

B561 – Selected Solutions for Assignment 4

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Dynamic and PL/SQL

1. CREATE OR REPLACE PROCEDURE exec_SQL (statement IN VARCHAR2)
IS
BEGIN
 EXECUTE IMMEDIATE ddl_string;
END;

Note: Cursors could be used here, but in practice, for such a short query, this is not done.

2. (A)

```
CREATE OR REPLACE FUNCTION rowCount (  
    tab IN VARCHAR2,  
    whr IN VARCHAR2 := NULL,  
    schema IN VARCHAR2 := NULL)  
RETURN INTEGER  
IS  
    retval INTEGER;  
BEGIN  
    EXECUTE IMMEDIATE  
        'SELECT COUNT(*)  
          FROM ' || NVL (sch, USER) || '.' || tab ||  
          ' WHERE ' || NVL (whr, '1=1')  
    INTO retval;  
    RETURN retval;  
END;
```

- (B)

```

CREATE OR REPLACE FUNCTION rowCountC (tab IN VARCHAR2,
                                     where IN VARCHAR2 := NULL,
                                     schema IN VARCHAR2 := NULL)

RETURN INTEGER IS
rcs SYS_REFCURSOR;
intcounter INTEGER := 0;
intdm INTEGER;
BEGIN
  OPEN rcs FOR
    'SELECT 1 FROM ' || NVL(schema,USER) || '.' || tab ||
    ' WHERE ' || NVL(where,'1=1');

  LOOP
    FETCH rcs into intdm;
    EXIT WHEN rcs\%NOTFOUND;
    intcounter := intcounter + 1;
  END LOOP;

  CLOSE rcs;
  RETURN intcounter;
END;

```

3. (A)

```

CREATE OR REPLACE FUNCTION updateNumVal(table IN VARCHAR2,
                                       column IN VARCHAR2,
                                       value IN VARCHAR2,
                                       where IN VARCHAR2 := NULL,
                                       schema IN VARCHAR2 := NULL)

RETURN number AS
intnrows INTEGER;
BEGIN
  EXECUTE IMMEDIATE 'UPDATE ' || NVL(schema, USER)
    || '.' || table || ' SET ' || column || ' = ' || value ||
    ' WHERE ' || NVL(where, '1=1');

  intnrows := SQL\%ROWCOUNT;
  COMMIT;
  RETURN intnrows;
END;

```

4.

5. (A)

```
CREATE OR REPLACE FUNCTION SumVal(schema IN VARCHAR2 := NULL)
                                RETURN NUMBER IS
    sum NUMBER := 0;
    temp NUMBER;
BEGIN
    FOR row IN (
        SELECT table_name, column_name
        FROM all_tab_columns
        WHERE (data_type = 'INT' OR data_type = 'NUMBER')
        AND owner=NVL(schema, USER))
    LOOP
        EXECUTE IMMEDIATE
            'SELECT SUM(' || tab.column_name || ') ' ||
            ' FROM ' || tab.table_name INTO temp;
        sum := sum + temp;
    END LOOP;
    RETURN sum;
END;
```

(B)

```
CREATE OR REPLACE FUNCTION SumValC(schema IN VARCHAR2 := NULL)
                                RETURN NUMBER IS
    sum NUMBER := 0;
    temp NUMBER;

    CURSOR cur IS
        SELECT table_name, column_name
        FROM all_tab_columns
        WHERE (data_type = 'INT' OR data_type = 'NUMBER')
        AND owner=NVL(schema, USER);
BEGIN
    FOR tab IN cur
    LOOP
        EXECUTE IMMEDIATE 'SELECT SUM(' || tab.column_name || ') ' ||
            || ' FROM ' || tab.table_name INTO temp;
        sum := sum + temp;
    END LOOP;
END;
```

```
    RETURN sum;  
END;
```