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NARWAL AUTH API DELIVERABLE 9

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Integrating NarwalAuthApi & NarwalAuthLib

Successfully Integrated and tested our JS NarwalAuth Library and our Narwal Auth Api into our website's registration and Authentication system.

Signup:

```
const Signup = () => {
  const [name, setName] = useState("");
  const [email, setEmail] = useState("");
  var [password, setPassword] = useState("");
  const navigate = useNavigate();

  const handleSignup = async () => {
    console.log("In Handle Sign Up");

    // Email validation
    const emailRegex = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;
    if (!emailRegex.test(email)) {
      alert("Please enter a valid email address");
      return;
    }

    // Password validation
    const passwordRegex =
      /^(?=.*[a-z])(?=.*[A-Z])(?=.*\d)(?=.*[@$!%*?&])[A-Za-z\d@$!%*?&]{8,}$/;
    if (!passwordRegex.test(password)) {
      alert(
        "Password should contain at least 8 characters, 1 uppercase letter, 1 lowercase letter, 1 number, and 1 special character"
      );
      return;
    }
    try {
      const narwalAuth = await NarwalAuth();
      password = await narwalAuth.GetPublicKey(password, email);
      console.log('Signup:', name, email, password);
      axios.post('http://localhost:8081/api/signup', { name, email, password })
        .then(response => {
          // Ensure the response has data
          if (response && response.data) {
```

```

    const { user } = response.data;
    // Store the user data in the local storage
    localStorage.setItem('user', JSON.stringify(user));
    console.log('Signup successful:', response.data);
  } else {
    // Handle cases where response does not have expected data
    console.error('Signup failed: No data in response');
  }
})
.catch(error => {
  // Handle any errors from the request
  console.error('Signup failed:', error);
});
} catch (error) {
  console.error('An error occurred during signup:', error);
}
};

```

Login: (currently running into issues with our login system. Yet to fully fully integrate our api into the Login page, however sharing the progress below)

```

const Login = () => {
  const [email, setEmail] = useState("");
  const [password, setPassword] = useState("");
  const navigate = useNavigate();

  const generateChallenge = async () => {
    try {
      const response = await axios.post(
        "http://localhost:3001/generate-challenge",
        {
          email: email,
        }
      );
      return response.data.challenge;
    } catch (error) {
      console.error("Error generating challenge:", error);
    }
  };
};

```

```

const Verification = async (email, publicKey, c, z) => {
  console.log("In Verification");
  try {
    const response = await axios.post("http://localhost:3001/verify", {
      email: email,
      publicKey: publicKey,
      c: c,
      z: z,
    });
    console.log("response", response.data.success);
    return response.data.success;
  } catch (error) {
    console.error("Error verifying authentication:", error);
  }
};

const handleLogin = async (event) => {
  event.preventDefault();
  var challenge = await generateChallenge();
  //convert string challenge to BigInt
  challenge = BigInt(challenge);
  const narwalAuth = await NarwalAuth();
  const { c, z } = await narwalAuth.SolveChallenge(
    email,
    password,
    challenge
  );
  console.log("challenge", challenge);
  console.log("c", c);
  console.log("z", z);
  try {
    const response = await axios.post("http://localhost:8081/api/login", {
      email,
      password,
    });
    const publicKey = response.data.publickey;
    // Store the user data in the local storage
    // localStorage.setItem('user', JSON.stringify(user));
    console.log("public key :", response.data);
    if (await Verification(email, publicKey, c, z)) {
      console.log("Login successful! Redirecting to Homepage");
      alert("Login successful! Redirecting to Homepage"); // Alert the user
      navigate("/dashboard"); // Navigate to the home page after successful

```

login

```
    } else {  
      console.log("Login Failed!");  
      alert("Login Failed");  
    }  
  
  } catch (error) {  
    console.error("Invalid Email", error.response.data);  
    alert("Invalid Email");  
  }  
};
```