

Exercise 1 – Control Structures

Question 1: Write a PL/SQL block that loops through all customers, checks their age, and if they are above 60, apply a 1% discount to their current loan interest rates.

```
BEGIN FOR CUSTOMER_Rec IN (SELECT CustomerID, Age, Interest FROM CUSTOMERS) LOOP
```

```
    IF CUSTOMER_Age.A>60 THEN
```

```
        UPDATE CUSTOMERS
```

```
        SET Interest=Interest-1
```

```
        WHERE CustomerID=CUSTOMER_Rec.CustomerID;
```

```
    END IF;
```

```
END LOOP;
```

```
COMMIT;
```

```
END;
```

Question 2: Write a PL/SQL block that iterates through all customers and sets a flag IsVIP to TRUE for those with a balance over \$10,000.

```
BEGIN
```

```
    FOR Customer_Rec IN (SELECT CustomerID, Balance FROM CUSTOMERS)
```

```
    LOOP
```

```
        IF Customer_Rec.Balance>10000 THEN
```

```
            UPDATE CUSTOMERS
```

```
            SET IsVIP = 'TRUE' WHERE CustomerID=Customer_Rec.CustomerID;
```

```
        END IF;
```

```
    END LOOP;
```

```
COMMIT;
```

```
END;
```

Question 3: Write a PL/SQL block that fetches all loans due in the next 30 days and prints a reminder message for each customer.

```
DECLARE
```

```
    by DATE:=SYSDATE+30;
```

```
BEGIN
```

```
    FOR loan_rec IN(
```

```
        SELECT L.LoanID,L.CustomerID,C.Name,L.DueDate
```

```
        FROM LOANS L JOIN CUSTOMERS C ON L.CustomerID=C.CustomerID
```

```
        WHERE L.DueDate BETWEEN SYSDATE AND by)
```

```
    LOOP
```

```
        DBMS_OUTPUT.PUT_LINE('Reminder: ' || loan_rec.Name || ', your loan (ID: ' || loan_rec.LoanID || ') is due on ' || TO_CHAR(loan_rec.DueDate,'DD-Mon-YYYY'));
    END LOOP;
```

```
END;
```