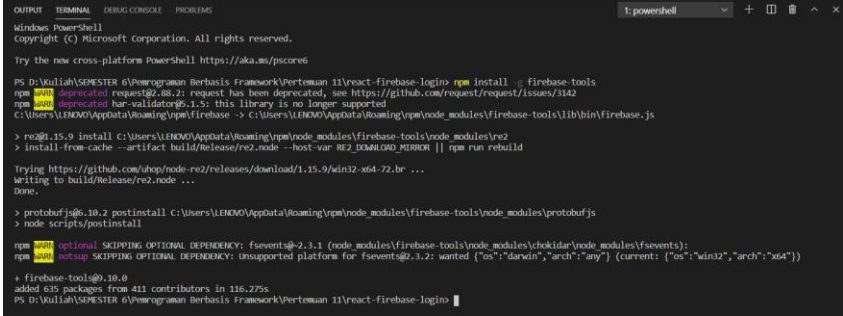
Setting react app dan firebase

No	Keterangan
1.	Buat aplikasi baru dengan perintah `create-react-app your-project-name`
2.	Install project baru dengan perintah `npm run start`

3.	Install firebase
	
	`npm install -g firebase-tools`
	
	`firebase login`

```
firebase init
```

4.	Pilih setting untuk firebase nya firebase dan Hosting
5.	Pilih build jangan pilih Do not choose public
6.	Pilih

7.	Untuk membangun firebase **npm run build** Firebase serve
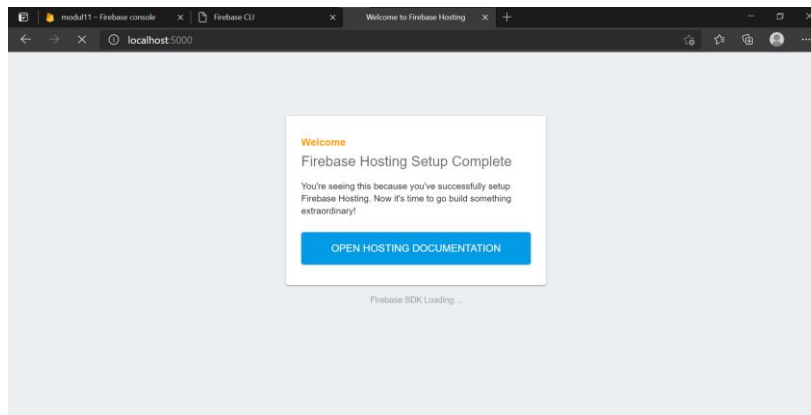
Instalasi Redux

No	Keterangan
1.	Install Redux dan react redux, redux thunk

npm install react-redux

```
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login> npm install react-redux
npm WARN tsutils@3.20.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >= 3.6.0-beta || >= 3.7.
0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ react-redux@7.2.4
added 8 packages from 52 contributors and audited 1950 packages in 36.829s

127 packages are looking for funding
  run `npm fund` for details

found 1 moderate severity vulnerability
  run `npm audit fix` to fix them, or `npm audit` for details
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login>
```

npm install redux-thunk

```
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login> npm install redux-thunk
npm WARN tsutils@3.20.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >= 3.6.0-beta || >= 3.7.
0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ redux-thunk@2.3.0
added 1 package from 1 contributor and audited 1952 packages in 27.836s

127 packages are looking for funding
  run `npm fund` for details

found 1 moderate severity vulnerability
  run `npm audit fix` to fix them, or `npm audit` for details
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login>
```

npm install react-router-dom

```
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login> npm install react-router-dom
npm WARN tsutils@3.20.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >= 3.6.0-beta || >= 3.7.
0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ react-router-dom@5.2.0
added 10 packages from 5 contributors and audited 1962 packages in 30.54s

127 packages are looking for funding
  run `npm fund` for details

found 1 moderate severity vulnerability
  run `npm audit fix` to fix them, or `npm audit` for details
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login>
```

