Aws:

1. **Compute Services:**
   - **EC2 (Elastic Compute Cloud):**
     - *Description:* EC2 provides resizable compute capacity in the cloud, allowing you to run virtual servers.
     - *Example:* Launching an EC2 instance involves selecting an Amazon Machine Image (AMI), choosing an instance type, configuring security groups, and launching the instance. Once running, you can connect to it and install your applications.

   - **Lambda:**
     - *Description:* Lambda is a serverless computing service that runs code in response to events and automatically manages the compute resources.
     - *Example:* You can create a Lambda function that processes image uploads to an S3 bucket. Whenever a new image is uploaded, the Lambda function is triggered to perform actions like resizing or watermarking.

2. **Storage Services:**
   - **S3 (Simple Storage Service):**
     - *Description:* S3 is object storage designed to store and retrieve any amount of data.
     - *Example:* Storing website assets (images, CSS, JavaScript) and serving them directly to users. S3 can also be used for backup and archival purposes.

   - **EBS (Elastic Block Store):**
     - *Description:* EBS provides persistent block-level storage volumes for use with EC2 instances.
     - *Example:* Attaching an EBS volume to an EC2 instance to store data persistently. It can be used as the root file system or for databases.

3. **Database Services:**
   - **RDS (Relational Database Service):**
     - *Description:* RDS is a managed relational database service supporting various database engines like MySQL, PostgreSQL, and SQL Server.
     - *Example:* Setting up an RDS instance for a web application to store and retrieve structured data.

   - **DynamoDB:**
     - *Description:* DynamoDB is a fully managed NoSQL database service for fast and predictable performance.
     - *Example:* Storing user profiles and preferences in a DynamoDB table for a scalable and low-latency application.

4. **Networking:**
   - **VPC (Virtual Private Cloud):**

- *Description:* VPC allows you to provision a logically isolated section of the AWS Cloud.
  - *Example:* Creating a VPC with public and private subnets, and configuring security groups and network ACLs for secure communication.

- **Route 53:**
  - *Description:* Route 53 is a scalable and highly available domain name system (DNS) web service.
  - *Example:* Registering a domain name, creating DNS records, and routing traffic to different AWS services.

5. **Security and Identity:**
- **IAM (Identity and Access Management):**
  - *Description:* IAM enables you to manage access to AWS services and resources securely.
  - *Example:* Creating IAM users, groups, and roles with specific permissions to control access to AWS resources.

- **Cognito:**
  - *Description:* Cognito provides user identity and access management for web and mobile apps.
  - *Example:* Implementing user sign-up, sign-in, and managing user pools for authentication in a mobile application.

6. **Machine Learning:**
- **Sagemaker:**
  - *Description:* Sagemaker simplifies the process of building, training, and deploying machine learning models at scale.
  - *Example:* Using Sagemaker to build a model for predicting customer churn and deploying it for real-time inference.

- **Rekognition:**
  - *Description:* Rekognition is an image and video analysis service with capabilities like facial recognition and object detection.
  - *Example:* Analyzing images to detect and index faces or objects for content moderation.

7. **Analytics:**
- **Redshift:**
  - *Description:* Redshift is a fully managed data warehouse for running complex queries on large datasets.
  - *Example:* Analyzing and querying large sets of business data to derive insights for decision-making.

- **Glue:**
  - *Description:* Glue is an ETL service for preparing and transforming data for analysis.

- *Example:* Extracting data from various sources, transforming it, and loading it into a data warehouse for analysis.

8. **Developer Tools:**
   - **CodeCommit:**
     - *Description:* CodeCommit is a fully managed source control service hosting Git repositories.
     - *Example:* Storing and managing source code for a web application, allowing collaboration among developers.

   - **CodePipeline:**
     - *Description:* CodePipeline automates the build, test, and deployment phases of the release process.
     - *Example:* Setting up a continuous integration and delivery (CI/CD) pipeline for a web application.

9. **Management and Monitoring:**
   - **CloudWatch:**
     - *Description:* CloudWatch provides monitoring for AWS resources and applications.
     - *Example:* Setting up CloudWatch alarms to notify when certain thresholds are exceeded, such as high CPU usage on an EC2 instance.

   - **CloudFormation:**
     - *Description:* CloudFormation allows you to define and provision AWS infrastructure as code.
     - *Example:* Creating a CloudFormation template to define and deploy a multi-tier web application with EC2 instances, RDS databases, and networking components.

10. **Internet of Things (IoT):**
    - **IoT Core:**
      - *Description:* IoT Core connects and manages IoT devices securely at scale.
      - *Example:* Connecting and managing smart devices (sensors, actuators) in a manufacturing plant to monitor and control processes.

    - **Greengrass:**
      - *Description:* Greengrass extends AWS capabilities to local devices, allowing them to run AWS Lambda functions.
      - *Example:* Running Lambda functions on edge devices to process data locally before sending it to the cloud, reducing latency.