**Cognito**

* Cognito lets you add user sign-up, sign-in and access control to your web and mobile apps quickly and easily
* Cognito provides authentication, authozation, and user management for your web and mobile apps
* Your users can sign in directly with a user name and password, or through a third party such as Facebook, Amazon, or Google
* The two main components of Cognito are user pools and identity pools:
  + User poos are user directories that provide sign-up and sign-in options for your app users
  + Identity pools enable you to grant your users access to other AWS Services
* You can use identity pools and user pools separately or together
* Cognito works with external identity providers that support SAML or OpenID Connect, social identity providers(such as Facebook, Twitter, Amazon)
* Cognito Identity provides temporary security credentials to access your app’s backend resources in AWS or any service behind Amazon API GW
* You can use Amazon, FB, Twitter, Digits, Google and any other OpenID Connect compatible identity provider
* You can also integrate with your own identity provider
* Cognito exposes server-side APIs
* Users can sign-up and sign-in using email, phone or user name
* End users of an application can also sign in with SMS-based MFA
* There is an import tool for migrating users into a Cognito User Pool
* **User Pools**
  + A user pool is a user directory in Cognito  
    With a user pool, users can sign in to your web or mobile app through Cognito
  + Users can also sign in through social identity providers like FB, Amazon and through SAML identity providers
  + Whether users sign in directly or through a third party, all members of the user pool have a directory profile that you can access through an DSK
  + User pools provide:
    - Sign-up and sign-in services
    - A built0in customizable web UI to sign in users
    - Social sign-in with Facebook, Google, and Login with Amazon, as well as sign-in with SAML identity providers from your user pool
    - User directory management and user profiles
    - Security features such as MFA, check s for comporomised credentials, account takeover protection, and phone and email verification
    - Customized workflows and user migration through Lambda triggers
  + After successfully authenticating a user, Cognito issues JSON web tokens(JWT) that you can use to secure and authorize access to your own APIs or exchange for AWS credentials
* **Identity Pools**
  + Cognito identity pools(federated identities) enable you to create unique identities for your users and federate them with identity providers
  + With an identity pool you can obtain temporary, limited-privelege AWS credentials to access other AWS services. Amazon Cognito identity pools support the following identity providers:
    - Public providers(Amazon, Facebook, Google)
    - Amazon Cognito User Pools
    - Open ID Connect Providers
    - SAML Identity Providers
    - Developer Authenticated Identities
* **Amazon Cognito Sync**
  + Cognito Sync is an AWS service and client library that enables cross-device syncing of application-related user data
  + You can use it to synchronize user profile data across mobile devices and the web without requiring your own backend
  + The client libraries cache data locally so your app can read and write data regardless of device connectivity status
  + When the device is online, you can synchronize data, and if you set up push sync, notify other devices immediately that an update is available