2.	Install firebase

```
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login> npm install firebase

> core-js@3.6.5 postinstall D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login\node_modules\@firebase\polyfill\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"

Thank you for using core-js ( https://github.com/zloirock/core-js ) for polyfilling JavaScript standard library!

The project needs your help! Please consider supporting of core-js on Open Collective or Patreon:
> https://opencollective.com/core-js
> https://www.patreon.com/zloirock

Also, the author of core-js ( https://github.com/zloirock ) is looking for a good job -)


> protobufjs@6.10.2 postinstall D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login\node_modules\protobufjs
> node scripts/postinstall

npm WARN tsutils@3.20.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >= 3.6.0-beta || >= 3.7.
0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32","arch":"x64"})

+ firebase@8.4.2
added 83 packages from 69 contributors and audited 2045 packages in 58.211s

128 packages are looking for funding
  run `npm fund` for details

found 1 moderate severity vulnerability
  run `npm audit fix` to fix them, or `npm audit` for details
PS D:\Kuliah\SEMESTER 6\Pemrograman Berbasis Framework\Pertemuan 11\react-firebase-login> []
```

3.	Pilih UI library
4.	Paste kan file public/index.html
5.	Install material icon

Setting firebase config

No	Keterangan
1.	Pilih project setting

	Add Firebase to your web app × **1** Register app App nickname ? firebase-login-app ☑ Also set up **Firebase Hosting** for this app. Learn more ☑ Hosting can also be set up later. It's free to get started anytime. 🌐 modul11-c0ca5 (No deploys yet) ▾ **Register app**
2.	Pilih config **Firebase SDK snippet** ◯ Automatic ? ◯ CDN ? ◉ Config ?
| 3. | Edit **firebase/firebase.js**<br><br>```js
// index.html   JS firebase.js 1 ×
src > firebase > JS firebase.js > [@] firebaseConfig
1   import firebase from "firebase/app";
2   import "firebase/auth";
3   import "firebase/firestore";
4
5   const firebaseConfig = {
6     apiKey: "AIzaSyBwDOZnLUHnfwksqH23ZeBlZB5sX5TH_W8",
7     authDomain: "modul11-c0ca5.firebaseapp.com",
8     databaseURL: "https://modul11-c0ca5-default-rtdb.firebaseio.com",
9     projectId: "modul11-c0ca5",
10    storageBucket: "modul11-c0ca5.appspot.com",
11    messagingSenderId: "98117289279",
12    appId: "1:98117289279:web:601bb6f96889741658ff8a",
13    measurementId: "G-C1W2F1ZRRS",
14  };
15
16  export const myFirebase = firebase.initializeApp(firebaseConfig);
17  const baseDb = myFirebase.firestore();
18  export const db = baseDb;
19
``` |
| 4. | **Edit actions/auth.js**<br><br>```js
// index.html   JS firebase.js   JS auth.js   3 ×
src > actions > JS auth.js > ...
1   importy { myFireBase } from "../firebase/firebase";
2
3   export const LOGIN_REQUEST = "LOGIN_REQUEST";
4   export const LOGIN_SUCCESS = "LOGIN_SUCCESS";
5   export const LOGIN_FAILURE = "LOGIN_FAILURE";
6
7   export const LOGOUT_REQUEST = "LOGOUT_REQUEST";
8   export const LOGOUT_SUCCESS = "LOGOUT_SUCCESS";
9   export const LOGOUT_FAILURE = "LOGOUT_FAILURE";
10
11  export const VERIFY_REQUEST = "VERIFY_rEQUEST";
12  export const VERIFY_SUCCESS = "VERIFY_SUCCESS";
``` |

