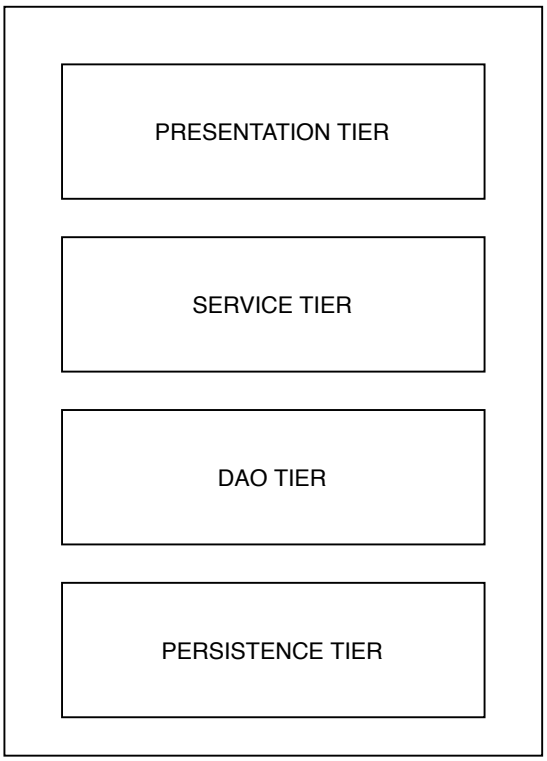
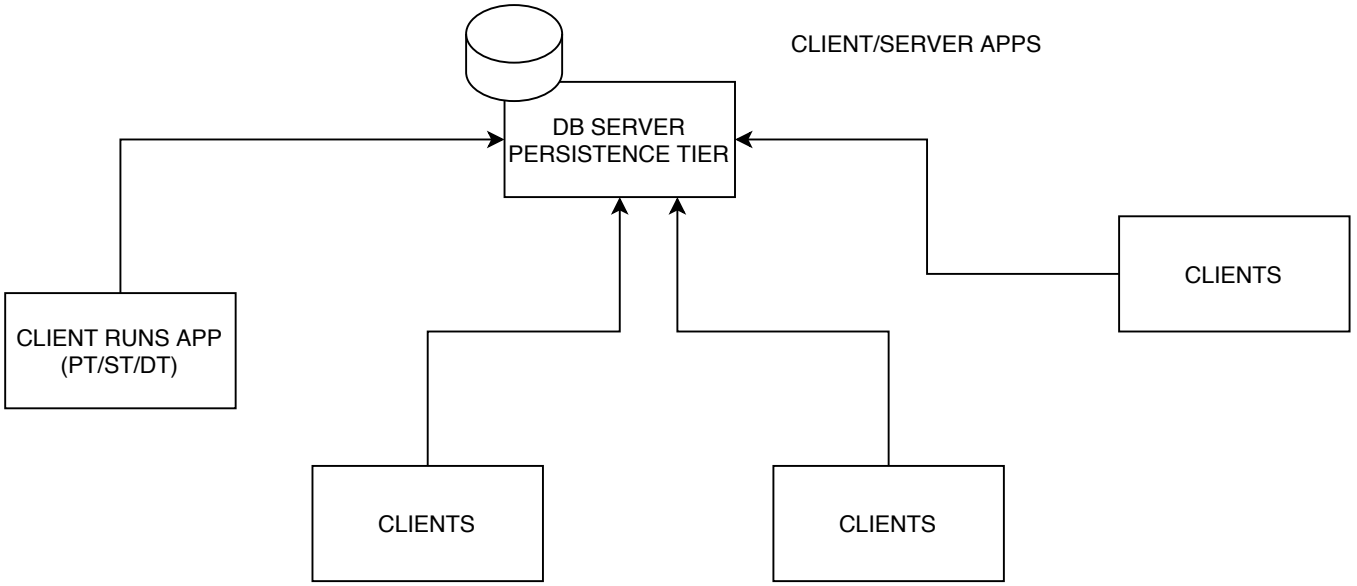
