

- ① what is Web Application
- ② Explain difference between Dynamic & Static Website
- ③ Explain Client Server Architecture
- ④ what is IP Address & Type
- ⑤ Define PORT
- ⑥ Explain URL
- ⑦ what do you understand by Web Server
- ⑧ Explain Three Layer Architecture
- ⑨ Brief Explanation of TOMCAT Server
- ⑩ Describe J2EE
- ⑪ Difference b/w Client Side & Server Side programming

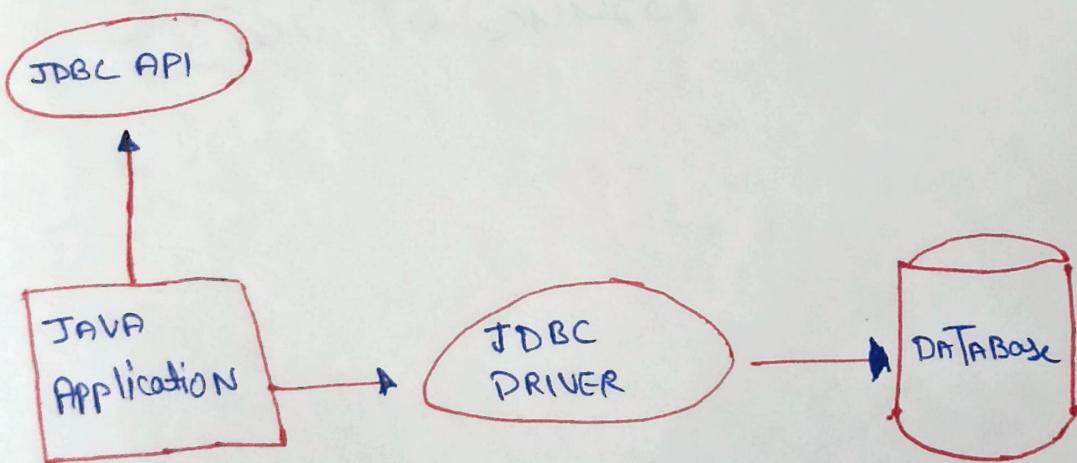
- ① what is Servlets
- ② what are Servlets Benefits
- ③ Explain Architecture of Servlets
- ④ Define Servlet Container & its States or Operation
- ⑤ Explain LifeCycle of a Servlet
- ⑥ what is Servlet-API
- ⑦ Define Servlet Interface
- ⑧ what are Methods of Servlet

# What is JDBC ?

JDBC stands for Java Database Connectivity

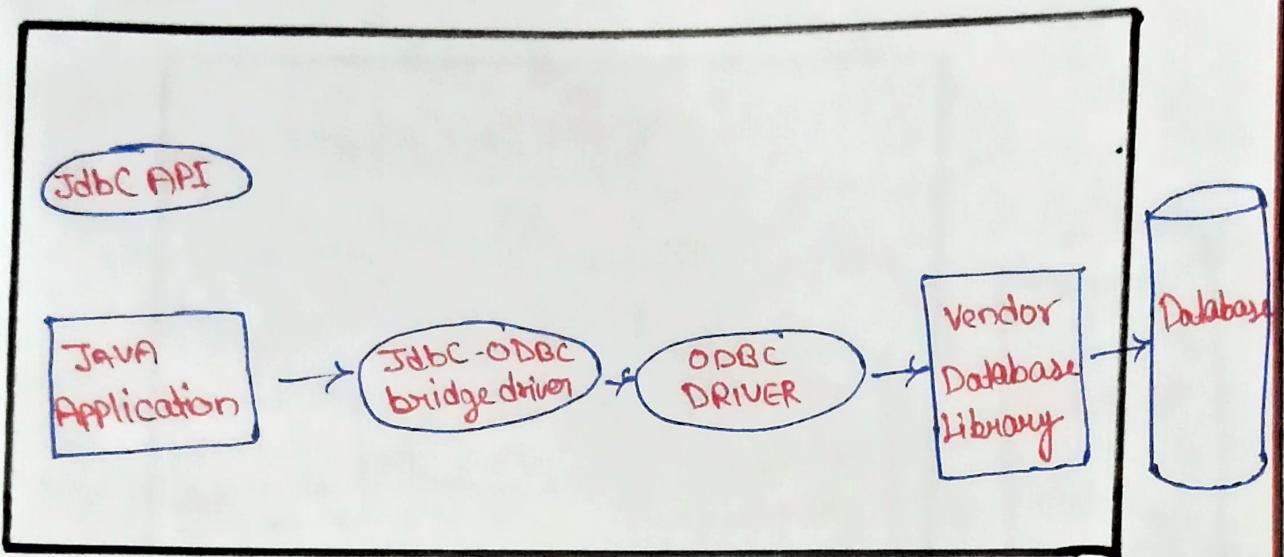
JDBC is an JAVA API used to Connect, manage  
Insert & Execute the query with the Database