5.	user requesting to login masih dalam **actions/auth.js**
| | ```js
14  const requestLogin = () => {
15      return {
16          type: LOGIN_REQUEST
17      };
18  };
19
20  const receiveLogin = user => {
21      return {
22          type: LOGIN_SUCCESS,
23          user
24      };
25  };
26
27  const loginError = () => {
28      return {
29          type: LOGIN_FAILURE
30      };
31  };
``` |
| 6. | edit loginUser()
```js
33      const requestLogout = () => {
34          return {
35              type: LOGOUT_REQUEST
36          };
37      };
38
39      const receiveLogout = () => {
40          return {
41              type: LOGOUT_SUCCESS
42          };
43      };
44
45      const logoutError = () => {
46          return {
47              type: LOGOUT_FAILURE
48          };
49      };
50
51      const verifyRequest = () => {
52          return {
53              type: VERIFY_REQUEST
54          };
55      };
56
57      const verifySuccess = () => {
58          return {
59              type: VERIFY_SUCCESS
60          };
61      };
62
63  export const loginUser = (email, password) => dispatch => {
64      dispatch(requestLogin());
65      myFirebase
66      .auth()
67      .signInWithEmailAndPassword(email, password)
68      .then(user => {
69          dispatch(receiveLogin(user));
70      })
71      .catch(error => {
72          //Do something with the error if you want!
73          dispatch(loginError());
74      });
75  };
76
77  export const logoutUser = () => dispatch => {
78      dispatch(requestLogout());
79      myFirebase
80      .auth()
81      .signOut()
82      .then(() => {
83          dispatch(receiveLogout());
84      })
85      .catch(error => {
86          //Do something with the error if you want!
87          dispatch(logoutError());
88      });
89  };
90
91  export const verifyAuth = () => dispatch => {
92      dispatch(verifyRequest());
93      myFirebase.auth().onAuthStateChanged(user => {
94          if (user !== null) {
95              dispatch(receiveLogin(user));
96          }
97          dispatch(verifySuccess());
98      });
99  };
``` |

Setting reducer

No	Keterangan
| 1. | Buka reducers/auth.js<br><br>```js
import {
  LOGIN_REQUEST,
  LOGIN_SUCCESS,
  LOGIN_FAILURE,
  LOGOUT_REQUEST,
  LOGOUT_SUCCESS,
  LOGOUT_FAILURE,
  VERIFY_REQUEST,
  VERIFY_SUCCESS,
} from "../actions/";

export default (
  state = {
    isLoggingIn: false,
    isLoggingOut: false,
    isVerifying: false,
    loginError: false,
    logoutError: false,
    isAuthenticated: false,
    user: {},
  },
  action
) => {
  switch (action.type) {
    case LOGIN_REQUEST:
      return {
        ...state,
        isLoggingIn: true,
        loginError: false,
      };
    case LOGIN_SUCCESS:
      return {
        ...state,
        isLoggingIn: false,
        isAuthenticated: true,
        user: action.user,
      };
    case LOGIN_FAILURE:
      return {
        ...state,
        isLoggingIn: false,
        isAuthenticated: false,
        loginError: true,
      };

    case LOGOUT_REQUEST:
      return {
        ...state,
        isLoggingOut: true,
        logoutError: false,
      };

    case LOGOUT_SUCCESS:
      return {
        ...state,
        isLoggingOut: false,
        isAuthenticated: false,
        user: {},
      };

    case LOGOUT_FAILURE:
      return {
        ...state,
        isLoggingOut: false,
        logoutError: true,
      };

    case VERIFY_REQUEST:
      return {
        ...state,
        isVerifying: true,
        verifyingError: false,
      };

    case VERIFY_SUCCESS:
      return {
        ...state,
        isVerifying: false,
      };
    default:
      return state;
  }
};
``` |
| 2. | Edit reducers/index.js<br><br>```js
src > reducers > JS index.js > ...
import { combineReducers } from "redux";
import auth from "./auth";
export default combineReducers({ auth });
``` |
| 3. | Setting Redux plumbing |

| 4. | **Pilih src** folder called **configureStore.js dan edit**<br><br>```js
src > JS configureStore.js > ...
1  import { applyMiddleware, createStore } from "redux";
2  import thunkMiddleware from "redux-thunk";
3  import { verifyAuth } from "./actions/";
4  import rootReducer from "./reducers";
5
6  export default function configureStore(persistedState) {
7    const store = createStore(
8      rootReducer,
9      persistedState,
10     applyMiddleware(thunkMiddleware)
11   );
12   store.dispatch(verifyAuth());
13   return store;
14 }
15
``` |
| 5. | Pilih dan edit folder src dan root.js<br><br>```js
src > JS root.js > ...
1  import React from "react";
2  import { Provider } from "react-redux";
3  import { BrowserRouter as Router } from "react-router-dom";
4  import App from "./App";
5  import configureStore from "./configureStore";
6  const store = configureStore();
7  function Root() {
8    return (
9      <Provider store={store}>
10       <Router>
11         <App />
12       </Router>
13     </Provider>
14   );
15 }
16 export default Root;
17
``` |
| 6. | Pilih dan edit folder src/index.js<br><br>```js
src > JS index.js
1  import React from "react";
2  import ReactDOM from "react-dom";
3  import Root from "./Root";
4
5  import * as serviceWorker from "./serviceWorker";
6  ReactDOM.render(<Root />, document.getElementById("root"));
7  // If you want your app to work offline and load faster, you can change
8  // unregister() to register() below. Note this comes with some pitfalls.
9  // Learn more about service workers: https://bit.ly/CRA-PWA
10 serviceWorker.unregister();
11
``` |
| 7. | Buat lah coding App.js<br><br>```js
src > JS App.js > ...
1  import React from "react";
2  import { Route, Switch } from "react-router-dom";
3  import { connect } from "react-redux";
4  import ProtectedRoute from "./components/ProtectedRoute";
5  import Home from "./components/Home";
6  import Login from "./components/Login";
7
8  function App(props) {
9    const { isAuthenticated, isVerifying } = props;
10   return (
11     <Switch>
12       <ProtectedRoute
13         exact
14         path="/"
15         component={Home}
16         isAuthenticated={isAuthenticated}
17         isVerifying={isVerifying}
18       />
19       <Route path="/login" component={Login} />
20     </Switch>
21   );
22 }
23
24 function mapStateToProps(state) {
25   return {
26     isAuthenticated: state.auth.isAuthenticated,
27     isVerifying: state.auth.isVerifying,
28   };
29 }
30
31 export default connect(mapStateToProps)(App);
32
``` |

8.	Buatlah file dan simpan **components/Login.js**
	src > components > JS Login.js > [@] default

