

1. Create a PL/SQL block which displays the list of customers (all the informations):

```
DECLAIRE
```

```
    CURSOR cur IS SELECT * FROM Customer
```

```
BEGIN
```

```
    FOR rec IN cur LOOP
```

```
        dbms_output.put_line("id " || rec.customer_id "first  
name: " || rec.customer_Name || " Tel: " ||  
rec.customer_Tel);
```

```
    END LOOP;
```

```
END;
```

2. Create a Procedure PS\_Customer\_Prodcuts which displays the list of product names of a given customer (customer\_id). If no result returned (No\_Data\_Found exception raised), display the following message "No products returned or customer not found"

```
CREATE OR REPLACE PROCEDURE PS_Customer_Products  
(v_cust_id Customer.customer_id %type) IS
```

```
    CURSOR cur IS SELECT Product_id FROM Orders WHERE  
Customer_id=v_cust_id;
```

```
    name_prod Varchar2(20);
```

```
BEGIN
```

```
    FOR rec IN cur LOOP
```

```
        SELECT product_name into name_prod FROM  
Products WHERE Product_id=rec;
```

```
        dbms_output.put_line(name_prod);
```

```
    END LOOP;
```

```
EXCEPTION
```

```
    WHEN no_data_found THEN
```

```
dbms_output.put_line("No products returned or  
customer not found");
```

```
END;
```

**3. Create a Function FN\_Customer\_Orders which returns the number of orders of a given customer (customer\_id):**

```
CREATE OR REPLACE FUNCTION FN_Customer_Orders (v_cust_id  
Customer.customer_id %type) RETURN number IS
```

```
nb_orders number;
```

```
BEGIN
```

```
SELECT count(*) into nb_orders FROM ORDERS WHERE  
Customer_id=v_cust_id;
```

```
RETURN nb_orders;
```

```
END;
```

**4. Create a trigger TRIG\_INS\_ORDERS which starts before each INSERT on Orders tables and test if the OrderDate >= SYSDATE. If not the following message is displayed "Order Date must be greater than or equal to today's date":**

```
CREATE OR REPLACE TRIGGER TRIG_INS_ORDERS
```

```
BEFORE INSERT ON Orders
```

```
BEGIN
```

```
IF (OrderDate<SYSDATE) THEN
```

```
dbms_output.put_line("Order Date must be greater  
than or equal to today's date");
```

```
END IF;
```

```
END;
```

