```sql
SET SERVEROUTPUT ON;

-- 1
DECLARE
    CURSOR c_emprunts IS
        SELECT * FROM Emprunt
        JOIN detail USING (num_emprunt);
    v_month NUMBER := 01;
    v_year NUMBER := 2017;
    v_cptm NUMBER := 0;
    v_cpty NUMBER := 0;
BEGIN
    FOR i IN c_emprunts LOOP
        IF EXTRACT(MONTH FROM i.creele) = v_month THEN
            v_cptm := v_cptm + 1;
        END IF;
        IF EXTRACT(YEAR FROM i.creele) = v_year THEN
            v_cpty := v_cpty + 1;
        END IF;
    END LOOP;
    DBMS_OUTPUT.PUT_LINE('Empruntés ce mois ('||v_month||') : ' || v_cptm);
    DBMS_OUTPUT.PUT_LINE('Empruntés cette année ('||v_year||') : ' || v_cpty);
END;
/


-- 2
DECLARE
    CURSOR c_emprunts IS
        SELECT isbn, COUNT(*) nb FROM detail
        GROUP BY isbn ORDER BY nb DESC;
    v_cpt NUMBER := 1;
BEGIN
    DBMS_OUTPUT.PUT_LINE('5 Ouvrages les plus empruntés');
    FOR i IN c_emprunts LOOP
        DBMS_OUTPUT.PUT_LINE('Numero : '||v_cpt||' - ISBN : '||i.isbn);
        v_cpt := v_cpt + 1;
        EXIT WHEN v_cpt = 6;
    END LOOP;
END;
/


-- 3
DECLARE
    CURSOR c_membres IS
        SELECT num_membre, nom, adhesion, duree, ADD_MONTHS(adhesion, duree) AS fin_adhesion
        FROM membre;
BEGIN
    FOR i IN c_membres LOOP
        IF (SYSDATE > i.fin_adhesion) OR (ADD_MONTHS(SYSDATE,1) > i.fin_adhesion) THEN
            DBMS_OUTPUT.PUT_LINE('Numero '||i.num_membre||' : '||i.nom);
        END IF;
    END LOOP;
END;
/
```

```sql
-- 4
DECLARE
    CURSOR c_membre IS
        SELECT num_membre FROM membre
        WHERE MONTHS_BETWEEN(SYSDATE,ADD_MONTHS(adhesion, duree))>24;
    CURSOR c_emprunt IS
        SELECT * FROM emprunt;
    v_membre NUMBER;
    enRegle BOOLEAN;
BEGIN
    FOR i IN c_membre LOOP
        enRegle := true;
        FOR j IN c_emprunt LOOP
            IF i.num_membre = j.num_membre THEN
                IF j.etat_emprunt = 'EC' THEN
                    enRegle := false;
                END IF;
                EXIT WHEN j.etat_emprunt = 'EC';
                UPDATE emprunt SET num_membre = null;
            END IF;
        END LOOP;
        IF enRegle THEN
            DELETE FROM membre WHERE membre.num_membre=i.num_membre;
        END IF;
    END LOOP;
END;
/


-- 5
DECLARE
    CURSOR c_gros IS
        SELECT num_membre, COUNT(*) AS c FROM emprunt
        GROUP BY num_membre
        ORDER BY c DESC;
    CURSOR c_petit IS
        SELECT num_membre, COUNT(*) AS c FROM emprunt
        GROUP BY num_membre
        ORDER BY c ASC;
    v_cpt NUMBER :=0;
    v_nom VARCHAR2(32);
BEGIN
    DBMS_OUTPUT.PUT_LINE('Les plus gros emprunteurs :');
    FOR i IN c_gros LOOP
        IF v_cpt < 3 THEN
            SELECT nom INTO v_nom FROM membre
            WHERE i.num_membre = membre.num_membre;
            DBMS_OUTPUT.PUT_LINE(v_nom);
            v_cpt := v_cpt +1;
        END IF;
    END LOOP;
    v_cpt :=0;
    DBMS_OUTPUT.PUT_LINE('Les plus petits emprunteurs :');
    FOR i IN c_petit LOOP
        IF v_cpt < 3 THEN
            SELECT nom INTO v_nom FROM membre
            WHERE i.num_membre = membre.num_membre;
            DBMS_OUTPUT.PUT_LINE(v_nom);
            v_cpt := v_cpt +1;
        END IF;
    END LOOP;
END;
/
```

```sql
-- 6
ALTER TABLE membre MODIFY(mobile CHAR(14));
DECLARE
    CURSOR c_mobile IS
        SELECT mobile, num_membre FROM membre
        ORDER BY num_membre DESC;
    v_1 CHAR(2);
    v_2 CHAR(2);
    v_3 CHAR(2);
    v_4 CHAR(2);
    v_5 CHAR(2);
    v_numero CHAR(14);
BEGIN
    FOR i IN c_mobile LOOP
        v_1 := (SUBSTR(i.mobile, 1, 2));
        v_2 := (SUBSTR(i.mobile, 3, 2));
        v_3 := (SUBSTR(i.mobile, 5, 2));
        v_4 := (SUBSTR(i.mobile, 7, 2));
        v_5 := (SUBSTR(i.mobile, 9, 2));
        v_numero := v_1||' '||v_2||' '||v_3||' '||v_4||' '|| v_5;
        UPDATE membre SET membre.mobile = v_numero WHERE i.num_membre = membre.num_membre;
    END LOOP;
END;
/


-- 7
DECLARE
    CURSOR c_ex IS
        SELECT d.isbn, d.num_exemplaire AS exemplaire, COUNT(*) AS nb_emprunts
        FROM detail d
        JOIN exemplaire e ON d.isbn=e.isbn AND d.num_exemplaire=e.num_exemplaire
        GROUP BY d.isbn, d.num_exemplaire;
    v_etat CHAR(2);
BEGIN
    FOR i IN c_ex LOOP
        IF i.nb_emprunts <= 10 THEN
            v_etat := 'NE';
        ELSE IF i.nb_emprunts <= 25 THEN
            v_etat := 'BO';
        ELSE IF i.nb_emprunts <= 40 THEN
            v_etat := 'MO';
        ELSE
            v_etat := 'MA';
        END IF;
        END IF; /*je sais pas pourquoi mais si j'en met qu'un*/
        END IF; /*ça marche pas*/
        UPDATE exemplaire e SET code_etat = v_etat
        WHERE i.exemplaire = e.num_exemplaire AND i.isbn = e.isbn;
    END LOOP;
END;
/
```