```javascript
import React, { Component } from "react";
import { connect } from "react-redux";
import { Redirect } from "react-router-dom";
import { loginUser } from "../actions";
import { withStyles } from "@material-ui/styles";
import Avatar from "@material-ui/core/Avatar";
import Button from "@material-ui/core/Button";
import TextField from "@material-ui/core/TextField";
import LockOutlinedIcon from "@material-ui/icons/LockOutlined";
import Typography from "@material-ui/core/Typography";
import Paper from "@material-ui/core/Paper";
import Container from "@material-ui/core/Container";

const styles = () => ({
  "@global": {
    body: {
      backgroundColor: "#fff"
    }
  },
  paper: {
    marginTop: 100,
    display: "flex",
    padding: 20,
    flexDirection: "column",
    alignItems: "center"
  },
  avatar: {
    marginLeft: "auto",
    marginRight: "auto",
    backgroundColor: "#f50057"
  },
  form: {
    marginTop: 1
  },
  errorText: {
    color: "#f50057",
    marginBottom: 5,
    textAlign: "center"
  }
});

class Login extends Component {
  state = { email: "", password: "" };
  handleEmailChange = ({ target }) => {
    this.setState({ email: target.value });
  };
  handlePasswordChange = ({ target }) => {
    this.setState({ password: target.value });
  };
  handleSubmit = () => {
    const { dispatch } = this.props;
    const { email, password } = this.state;
    dispatch(loginUser(email, password));
  };
  render() {
    const { classes, loginError, isAuthenticated } = this.props;
    if (isAuthenticated) {
      return <Redirect to="/" />;
    } else {
      return (
        <Container component="main" maxWidth="xs">
          <Paper className={classes.paper}>
            <Avatar className={classes.avatar}>
              <LockOutlinedIcon />
            </Avatar>
            <Typography component="h1" variant="h5">
              Sign in
            </Typography>
            <TextField
              variant="outlined"
              margin="normal"
              fullWidth
              id="email"
              label="Email Address"
```

```jsx
                name="email"
                onChange={this.handleEmailChange}

