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PL/SQL ASSIGNMENT

BOOK MANAGMENT SYSTEM PROJECT

1. CREATING TABLE BOOK

```
CREATE TABLE book (  
    book_id    NUMBER PRIMARY KEY,  
    title      VARCHAR2(200),  
    author     VARCHAR2(100),  
    price      NUMBER  
);
```

2. INSERT VALUES INTO TABLE BOOK

```
INSERT INTO book VALUES (1, 'Oracle SQL Basics', 'Alice M', 450);  
INSERT INTO book VALUES (2, 'PL/SQL Mastery', 'John K', 700);  
INSERT INTO book VALUES (3, 'Database Design', 'Chris R', 1200);  
INSERT INTO book VALUES (4, 'Data Structures', 'David S', 300);  
INSERT INTO book VALUES (5, 'Advanced Algorithms', 'Martha T', 1500);
```

```
COMMIT;
```

3. PL/SQL PROGRAM (Collections + Records)

```
SET SERVEROUTPUT ON;
```

```
DECLARE
```

```
TYPE book_table_type IS TABLE OF book%ROWTYPE;  
book_list book_table_type;
```

```
TYPE book_summary_rec IS RECORD (  
    total_books NUMBER,  
    avg_price  NUMBER,  
    high_price NUMBER  
);
```

```
summary book_summary_rec;
```

```
b book%ROWTYPE;  
price_sum NUMBER := 0;
```

```
BEGIN
```

```
SELECT * BULK COLLECT INTO book_list FROM book;
```

```
DBMS_OUTPUT.PUT_LINE('Loaded ' || book_list.COUNT || ' book records.');
```

```
summary.total_books := book_list.COUNT;  
summary.high_price := 0;
```

```
FOR i IN 1 .. book_list.COUNT LOOP
```

```
    b := book_list(i);
```

```
    price_sum := price_sum + b.price;
```

```
    IF b.price > summary.high_price THEN
```

```
        summary.high_price := b.price;
```

```
    END IF;
```

```
    IF b.price > 1000 THEN
```

```
        GOTO expensive_book;
```

```
    END IF;
```

```
END LOOP;
```

```
summary.avg_price := price_sum / summary.total_books;
```

```
DBMS_OUTPUT.PUT_LINE('----- BOOK SUMMARY -----');
```

```
DBMS_OUTPUT.PUT_LINE('Total Books: ' || summary.total_books);
```

```
DBMS_OUTPUT.PUT_LINE('Average Price: ' || summary.avg_price);
```

```
DBMS_OUTPUT.PUT_LINE('Highest Price: ' || summary.high_price);
```

```
RETURN;
```

```
<<expensive_book>>
```

```
DBMS_OUTPUT.PUT_LINE('*** EXPENSIVE BOOK DETECTED ***');  
DBMS_OUTPUT.PUT_LINE('A book priced above 1000 was found.');
```

```
DBMS_OUTPUT.PUT_LINE('Triggering price review process...');
```

```
END;
```

```
/
```