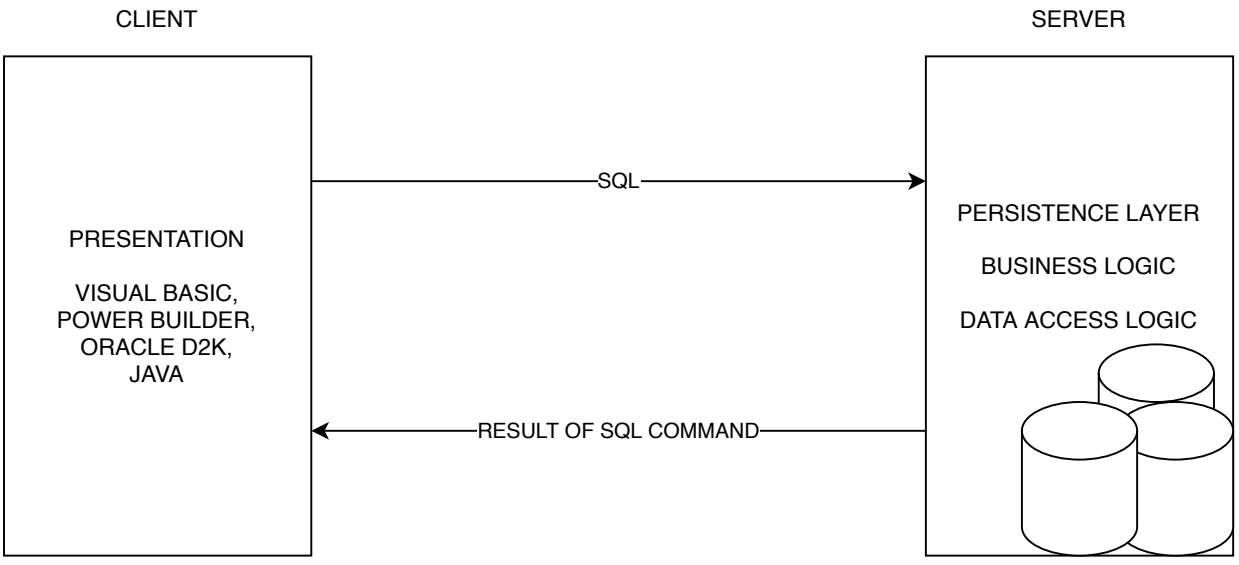
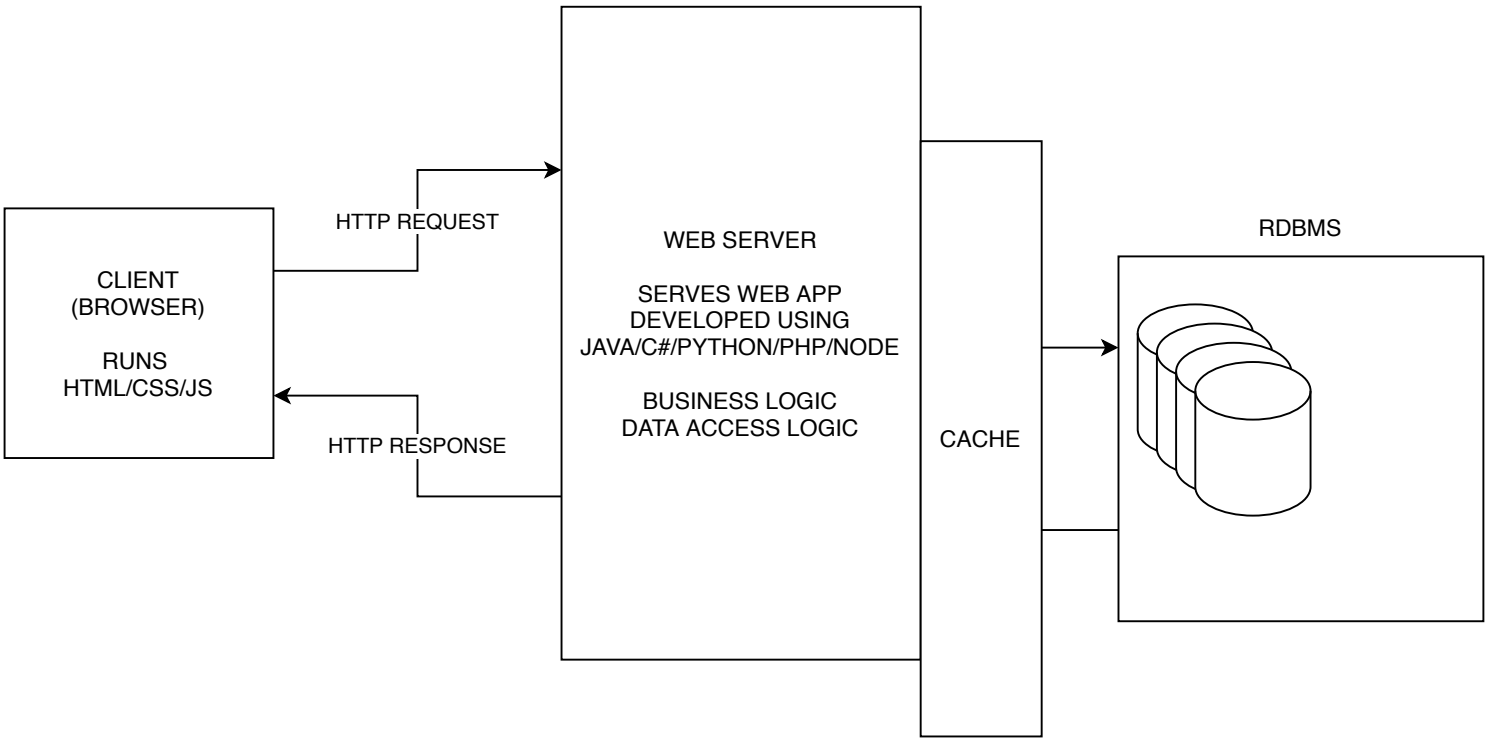
