**Database Programming**

**2024/2025 First Semester (Dr. Ala Abuthawabeh)**

**Homework #2**

**Q1) Create the following anonymous block and answer the following:**

**1)**

DECLARE

TODAY DATE := SYSDATE;

TOMORROW TODAY%TYPE;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Hello World');

END;

2)

DECLARE

TODAY DATE := SYSDATE;

TOMORROW TODAY%TYPE;

BEGIN

TOMORROW := TODAY + 1;

DBMS\_OUTPUT.PUT\_LINE('Hello World');

DBMS\_OUTPUT.PUT\_LINE('Today is: ' || TO\_CHAR(TODAY, 'DD-MM-YYYY'));

DBMS\_OUTPUT.PUT\_LINE('Tomorrow is: ' || TO\_CHAR(TOMORROW, 'DD-MM-YYYY'));

END;

**3)** DECLARE

my\_date DATE := SYSDATE;

v\_last\_day DATE;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Today is: ' || TO\_CHAR(my\_date, 'Month dd, yyyy'));

v\_last\_day := LAST\_DAY(my\_date);

DBMS\_OUTPUT.PUT\_LINE('Last day of this month is: ' || TO\_CHAR(v\_last\_day, 'Month dd, yyyy'));

END;

**4)**DECLARE

my\_date DATE := SYSDATE;

v\_last\_day DATE;

v\_new\_date DATE;

v\_months\_diff NUMBER;

BEGIN

DBMS\_OUTPUT.PUT\_LINE('Today is: ' || TO\_CHAR(my\_date, 'Month dd, yyyy'));

v\_last\_day := LAST\_DAY(my\_date);

DBMS\_OUTPUT.PUT\_LINE('Last day of this month is: ' || TO\_CHAR(v\_last\_day, 'Month dd, yyyy'));

v\_new\_date := my\_date + 45;

DBMS\_OUTPUT.PUT\_LINE('New date after adding 45 days is: ' || TO\_CHAR(v\_new\_date, 'Month dd, yyyy'));

v\_months\_diff := MONTHS\_BETWEEN(v\_new\_date, my\_date);

DBMS\_OUTPUT.PUT\_LINE('Number of months between today and new date: ' || v\_months\_diff);

END;

**Q2) Create table called countries with two columns named country\_name, median\_age. using SQL code. Then insert several records to the table. Evaluate the variables in the following PL/SQL code. Change the declarations so they use the %TYPE attribute. Also rewrite code using Explicit cursor.**

CREATE TABLE countries (

country\_name VARCHAR2(50),

median\_age NUMBER(6, 2));

INSERT INTO countries (country\_name, median\_age) VALUES ('Usa', 30.4);

INSERT INTO countries (country\_name, median\_age) VALUES (' France ', 19.4);

INSERT INTO countries (country\_name, median\_age) VALUES (' Japan ', 40.1);

DECLARE

country\_name countries.country\_name%TYPE;

median\_age countries.median\_age%TYPE;

BEGIN

SELECT country\_name, median\_age INTO country\_name, median\_age

FROM countries

WHERE country\_name = ' Japan ';

DBMS\_OUTPUT.PUT\_LINE('The median age in ' || country\_name || ' is ' || median\_age || '.');

END;

**rewrite code using Explicit cursor.**

DECLARE

country\_name countries.country\_name%TYPE;

median\_age countries.median\_age%TYPE;

CURSOR coun IS SELECT country\_name, median\_age INTO country\_name, median\_age FROM countries WHERE country\_name = ' Japan ';

BEGIN

OPEN coun;

Fetch coun INTO country\_name, median\_age;

IF COUN%FOUND THEN

DBMS\_OUTPUT.PUT\_LINE('The median age in ' || country\_name || ' is ' || median\_age || '.');

ELSE

DBMS\_OUTPUT.PUT\_LINE('No data found for Japan.');

CLOSE coun;

END;