**Understand the Components of Monitoring**

* Every monitoring architecture or setup works with same base components, They are
  + Alerts/notifications:
    - A alert/notification is an event that is triggered to inform the system Admin or Cloud Engineer about a potential issue or issue that has already happened
    - Notifications can be sent using different media Email, SMS, Pager Alert, Mobile App Push Notifications.
    - In AWS there is a Service called as Amazon SNS (Simple Notification System) where we can configure alerts/notifications
  + Events:
    - Any action or activity or series of activities that occur in a system is called an event
    - The ability to track each of thes events is very important in monitoring software systems and applications
  + Logging:
    - A log is historical record of an event.
    - A log contains details of the event and also the time when event occured.
    - Logs are generally text files in formats such as (.txt, .json, .xml)
    - Analyzing Logs to improve troubleshooting is an important action for admins.
  + Metrics
    - A metric is an information about a resource at certain point of time
    - Examples: Free disk space, memory consumption, cpu usage etc
  + System Availability:
    - Availability = (uptime)/(uptime+downtime)
  + Incidents: Some issue that has caused the failure of the system
* Note: MTTR (Mean time to Recover)

**AWS CloudWatch**

* This is a Service designed by AWS which is end-to-end monitoring solution, used for monitoring applications, server, serverless application, on-premises systems and many more.
* Cloud Watch has the ability
  + to collect and store logs of the applications deployed in any environment
  + to collect metrics and create dashboards
  + to use SNS to send notifications of failures
  + to capture inbuilt Events
  + to take corrective actions