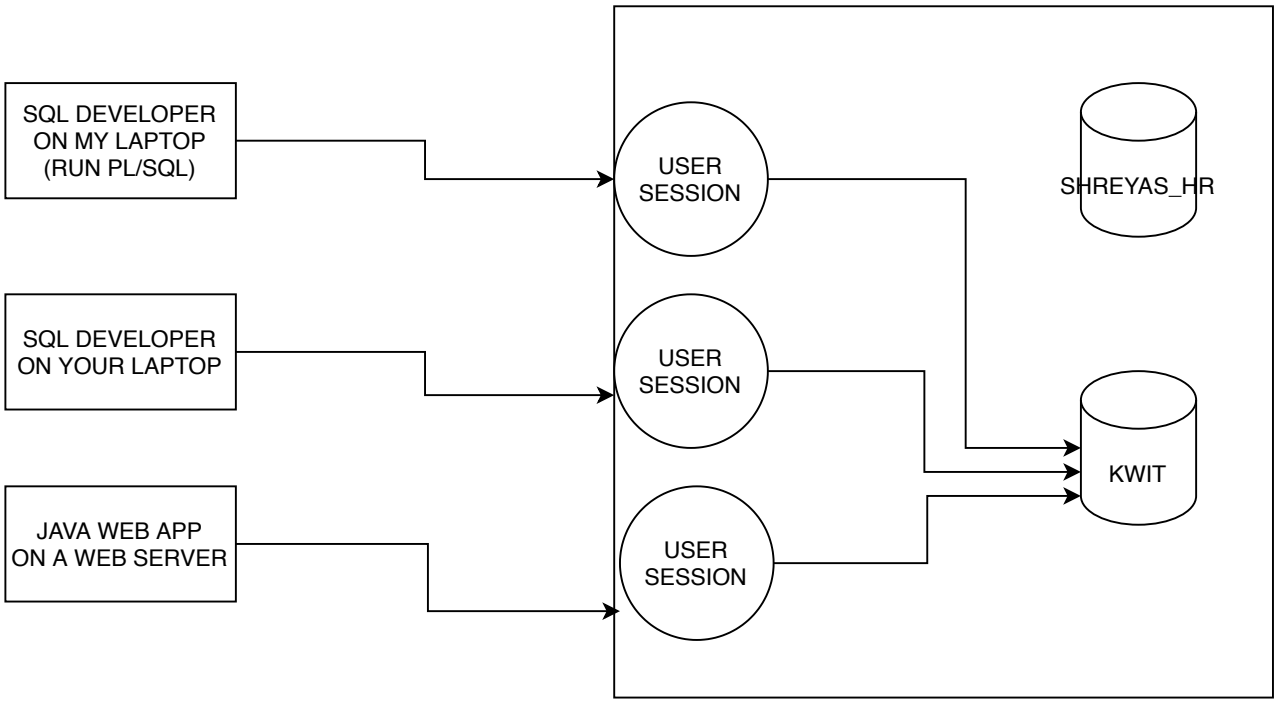
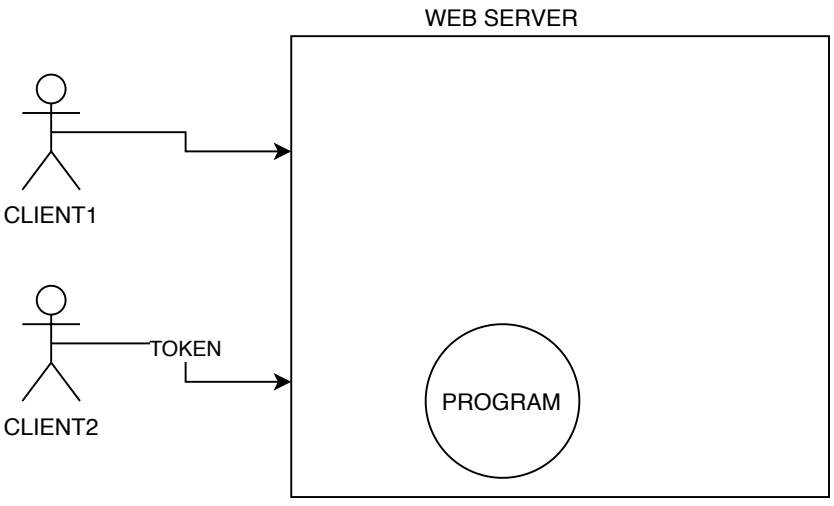

