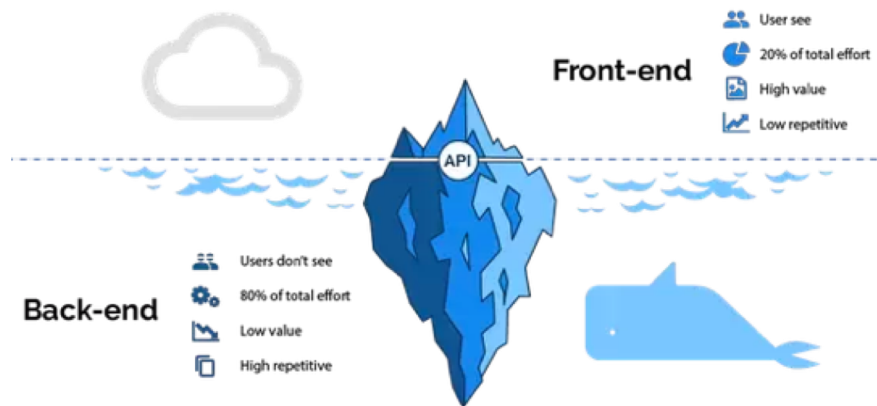# Tools for building cloud backend for an App
(Web, iOS, Android)
BaaS = Backend as a Service, MBaaS – Mobile BaaS

Typical Features:
- User registration & management, Authentication, Single Sign-on (secure tokens)
- Messaging, subscriptions, email verification, push notifications
- Geolocation
- Chatbots
- API (GraphQL & REST)
- Caching, CDN (Content Delivery Network), Realtime Database for synchronization & conflict resolution
- Storage (files, buckets, databases)
- A/B Testing, Analytics, AI/ML - Predictions, translations, ...
- Social Media Integration (Facebook, LinkedIn, Twitter, etc.)
- Logging, Performance monitoring, Crash Reporting
- Infrastructure (Security settings, auto-scaling, load-balancing, data replication, data backup, DB optimization)
- Supports multiple frontend technologies: React Native, iOS Native (Swift or Objective-C), Kotlin, Android Native, Ionic, Xamarin, Flutter, ...

Review:
 - https://blog.back4app.com/backend-as-a-service-baas/

- **Firebase** – BaaS/MBaaS from Google. It was originally an independent company founded in 2011. In 2014, Google acquired the platform and it is now their flagship offering for app development - https://firebase.google.com/
- **Back4app** - https://www.back4app.com/ - open source, free or paid ($5 .. $50 .. $1000/mo)
- **AWS Amplify** - https://aws.amazon.com/amplify/ - open source libraries, GUI components, CLI toolchain
- **Parse** - https://parseplatform.org/ - open-source
- **Backendless** - https://backendless.com/ - visual app builder
- **Cloudkit** - Apple's closed-source platform - https://developer.apple.com/icloud/cloudkit/ -
- **Kinvey** – enterprise BaaS, starts at $2.5K/year - https://www.progress.com/kinvey -
- **Azure Mobile Apps** - https://azure.microsoft.com/en-us/services/app-service/mobile/ -
- **Kii** - https://en.kii.com/ - IoT platform
- **Kumulos** - https://www.kumulos.com/ - user engagement platform
- **GameSparks** - https://www.gamesparks.com/ - backends for games
- **8Base** - https://www.8base.com/ - GraphQL-powered
- **Kuzzle** - https://kuzzle.io/ - open-source for IoT and mobile
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- **Playfab** - https://playfab.com/ - Microsoft backend for games
- **Appcelerator - Titanium** - https://en.wikipedia.org/wiki/Appcelerator - https://appcelerator.com/ - https://www.appcelerator.org/
- **MongoDB Stitch** - https://docs.mongodb.com/realm/ -
- **Oracle Mobile Hub** - https://www.oracle.com/application-development/cloud-services/mobile/ -
- **IBM Mobile Foundation** - https://www.ibm.com/cloud/mobile-foundation -
- **Baqend** (retired) - https://www.baqend.com/ -
- **Convertigo** - https://www.convertigo.com/ - open-source
- **BaasBox** - https://opensource.baasbox.com/ -
- **Hoodie** - http://hood.ie/ - https://github.com/hoodiehq - Javascript , Offline-First Backend