              />

            <TextField
                variant="outlined"
                margin="normal"
                fullWidth
                name="password"
                label="Password"
                type="password"
                id="password"
                onChange={this.handlePasswordChange}

            />
            {loginError && (
                <Typography component="p" className={classes.errorText}>
                    Incorrect email or password.
                </Typography>
                )}
                <Button
                    type="button"
                    fullWidth
                    variant="contained"
                    color="primary"
                    className={classes.submit}
                    onClick={this.handleSubmit}
                >
                Sign In
                </Button>
            </Paper>
            </Container>
            );
        }
    }

    function mapStateToProps(state) {
        return {
            isLoggingIn: state.auth.isLoggingIn,
            loginError: state.auth.loginError,
            isAuthenticated: state.auth.isAuthenticated
        };
    }

    export default withStyles(styles)(connect(mapStateToProps)(Login));
```

9.	Buka **component/Home.js**

```jsx
src > components > JS Home.js > ...
import React, { Component } from "react";
import { connect } from "react-redux";
import { logoutUser } from "../actions";
class Home extends Component {
  handleLogout = () => {
    const { dispatch } = this.props;
    dispatch(logoutUser());
  };
  render() {
    const { isLoggingOut, logoutError } = this.props;
    return (
      <div>
        <h1>This is your app's protected area.</h1>