PRESENTATION TIER
SERVICE TIER
DAO TIER
PERSISTENCE TIER


CLIENT/SERVER APPS
DB SERVER
PERSISTENCE TIER
CLIENT RUNS APP
(PT/ST/DT)
CLIENTS
CLIENTS
CLIENTS


CLIENT
SERVER
PRESENTATION
VISUAL BASIC,
POWER BUILDER,
ORACLE D2K,
JAVA
SQL
PERSISTENCE LAYER
BUSINESS LOGIC
DATA ACCESS LOGIC
RESULT OF SQL COMMAND

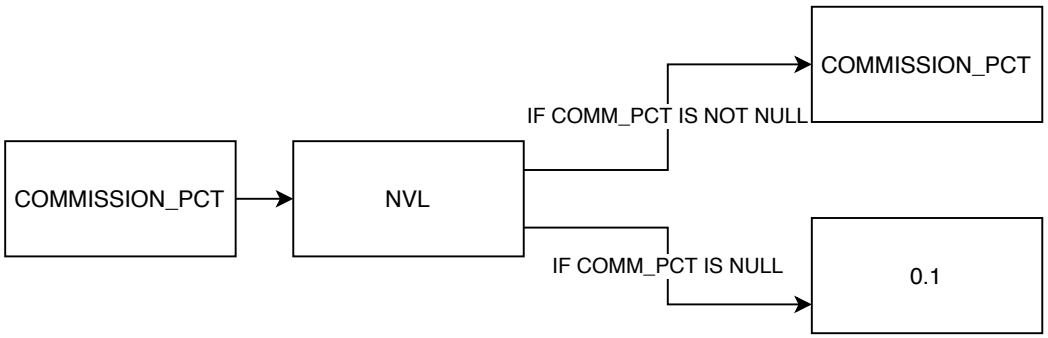

CLIENT
(BROWSER)
RUNS
HTML/CSS/JS
HTTP REQUEST
HTTP RESPONSE
WEB SERVER
SERVES WEB APP
DEVELOPED USING
JAVA/C#/PYTHON/PHP/NODE
BUSINESS LOGIC
DATA ACCESS LOGIC
CACHE
RDBMS

