

Advance PL/SQL - Notes for students

References

Packages

Packages are schema objects that groups logically related PL/SQL types, variables, and subprograms.

A package will have two mandatory parts -

Package specification

Package body or definition

Advantage of Packages in PL/SQL

Packages let you encapsulate logically related types, items, and subprograms in a named PL/SQL module.

Each package is easy to understand, and the interfaces between packages are

simple, clear, and well defined.

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Package Specification

The specification is the interface to the package.

It just DECLARES the types, variables, constants, exceptions, cursors, and subprograms that can be referenced from outside the package. In other words, it contains all information about the content of the package, but excludes the code for the subprograms.

All objects placed in the specification are called public objects.

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Package Body

The package body has the codes for various methods declared in the package specification and other private

declarations, which are hidden from the code outside the package.

The CREATE PACKAGE BODY Statement is used for creating the package body

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```

Example of using packages

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```

Question

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Create a package called sales_salary which will have a user defined procedure called find_sal.

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```

Packages Specification created

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```

CREATE PACKAGE sales_salary AS

```
    PROCEDURE find_sal(s_no  
salespeople.snum%type);  
END sales_salary;  
/
```


Question

Create a package body called sales_salary in which a procedure called find_sal will fetch the details of salesman which will be called from a different pl/sql block.

Packages body or defenition (ppbody.sql)

```
CREATE OR REPLACE PACKAGE BODY  
sales_salary AS  
    PROCEDURE find_sal(s_no  
salespeople.snum%type) IS  
        s_salary salespeople.comm%TYPE;  
BEGIN
```

```

        SELECT comm into s_salary
        FROM salespeople
        WHERE snum = s_no;
        dbms_output.put_line('Incentive is
: ' || s_salary);
    END find_sal;
END sales_salary;
/
=====

```

example of using package elements to execute the code from a different pl/sql block to accept sales man number and call the procedure declared in the above block.

```

*****
*****

```

```

/*
following code from sql *plus or execute
it from following
*/

```

```

DECLARE
    code salespeople.snum%type := &snum;
BEGIN
    sales_salary.find_sal(code);

```

END;

```
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```

Dropping the pacakge

sql> DROP PACKAGE BODY sales_salary ;

to drop specifcatons and body

sql>DROP PACKAGE sales_salary ;

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```