        <p>Any routes here will also be protected</p>
        <button onClick={this.handleLogout}>Logout</button>
        {isLoggingOut && <p>Logging Out....</p>}
        {logoutError && <p>Error logging out</p>}
      </div>
    );
  }
}
function mapStateToProps(state) {
  return {
    isLoggingOut: state.auth.isLoggingOut,
    logoutError: state.auth.logoutError,
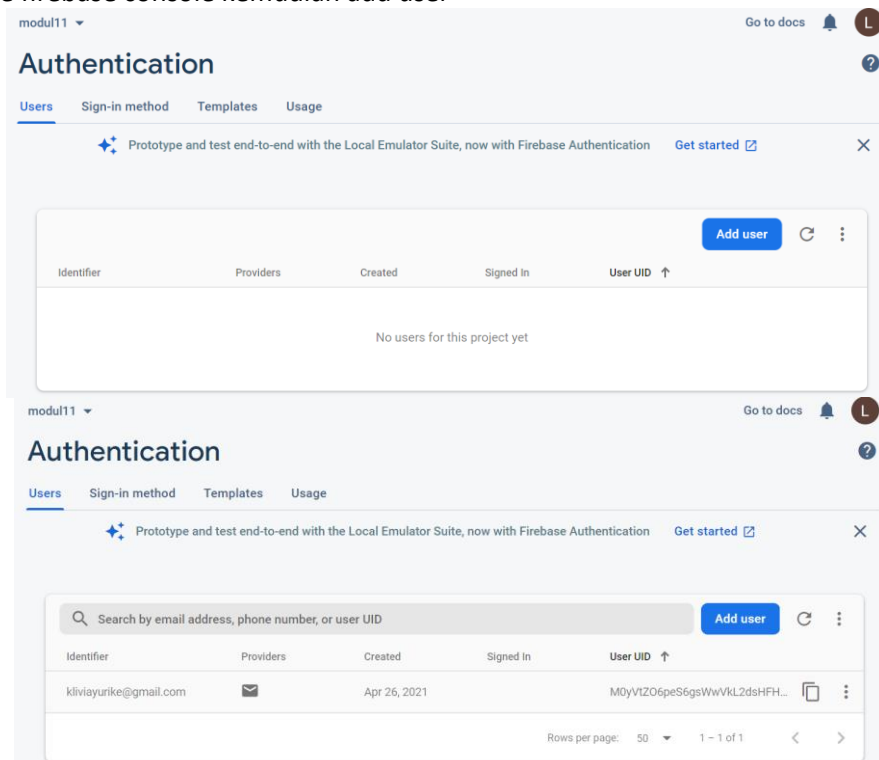  };
}
export default connect(mapStateToProps)(Home);
```

10.	Buatfile dalam folder /src/component/ dengan nama protectedRoute.js
| | ```js
src > components > JS protectedRoute.js
1    import React from "react";
2    import { Route, Redirect } from "react-router-dom";
3    const ProtectedRoute = ({
4      component: Component,
5      isAuthenticated,
6      isVerifying,
7      ...rest
8    }) => (
9      <Route
10       {...rest}
11       render={(props) =>
12         isVerifying ? (
13           <div />
14         ) : isAuthenticated ? (
15           <Component {...props} />
16         ) : (
17           <Redirect
18             to={{
19               pathname: "/login",
20               state: { from: props.location },
21             }}
22           />
23         )
24       }
25     />
26   );
27   export default ProtectedRoute;
28
``` |
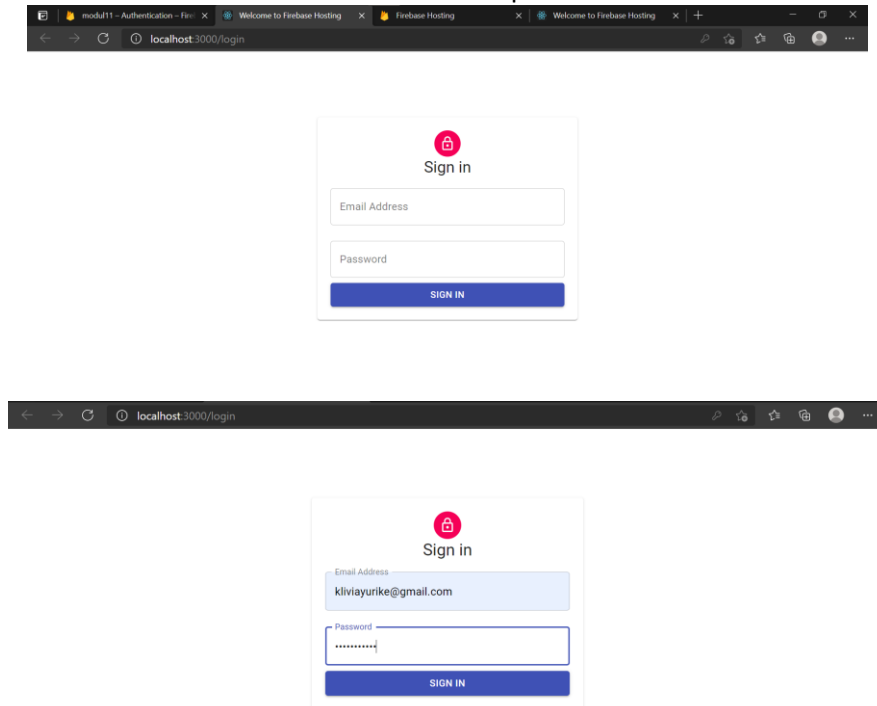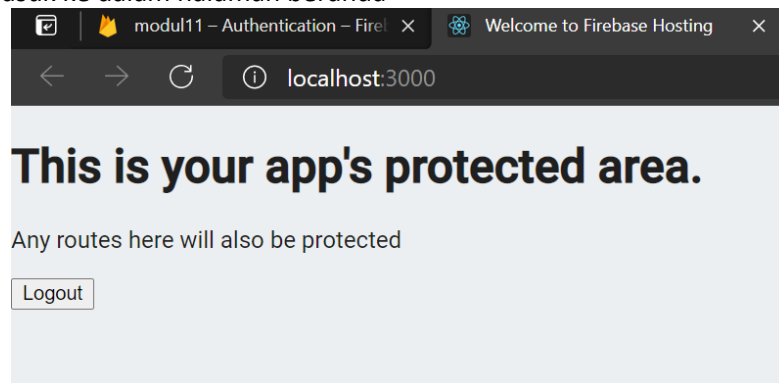| 11. | Running start |
| 12. | Masuk ke firebase console kemudian add user |
| | |

13.	Pilih **npm start** kemudian masukkan username dan password
14.	Kemudian masuk ke dalam halaman beranda

Link Github :
https://github.com/liviayurike/Pemrograman-Berbasis-Framework/tree/master/Pertemuan%2011

Link Video Youtube :
https://youtu.be/NqLQ_jX_NYg