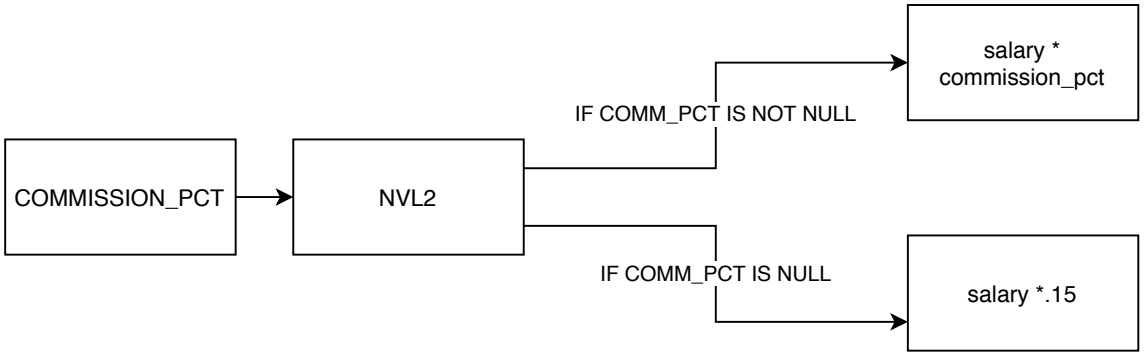

SQL DEVELOPER
ON MY LAPTOP
(RUN PL/SQL)
SQL DEVELOPER
ON YOUR LAPTOP
JAVA WEB APP
ON A WEB SERVER
USER
SESSION
USER
SESSION
USER
SESSION
SHREYAS_HR
KWIT

