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AWS RDS
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Database : It is a software which is used to store the data permanently.


=> Every s/w application will use database to store the data permanently.

=> Software applications will use SQL to communicate with databases.

=> SQL stands for Structured Query Language.

=> Using SQL we can perform CRUD operations in the database.

                        C -> Create
                        R -> Retrieve
                        U -> Update
                        D -> Delete

=> We have several databases in the market

                        1) Oracle
                        2) MySQL
                        3) SQLServer
                        4) PostGres

=> The above databases are called as Relational Databases.

=> Relational databases will store the data using tables.

=> Table represents data by using Rows and columns.

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Database Setup
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=> We can setup database in 2 ways

        1) On-Prem Database (our own setup)

        2) Cloud Database (provider will manage)


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Challenges with On-Prem Database
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                1) Purchase DB server license

                2) Install DB Server s/w

                3) Network

                4) Availability (24*7)

                5) Scalability

                6) Backup

                7) Security
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=> To overcome above challenges it is highly recommended to use Cloud Database.

=> If we use cloud database then cloud provider will manage database server for us.

=> AWS RDS is a service what is providing cloud databases

=> RDS stands for relational database service in AWS cloud.

=> RDS is used to create & manage relational databases in AWS.

=> RDS is a fully managed service in AWS cloud.

=> RDS works based on "pay as you go" model.


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RDS Lab Task
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Step-1 : Create MySQL DB Server using RDS

Step-2 : Enable MySQL :: 3306 port number in Security Group Inbound Rules

Step-3 : Test MySQL DB Connection using MySQL Workbench software (client s/w)

Step-4 : Execute some SQL queries for practice

Step-5 : Delete RDS instance to avoid billing.

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MySQL DB Creation Steps
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Creation method : Standard Create

Engine Type : MySQL

Templates: Free Tier

Setup Credentials

public access : Yes

Select Security Group

Initial DB name : sbidevdb (optional)

Create Database

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Database Details
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DB Endpoint : database-1.cjmqwwo0a08x.ap-south-1.rds.amazonaws.com

DB username : admin

DB password : AshokIT321

DB port : 3306

Note : Using above details we can check database connectivity.

note: once practice completed, delete RDS instance


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Assigment
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Springboot with RDS Integration : https://www.youtube.com/watch?v=GSu1g9jvFhY