- JDBC API uses JDBC DRIVERS to Connect with the Data base
- There are 4 Types of JDBC DRIVERS
  - JDBC-ODBC Bridge Driver
  - Native DRIVER
  - Network Protocol Driver
  - Thin Driver



Basic Structure of DRIVERS

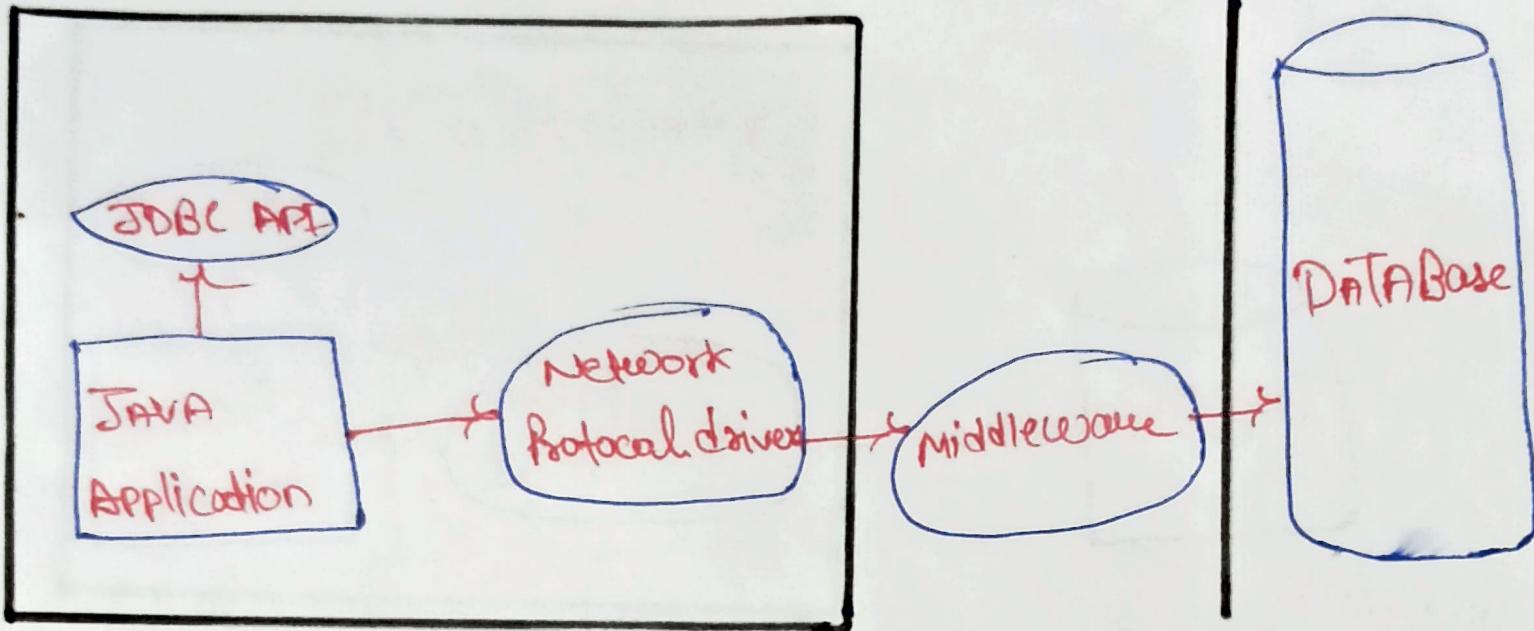
# JDBC-[ODBC]