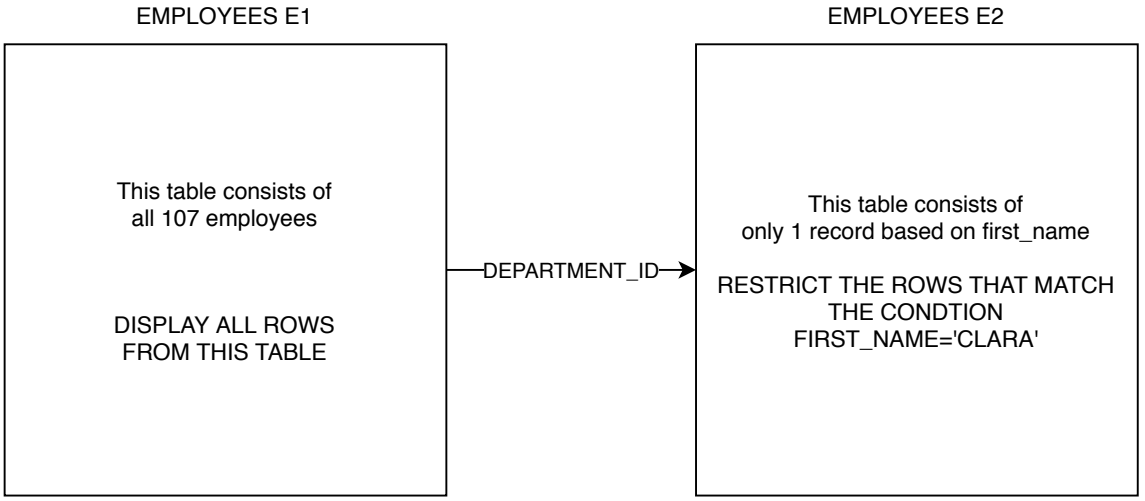

WEB SERVER
CLIENT1
CLIENT2
TOKEN
PROGRAM

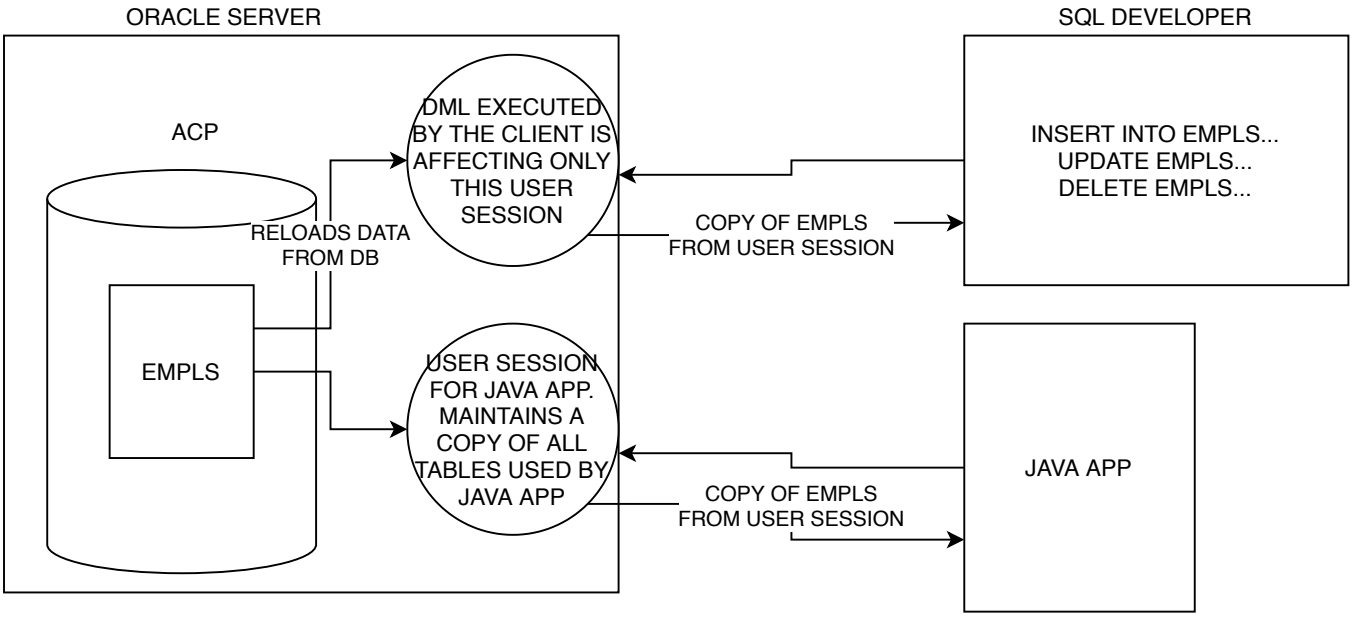
100	VINOD
200	RAMESH
224	HARISH
300	JOHN

