## **Exercise 4: Functions**

### **Scenario 1: CalculateAge function for eligibility checks**

CREATE OR REPLACE FUNCTION CalculateAge(

p\_dob IN DATE

) RETURN NUMBER

IS

BEGIN

RETURN EXTRACT(YEAR FROM SYSDATE) - EXTRACT(YEAR FROM p\_dob);

END CalculateAge;

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### **Scenario 2: CalculateMonthlyInstallment function for loans**

CREATE OR REPLACE FUNCTION CalculateMonthlyInstallment(

p\_loan\_amount IN NUMBER,

p\_interest\_rate IN NUMBER,

p\_loan\_duration\_years IN NUMBER

) RETURN NUMBER

IS

v\_monthly\_rate NUMBER := p\_interest\_rate / 12 / 100;

v\_number\_of\_payments NUMBER := p\_loan\_duration\_years \* 12;

BEGIN

RETURN (p\_loan\_amount \* v\_monthly\_rate) / (1 - POWER(1 + v\_monthly\_rate, -v\_number\_of\_payments));

END CalculateMonthlyInstallment;

/

### **Scenario 3: HasSufficientBalance function for transactions**

CREATE OR REPLACE FUNCTION HasSufficientBalance(

p\_account\_id IN NUMBER,

p\_amount IN NUMBER

) RETURN BOOLEAN

IS

v\_balance NUMBER;

BEGIN

SELECT Balance INTO v\_balance FROM Accounts WHERE AccountID = p\_account\_id;

RETURN v\_balance >= p\_amount;

END HasSufficientBalance;

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