CONVERTS JDBC METHOD CALLS INTO  
ODBC Function Calls

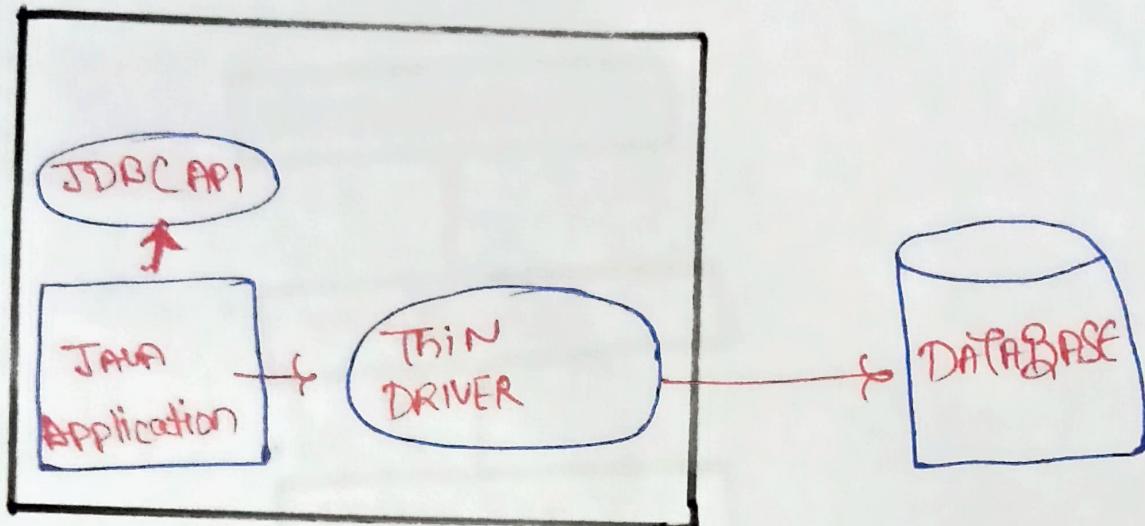
- Easy to use
- Easy to connect

# NETWORK PROTOCOL



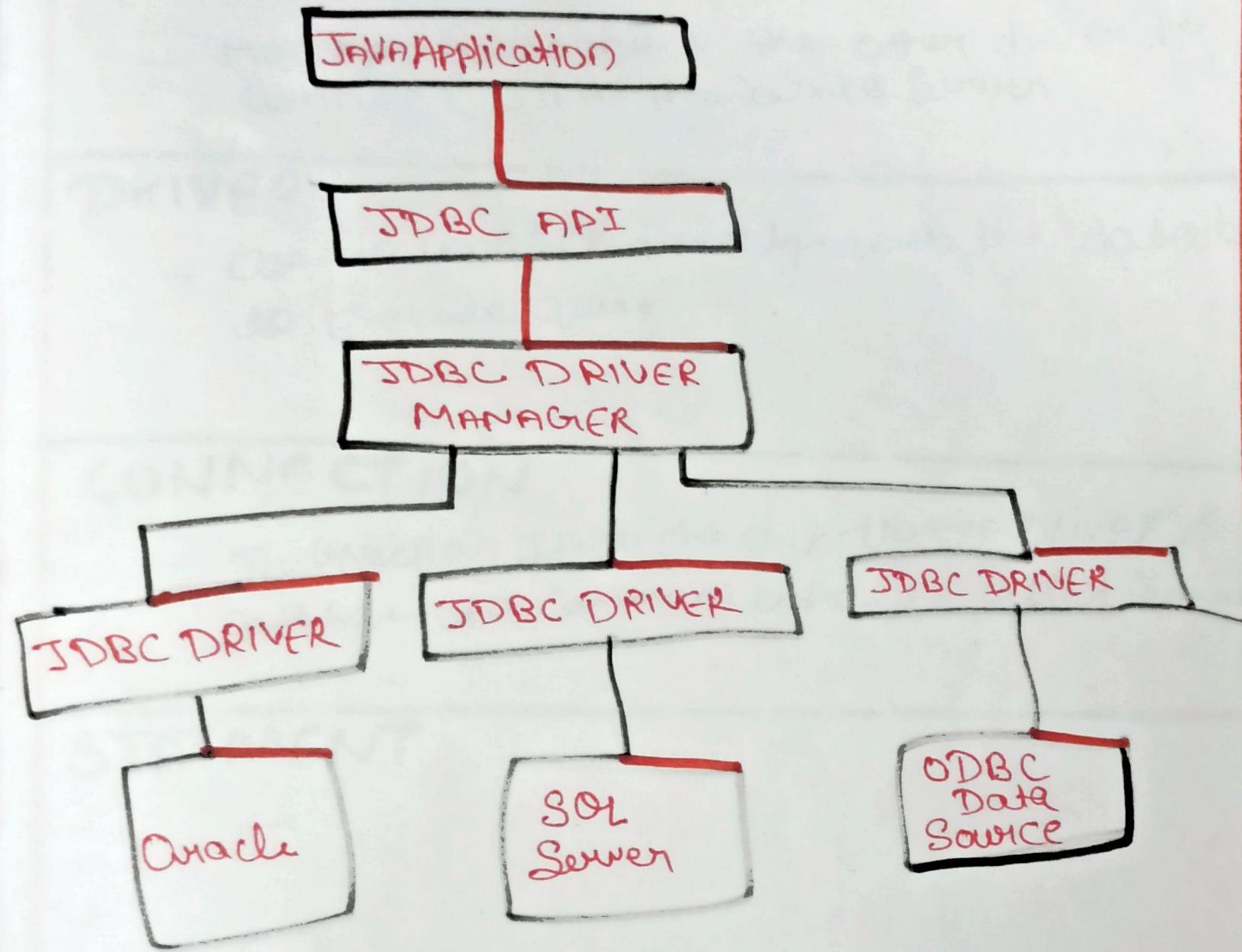
- CONVERT JDBC CALLS INTO VENDOR SPECIFIED databaseProtocol
- NO library Required

# THIN



- CONVERT JDBC CALLS INTO  
the VENDOR-SPECIFIC DATABASE Protocol
- Fully / Pure JAVA
  - BETTER PERFORMANCE than  
other

# ARCHITECTURE OF JDBC



# COMPONENT OF JDBC

## DRIVER MANAGER

- Manages to connect the other driver to connect with the write Server

## DRIVER

- Use to connect directly with the database to execute query

## CONNECTION

- The connection established between DRIVER & Database to communicate is called Connection