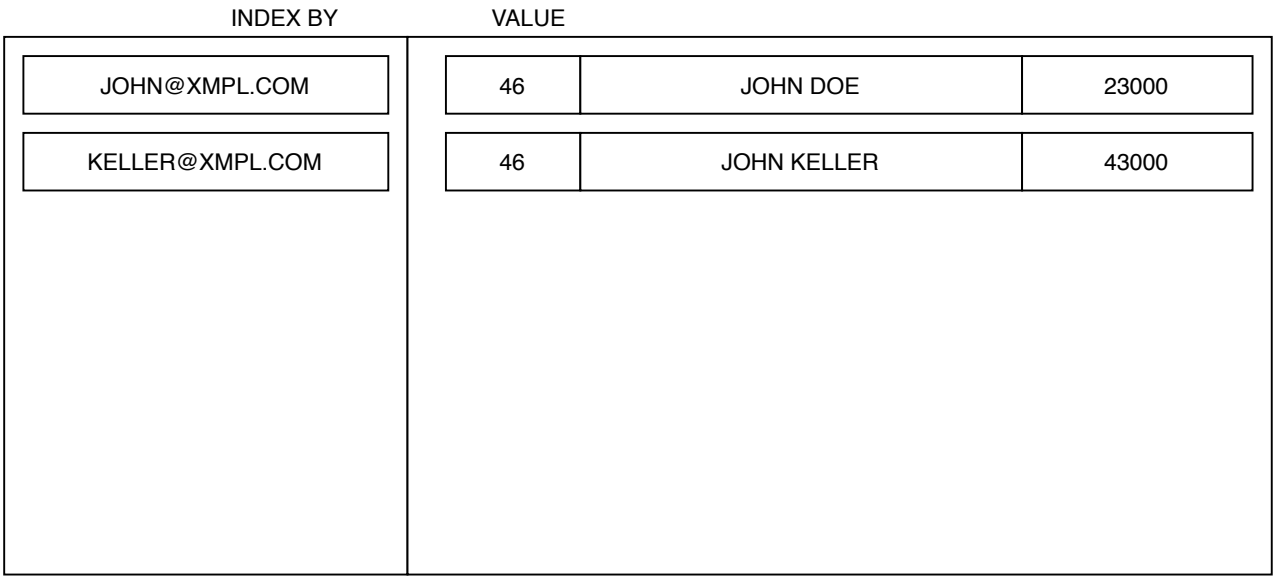
VINOD@VINOD.CO	101	VINOD	KUMAR	BANGALORE
SHYAM@XMPL.COM	102	SHYAM	SUNDAR	SHIMOGA

