Utilizing Databases

Questions	Notes
Database	• Databases allow us to collect , store , retrieve , sort , graph , and manipulate data. • databases are necessary to presist data through runs of an application • a database is an organized collection of various forms of data • Databases are used by many apps , web, mobile, services and more • you access the data stored in a database by querrying it • Databases are typically controlled by a database management system

Amazon Relational database service (rds)	• Supports popular databases engines
	• offers high availability and fault tolerance using Multi-AZ deployment option
	• AWS manages the database with automatic software patching, automated backups , operating system maintenance , and more
	• launch read replicas across regions in order to provide enhanced performance and durability
	• includes:
	  ◦ Amazon Aurora
	  ◦ Mysql
	  ◦ Oracle
	  ◦ mariadb
	  ◦ SQLserver
	  ◦ Postgresql

Amazon Aurora	• supports MySQL and PostgreSQL database engines
	• 5 faster than normal MYSQL and 3 faste than normal PostgreSQL
	• scales automatically while providing durability and high avilability
	• managd by rds
	• supports:
	  ◦ postgresSQL
	  ◦ MySQL

DynamoDB	• is a fully managed NOSQL key-value and document database • Fully managed and serverless • non-relational • scales automatically to massive workloads with fast performance
Amazon DocumentDB	• is fully managed document database that support MongoDB • Document database • Mongodb Compatiible • Fully managed and serverless • non-relational
Amazon ElastiCache	• is a fully managed in-memory datastore compatible with Redis or Memcached • In-memory datastore • compatible with Redis or Memcached engines • data can be lost • offers high performance and low latency
Amazon Neptune	• Graph database service • supports highly connected datasets like social media networks • fully managed and serveless • fast and reliable
Databases in the real world	• Alleviate database load for data that's accessed often:ElastiCache • Process large setes of user profiles and social interactions: Neptune • Nosql database fast enough to handle millions of request per second: Dynamodb • Operate MongoDB workloads at scale: DocumenDB

Résumé

- Rds: is only for relational databases.Don't forget the supported database engines:aurora, postgreSQL, MySQL, MariaDB, Oracle database, and sql server
- Aurora: only supports PostgreSQL and Mysql
- Neptune: Helps you to create social media graphs

- dynamoDB is NOSQL database
- Elasticache: an in-memory datastore
- DocumentDB: supports MongoDB