1. What is Cognito? Equivalent to Azure Active Directory B2C:   
   https://us-east-1.console.aws.amazon.com/cognito/v2/home?region=us-east-1
2. What is Amplify: <https://aws.amazon.com/amplify/>
3. Set up Angular shell app with ng new.
4. Install Amplify CLI: npm install -g @aws-amplify/cli
5. Configure Amplify: amplify configure
   1. Prompts to create IAM user with ‘AdministratorAccess-Amplify’
      1. Username: amplify-demo-user-iam
      2. Access key type authentication – this user is used by AWS tools
      3. Skip through steps
      4. Download user creds .csv to be safe
   2. Save profile as ‘angular-demo’
   3. Best to create separate IAM user for everywhere Amplify is installed
6. Install Amplify for Angular:
   1. npm install — save aws-amplify
   2. npm install aws-amplify-angular
7. Initialize Amplify: amplify init
   1. Does *lots* of stuff so project is initialized and connected to the cloud
   2. Lots of artefacts in ./amplify folder under root
8. Add auth
   1. Default config. Social provider needs Google and Facebook secrets
   2. Use email to sign in
   3. Advanced settings: Email and name to sign up
   4. Email verification with redirect
   5. ?????
9. Amplify push
   1. Pushed auth backend config to hosting resources on AWS and sets up a hosted auth UI
   2. Test the signin/up UI using the given endpoint
10. Adding auth creates a src/aws-exports.js file with config to use in your Angular code to integrate the backend into your frontend.
11. Time for Angular code:
    1. app.component.html gets login and logout links
    2. app.component.ts gets Auth object and login and logout methods
    3. polyfill.ts needs some additions because after Angular 6 these shims are no longer available but browsers seem to want them

(window as any).global = window;

(window as any).process = {

env: { DEBUG: undefined }

};

1. Hosted auth is configured to redirect to https URLs, so your angular app must use a certificate to serve routes as https.
   1. Create a self-signed certificate: <https://betterprogramming.pub/how-to-create-trusted-ssl-certificates-for-your-local-development-13fd5aad29c6>
   2. Make the certificate trusted. As in (a)
2. AuthenticationGuard to protect chosen routes from unauthenticated users.
   1. Use in routing.module
   2. Configure your angular.json file to get the Angular CLI to serve your application over https: <https://betterprogramming.pub/how-to-serve-your-angular-application-over-https-using-ng-serve-240e2c2e0a5d>