## STATEMENT

-

## RESULTSET

- the Data provided by the database as result are stored in Result Set

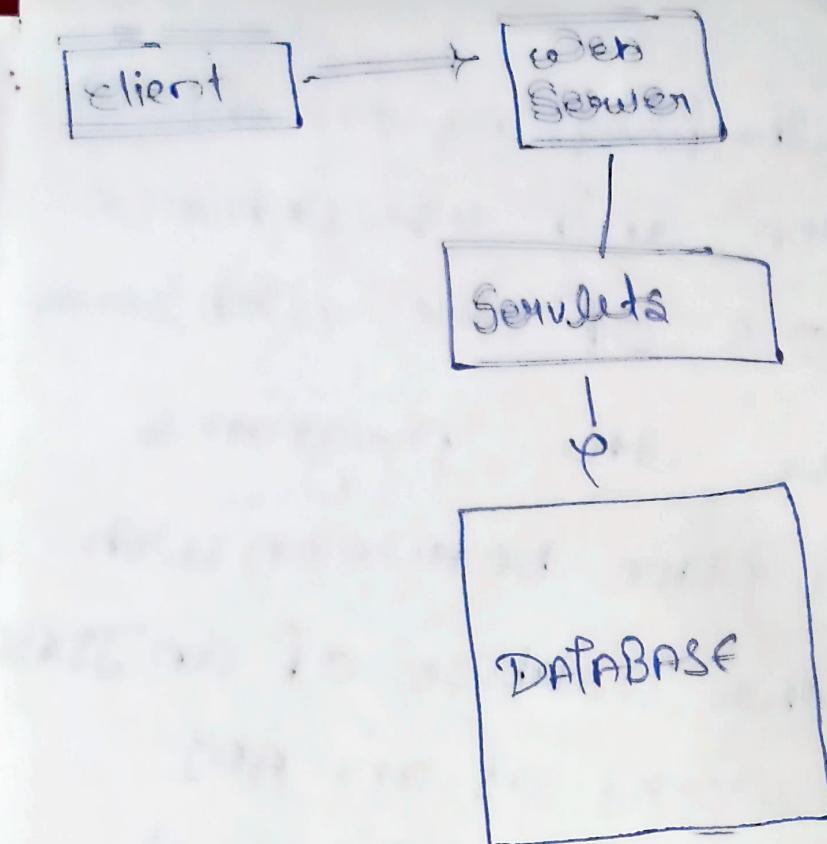
## SQLEXCEPTION -

The Error Condition or Situation in which the Result is blocked because of some reason known as SQLEXCEPTION

## Servlets

Servlets are the programs on the web application and use Enhance the power O.R of the Web Server

Servlet are the programs which takes place between Web-Server & the Database of an JDBC by which it works as an API (Application Programming Interface) which takes the Request from the Web Server & create a response by taking Result by the DATABASE & SENT BACK it to the SERVER so that it can send it by to the client or the user



SERVLET programs & API  
are we use to Create  
Our web site dynamic &  
Responsive.

some of its BENEFITS

- ① It makes web Application fast
- ② It Enhance the performance
- ③ Platform Independent
- ④ Secure

## Resistor Resistor Reference Architecture

In this org. ALU operation are perform only on a resistor data so operant are required in the resistor after manipulation Result is also placed in Resistor

Here 3 address instruction format is compatible instruction format

Stack Based CPU Org. →  
The Computer which use Stack based CPU org. are based on a data structure

Stack is a list of Data word  
Stack is a list of Data ~~word~~ word

it uses Last in First Out Access method which is most popular Access method in most of CPU in this R Resistor

we to store the address of top most element of Stack

which is known as Stack pointer.

In this org. ALU operation are perform on stack data it means both the Operant are always required on the stack after manipulation the result is based in the stack

The main two operation that are perform on the stack are push or pop these two operation are the perform from one end only

PUSH



This operation Results in inserting one operant at top of the stack & it decrease the stack pointer register

The format of push instruction is push it insert one data word & specify the address

To the TOP of the STACK. Can be implemented  
It inserts the data word  
as SP (stack pointer)

$\overleftarrow{SP \leftarrow SP - 1}$   
SP (top of the stack)  
SP (memory address)

