

## PL/SQL Questions

Create below tables and insert data to them using below SQL script.

<https://pastebin.com/tQJpVQ3A>

---

-- Create customers table

```
CREATE TABLE customers (  
    customer_id NUMBER PRIMARY KEY,  
    first_name VARCHAR2(50),  
    last_name VARCHAR2(50),  
    email VARCHAR2(100),  
    total_purchase NUMBER,  
    loyalty_points NUMBER  
);
```

-- Create employees table

```
CREATE TABLE employees (  
    employee_id NUMBER PRIMARY KEY,  
    first_name VARCHAR2(50),  
    last_name VARCHAR2(50),  
    salary NUMBER,  
    annual_sales NUMBER  
);
```

-- Insert statements for customers table

```
INSERT INTO customers (customer_id, first_name, last_name, email, total_purchase,  
loyalty_points)  
VALUES (101, 'John', 'Doe', 'john.doe@example.com', 12000, 240);
```

```
INSERT INTO customers (customer_id, first_name, last_name, email, total_purchase,  
loyalty_points)  
VALUES (102, 'Jane', 'Smith', 'jane.smith@example.com', 8000, 80);
```

```
INSERT INTO customers (customer_id, first_name, last_name, email, total_purchase,  
loyalty_points)  
VALUES (103, 'Michael', 'Johnson', 'michael.johnson@example.com', 3000, 30);
```

```
INSERT INTO customers (customer_id, first_name, last_name, email, total_purchase,  
loyalty_points)  
VALUES (104, 'Emily', 'Davis', 'emily.davis@example.com', 500, 2.5);
```

```
INSERT INTO customers (customer_id, first_name, last_name, email, total_purchase,  
loyalty_points)  
VALUES (105, 'Daniel', 'Wilson', 'daniel.wilson@example.com', 15000, 300);
```

-- Insert statements for employees table

```
INSERT INTO employees (employee_id, first_name, last_name, salary, annual_sales)  
VALUES (201, 'Alice', 'Brown', 70000, 110000);
```

```
INSERT INTO employees (employee_id, first_name, last_name, salary, annual_sales)
```

```
VALUES (202, 'Robert', 'Taylor', 60000, 90000);
```

```
INSERT INTO employees (employee_id, first_name, last_name, salary, annual_sales)  
VALUES (203, 'Jessica', 'Anderson', 50000, 60000);
```

```
INSERT INTO employees (employee_id, first_name, last_name, salary, annual_sales)  
VALUES (204, 'David', 'Thomas', 45000, 30000);
```

```
INSERT INTO employees (employee_id, first_name, last_name, salary, annual_sales)  
VALUES (205, 'Sarah', 'Moore', 80000, 125000);
```

---

### **Question 1: Write a PL/SQL Block to Display All Customer Emails**

**Task:** Write a PL/SQL block that fetches and displays the email addresses of all customers.

### **Question 2: Write a PL/SQL Block to Calculate and Display the Total Number of Customers**

**Task:** Write a PL/SQL block that calculates and displays the total number of customers.

### **Question 3: Write a PL/SQL Block to Update a Customer's Email Address**

**Task:** Write a PL/SQL block that updates the email address of a customer given their customer ID. If there is no customer, print “No Customer Found”.

### **Question 4: Write a PL/SQL Function to Get Customer's Full Name**

**Task:** Write a PL/SQL function that accepts a customer ID and returns the customer's full name (first name + last name).

### **Question 5: Write a PL/SQL Procedure to Give a Bonus to Employees Based on Sales**

**Task:** Write a PL/SQL procedure that gives a bonus to employees based on their annual sales:

- 10% bonus if sales are greater than 100000.
- 5% bonus if sales are between 50000 and 100000.
- 2% bonus if sales are less than 50000.

The procedure should update the employee's salary with the bonus and print the new salary.

### **Question 6: Write a PL/SQL Function to Retrieve Customer Details by Email Using %ROWTYPE**

**Task:** Write a PL/SQL function that accepts a customer's email and returns the customer's record using %ROWTYPE. If the customer does not exist, return an appropriate message.

### **Question 7: Write a PL/SQL Procedure to Give a Performance Bonus to Employees Using %ROWTYPE**

**Task:** Write a PL/SQL procedure that gives a performance bonus to employees based on their annual sales using %ROWTYPE. The bonus rules are:

- 10% bonus if sales are greater than 100000.
- 5% bonus if sales are between 50000 and 100000.
- 2% bonus if sales are less than 50000.

The procedure should update the employee's salary with the bonus and print the new salary.