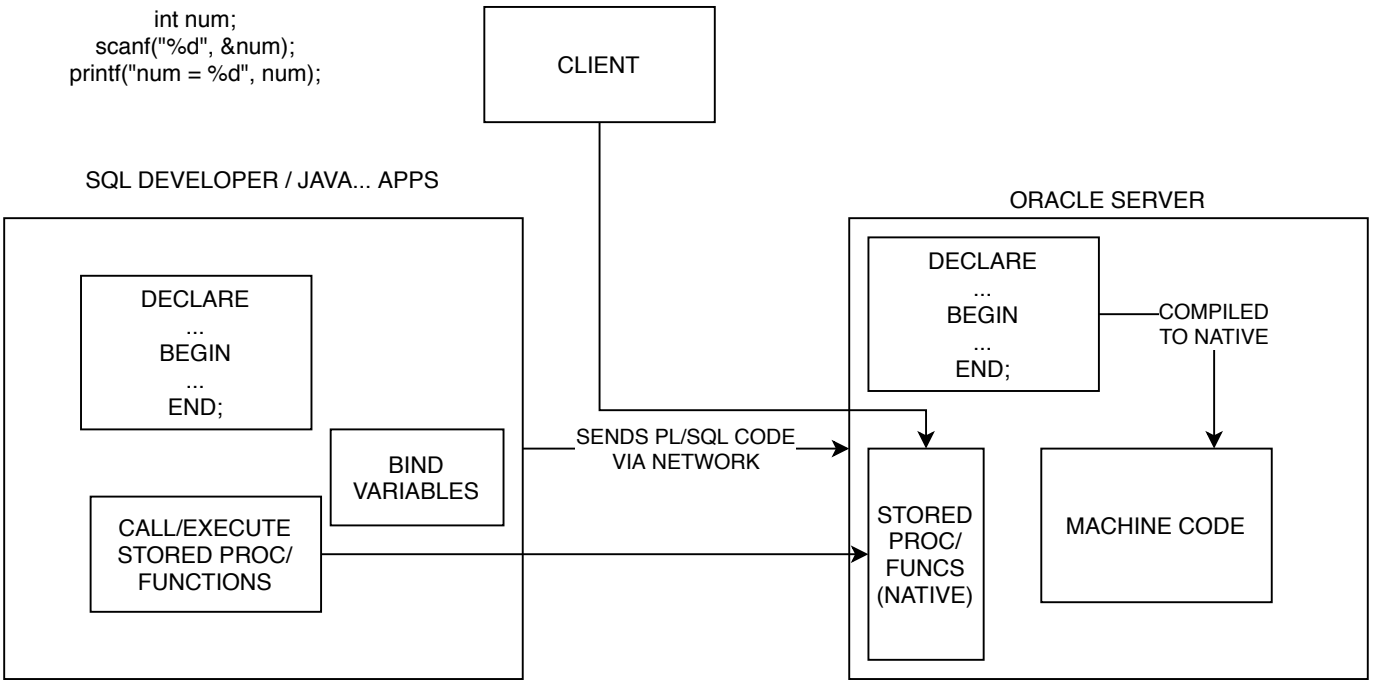

COMMISSION_PCT
NVL
IF COMM_PCT IS NOT NULL
COMMISSION_PCT
IF COMM_PCT IS NULL
0.1

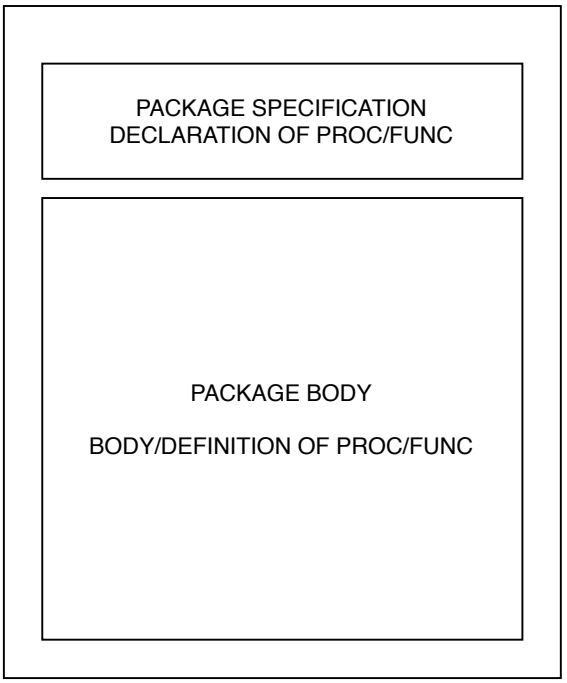

COMMISSION_PCT
NVL2
IF COMM_PCT IS NOT NULL
salary *
commission_pct
IF COMM_PCT IS NULL
salary *.15


EMPLOYEES E1
This table consists of
all 107 employees
DISPLAY ALL ROWS
FROM THIS TABLE
DEPARTMENT_ID
EMPLOYEES E2
This table consists of
only 1 record based on first_name
RESTRICT THE ROWS THAT MATCH
THE CONDTION
FIRST_NAME='CLARA'


ORACLE SERVER
SQL DEVELOPER
ACP
DML EXECUTED BY THE CLIENT IS AFFECTING ONLY THIS USER SESSION
INSERT INTO EMPLS...
UPDATE EMPLS...
DELETE EMPLS...
RELOADS DATA FROM DB
COPY OF EMPLS FROM USER SESSION
EMPLS
USER SESSION FOR JAVA APP. MAINTAINS A COPY OF ALL TABLES USED BY JAVA APP
JAVA APP
COPY OF EMPLS FROM USER SESSION


INDEX BY
VALUE
JOHN@XMPL.COM
KELLER@XMPL.COM
46
JOHN DOE
23000
46
JOHN KELLER
43000


int num;
scanf("%d", &num);
printf("num = %d", num);
CLIENT
SQL DEVELOPER / JAVA... APPS
ORACLE SERVER
DECLARE
...
BEGIN
...
END;
DECLARE
...
BEGIN
...
END;
COMPILED TO NATIVE
BIND VARIABLES
SENDS PL/SQL CODE VIA NETWORK
CALL/EXECUTE STORED PROC/ FUNCTIONS
STORED PROC/ FUNCS (NATIVE)
MACHINE CODE


PACKAGE SPECIFICATION
DECLARATION OF PROC/FUNC
PACKAGE BODY
BODY/DEFINITION OF PROC/FUNC