$\overrightarrow{POP}$   
This operation results in deleting one operand  
from the top of the stack & it increase the stack  
pointer register the format the POP instruction  
is instruction deletes the data word at the  
top of the stack to the specified address it can  
be prevented is

$SP \leftarrow SP + 1$   
SP (top of the stack)  
SP (memory address)

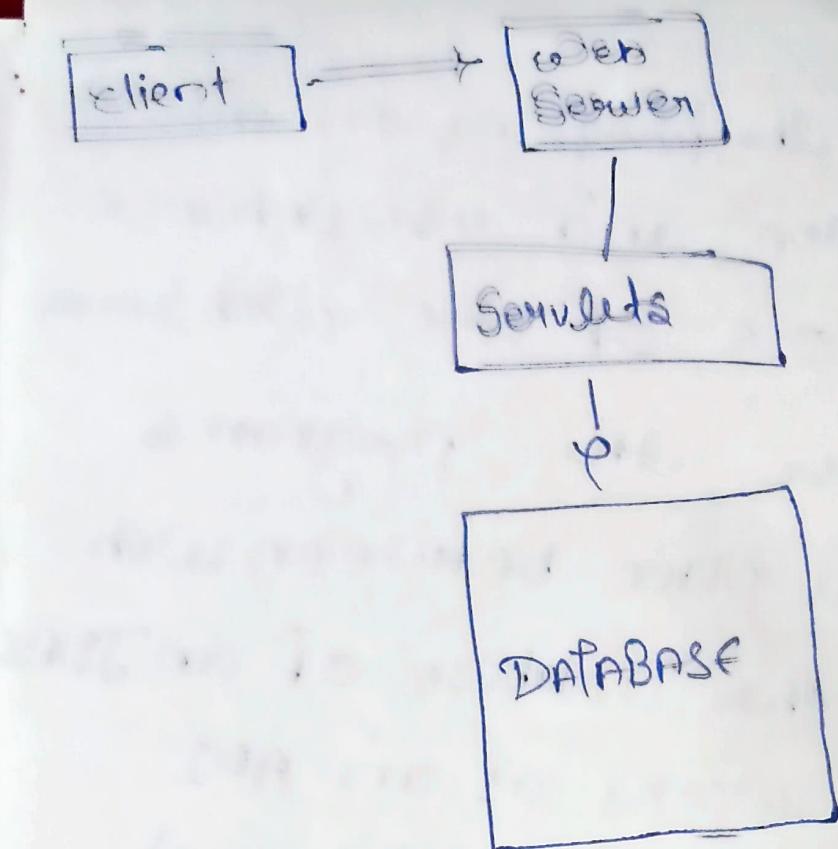
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## JAVA

Procedure Oriented Programming (POP)  
or  
Object Oriented Programming (OOPS)

- POP:-
- ① Collection of programs for every specific task
  - ② Languages used - C, COBOL
  - ③

## OOPS

- Have to Create object
- ① Have not to repeat coding
- ② Languages C++, Java

## Method

## Hierarchically

Level wise division →

Sub division

Dep - I

Dep - II

Dep - III

Dep - IV

## Register Register Reference Architecture

ALU operation are perform Only in this Org. ALU operation are required in register data so operation result is also on a register after manipulation Result is also on a register after manipulation Result is also on a register placed in register placed in instruction format is compatible with 3 address instruction format Here 3 address instruction format instruction

Stack Based CPU org. →  
The computer which we Stack based  
CPU org. one based on a data structure  
Stack is a list of Data word  
Stack is a list of Data word  
it uses stack in first out Access  
method which is most popular Access  
method in most of CPU in this R register  
use to store the address of top  
most Element of Stack

which is known as Stack pointer.

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Pop  
This operation results in deleting one operand from the top of the stack & it increases the stack pointer position. If the format of the POP instruction is instruction deletes the data word at the top of the stack to the specified address it can be prevented in

SP ← SP + 1  
SP (Top of the Stack)  
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