```
-----------------------------------------
--Implicit Cursors
-----------------------------------------

set serveroutput on;
begin

    update personel
    set maas = 3000
    where personel_id = 5010;

    if sql%notfound then

        dbms_output.put_line('Personel bulunamadı');

    elsif sql%found then

        dbms_output.put_line('Güncellenen kayıt sayısı: ' || sql%rowcount);

    end if;

end;


-----------------------------------------------
--Cursor'dan Data Getirme – Tek Satır
-----------------------------------------------

declare
    cursor c_personel is
        select ad, maas from personel
        where personel_id = 5020;

    v_ad personel.ad%type;
    v_maas personel.maas%type;

begin

    open c_personel;
    fetch c_personel into v_ad, v_maas;

    dbms_output.put_line(v_ad|| ': '||v_maas);

end;


-----------------------------------------------
--Cursor'dan Data Getirme – Çok Satır
-----------------------------------------------

declare
    cursor c_personel is
        select ad, maas from personel
        where unvan = 'UZMAN';

    v_ad personel.ad%type;
    v_maas personel.maas%type;

begin

    open c_personel;

    loop
        fetch c_personel into v_ad, v_maas;
        exit when c_personel%notfound;
        dbms_output.put_line(v_ad|| ': '||v_maas);
    end loop;

end;
```

```
--------------------------------------------
--Cursor - Record Birlikte Kullanımı
--------------------------------------------

declare
    cursor c_personel is
        select ad, soyad, maas from personel
        where unvan = 'UZMAN';

    v_per_record c_personel%rowtype;

begin

    open c_personel;

    loop
        fetch c_personel into v_per_record;
        exit when c_personel%notfound;

        dbms_output.put_line(v_per_record.ad ||' '||
                             v_per_record.soyad || ': '||
                             v_per_record.maas);
    end loop;

    close c_personel;
end;

--------------------------------------------
--For Loop ile Cursor Kullanımı
--------------------------------------------

declare
    cursor c_personel is
        select ad, soyad, maas from personel
        where unvan = 'UZMAN';

begin

    for v_per_record in c_personel loop

        dbms_output.put_line(v_per_record.ad ||' '||
                             v_per_record.soyad || ': '||
                             v_per_record.maas);
    end loop;

end;

--------------------------------------------
--For Loop ile Cursor Kullanımı - Alt sorgular
--------------------------------------------

begin
    for v_row in (select * from konum) loop

        dbms_output.put_line(v_row.konum_id ||': '||
                             v_row.konum_adi);

    end loop;
end;
```

```
--------------------------------------------
begin
    for v_row in
        (select personel_id, ad, soyad, maas
          from personel where unvan = 'UZMAN')
    loop

        dbms_output.put_line(v_row.personel_id ||': '||
                             v_row.ad ||' '|| v_row.soyad ||' '||
                             v_row.maas);
    end loop;
end;


--------------------------------------------
--Cursor Özellikleri
--------------------------------------------

declare
    cursor c_personel is
        select ad, soyad, maas from personel
        where unvan = 'UZMAN';

    v_per_record c_personel%rowtype;

begin

    if not c_personel%isopen then
        open c_personel;
    end if;

    loop
        fetch c_personel into v_per_record;
        exit when c_personel%notfound or c_personel%rowcount > 12;

        dbms_output.put_line(c_personel%rowcount||': '||
                             v_per_record.ad ||' '||
                             v_per_record.soyad);

    end loop;
end;

--------------------------------------------
--Cursor'e Parametre Verme
--------------------------------------------

declare
    cursor c_personel (cv_unvan varchar2) is
        select ad, soyad, maas from personel
        where unvan = cv_unvan;
begin

    dbms_output.put_line('.....UZMANLAR.....');

    for v_per_record in c_personel('UZMAN') loop

        dbms_output.put_line(v_per_record.ad ||' '||
                             v_per_record.soyad);
        if c_personel%rowcount > 5 then exit; end if;

    end loop;

    dbms_output.put_line('.....MÜDÜRLER.....');

    for v_per_record in c_personel('MÜDÜR') loop

        dbms_output.put_line(v_per_record.ad ||' '||
```

```
                                v_per_record.soyad);
        if c_personel%rowcount > 5 then exit; end if;
    end loop;
end;


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

declare
    cursor c_personel (cv_maas1 number, cv_maas2 number) is
        select ad, maas from personel
        where maas between cv_maas1 and cv_maas2;

begin

    dbms_output.put_line('.....Düşük Maaşlar....');

