Parts of Computer

-----------------

CPU, RAM, Main Board, Monitor, Hard disk drive, PowerSupply (SMPS), Monitor, GPU, Keyboard, Mouse, Network Interface card

System Hardware

----------------

CPU - i3, i5,i7,i9

Memory RAM - 4GB, 8GB, 16GB

Hard disk - HDD / SSD (HDD - Magnetic - SATA - 1GBps, SSD - upto 6GBps - 10GBps)

Network Speed -

Operation system

-----------------

1. To make your hardware functional or operational

2. User interface to use applications on common platform.

types of OS - Windows, Linux / unix, Android, MAC, Chrome, IOS - APPLE, IOS - cisco

3 tier model

------------

USER

3. Applications - System Software

2. OS - Software

1. Hardware

Server / Workstation / Client / Desktop

---------------------------------------

Server takes requests from client and executes...

Types of Servers - File server, Web Server, DB Server, EMail server, DNS server, Directory Server, Proxy Server, DHCP Server, Print Server, Media Server,

Workstation- A System to work along - Normally your place which contains os + applications

Desktop - End user Computing -

2 types of OS

Server Desktop

----------------------------------------------------------

MS Windows Server -2016, 2019, 2022 MS windows 10, 11

Redhat Linux Server - RHEL 7,8 Redhat Fedora

Ubuntu Server Ubuntu Desktop, Kali, Parrot

Amazon Linux Server Android

Mac

CISC (Complex Instructions Set Computing) / RISC (Random Instructions Set Computing)

SDLC - Software Development Life Cycle

======================================

Plan Analyze Design Develop Test Implement Maintain

• Plan – What is the problem and what resources do you need to solve it? • Analyze – What do you want from a solution? • Design – How will you built what you want? • Develop – Build what you have designed. • Test – Did you get what you want? • Implement – Start to use what you built. • Maintain – Improve what you built.

Software - System Software (OS), Application Software,

User Data

Web Services - Web Server is a service which hosts your websites.

Popular WEB Servers - Microsoft IIS ( Internet information Server)

Apache Web Server (GNU) supports both Linux / Windows

Apache Tomcat

nginx server

Programming languages used for website development - Java, Python, PHP, html, c++, JS, CSS, node.js,

New generation Scripting Languages

----------------------------------

JSON - Javascript Object Notation.(Java)

YAML - Yet another markup Language. (Python)

IAAS - Servers - Compute, Storage, Network

PAAS - OS, Applications, Runtime

SAAS - Applications software,

ECC - EC2 - Elastic Compute Cloud

SSS - S3 - Simple Storage Service

Cloud - A Service which is deployed on Network / Internet is called Cloud

CYOL -

• Amazon Elastic Block Store (Amazon EBS)

• Amazon Elastic Compute Cloud (Amazon EC2)

• Amazon Elastic Container Registry (Amazon ECR)

• Amazon Elastic Container Service (Amazon ECS)

• Amazon Elastic File System (Amazon EFS)

• Amazon Elastic Kubernetes Service (Amazon EKS)

• Amazon Relational Database Service (Amazon RDS)

• Amazon Simple Storage Service (Amazon S3)

• Amazon Simple Storage Service Glacier

• Amazon Virtual Private Cloud (Amazon VPC)

• AWS Identity and Access Management (IAM)

• AWS Key Management Service (AWS KMS

ACCESSING AWS Resources

-----------------------

1) AWS Management Console

2) Using CLI (Command line interface)

3) SDK - Software Development Kits - Android Studio, Eclipse, Visual Studio

4) API - Application Programing Interface - SQL Work Bench

Documentation for EC2, S3, Cloud9, Lambda

Pricing

TCO - Total Cost of ownership

ROI - Return on Investment

Instance - Server

Region is a Data Centre which contains Multiple Availability Zones

Fault Tolerant - Withstanding Failures.

20.04.2022

----------

Foundational Services

Compute -EC2 (Autoscaling, ELB), Lambda, Beanstalk

Networking - VPC, Route53, VPN

Storage - EBS Elastic Block Store(Volume), S3, Glacier, EFS (Elastic File System)

Database, Security, Management ..

RDS - Relational Database Services

Mysql (free), MSSQL, PostGreSQL, MariaDB, Oracle, Amazon Aurora

Security Group - System Firewall.

Firewall is to allow / deny the inbound / outbound traffice to your system

Compliance - Adherence to specified / standards

S3 - Simple storage Service

----------------------------

Storage - 2 Types (Volume Based & Object based)

Volume based is EBS

Object Based is S3 and is Global

Max Buckets - 500 /account (Bucket name should be unique)

Max size of object - 5TB

Max no. of objects /bucket = unlimited

Object can be either file / folder

3(1000) 6 9 12 15 18 21 24

K M G T P Y Z X