    for v_per_record in c_personel(1000, 3000) loop

        dbms_output.put_line(v_per_record.ad ||': '||
                            v_per_record.maas);
        if c_personel%rowcount > 3 then exit; end if;

    end loop;

    dbms_output.put_line('.....Yüksek Maaşlar.....');

    for v_per_record in c_personel(3001, 10000) loop

        dbms_output.put_line(v_per_record.ad ||': '||
                            v_per_record.maas);
        if c_personel%rowcount > 3 then exit; end if;
    end loop;
end;


------------------------------------------------
--Where Current Of İfadesi
------------------------------------------------

declare

    cursor crs_personel(v_unvan varchar2) is
        select personel_id, ad, soyad, maas
        from personel
        where unvan = v_unvan
        for update;

begin
    for row_prs in crs_personel('UZMAN') loop

        update personel set maas = maas*1.25
        where current of crs_personel;

    end loop;
end;
```

```
-----------------------------------------------------
--ALIŞTIRMALARIN CEVAPLARI
-----------------------------------------------------


---------------------------------------------
--Cursor'dan Data Getirme
---------------------------------------------

declare
    cursor c_emp is
        select
            title_of_courtesy || ' ' ||
            first_name        || ' ' ||
            last_name         || ' ' ||
            birth_date as emp_info
        from employees e;

    v_emp_info varchar(500);

begin

    open c_emp;
    loop
        fetch c_emp into v_emp_info;
        exit when c_emp%notfound;
        dbms_output.put_line(v_emp_info);
    end loop;

end;


---------------------------------------------
--Cursor – Record Birlikte Kullanımı
---------------------------------------------

DECLARE
    CURSOR c_cars IS
    SELECT
        brand, price, nvl(discount, 0) AS discount,
        price – nvl(discount, 0) AS net_price
    FROM cars;

    v_car_record   c_cars%rowtype;
    v_sum_price    NUMBER := 0;
    v_sum_discount NUMBER := 0;
BEGIN
    OPEN c_cars;
    LOOP
        FETCH c_cars INTO v_car_record;
        EXIT WHEN c_cars%notfound;

        v_sum_price := v_sum_price + v_car_record.price;
        v_sum_discount := v_sum_discount + v_car_record.discount;

        dbms_output.put_line(v_car_record.brand
                            || ', Price: '
                            || v_car_record.price
                            || ', Discount: '
                            || v_car_record.discount
                            || ', Net Price: '
                            || v_car_record.net_price);

    END LOOP;
    CLOSE c_cars;
    dbms_output.put_line('Sum price is: ' || v_sum_price);
    dbms_output.put_line('Sum discount is: ' || v_sum_discount);

END;
```

```
---------------------------------------------
--For Loop ile Cursor Kullanımı
---------------------------------------------
--Yöntem-1

declare
    cursor c_product is
        select segment as segment_name,
            count(*) product_count,
            sum(price) sum_price
        from product p, product_segment ps
        where p.segment_id = ps.id
        group by segment;

begin

    for v_product in c_product loop

        dbms_output.put_line(
            v_product.segment_name ||': Count: '||
            v_product.product_count || ', Sum Price: '||
            v_product.sum_price);
    end loop;

end;

--Yöntem-2

begin

    for v_product in
    (   select segment as segment_name,
            count(*) product_count,
            sum(price) sum_price
        from product p, product_segment ps
        where p.segment_id = ps.id
        group by segment
    )
    loop

        dbms_output.put_line(
            v_product.segment_name ||': Count: '||
            v_product.product_count || ', Sum Price: '||
            v_product.sum_price);
    end loop;

end;
```

```
---------------------------------------------
--Cursor'e Parametre Verme
---------------------------------------------

declare
    cursor c_student (cv_course_name varchar2) is
        select name, gender from student
        where course_name = cv_course_name;
begin

    dbms_output.put_line('------Computer Engineer------');

    for v_stud_record in c_student('Computer Engineer') loop

        dbms_output.put_line(v_stud_record.name ||', Gender: '||
                            v_stud_record.gender);
        if c_student%rowcount > 2 then exit; end if;

    end loop;

    dbms_output.put_line('');
    dbms_output.put_line('------Computer Science-----');

    for v_stud_record in c_student('Computer Science') loop

        dbms_output.put_line(v_stud_record.name ||', Gender: '||
                            v_stud_record.gender);
        if c_student%rowcount > 2 then exit; end if;

    end loop;

end;
```