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| [**PSOUG Home**](http://psoug.org/index.htm) | [**Code Snippets**](http://psoug.org/browse.htm) | [**Oracle Lookup**](http://psoug.org/definition.htm) | [**Oracle Reference**](http://psoug.org/reference/library.html) | [**Oracle Error Codes**](http://psoug.org/oraerror.htm) | [**Oracle Functions**](http://psoug.org/reference/builtin_functions.html) | [**PSOUG Forum**](http://psoug.org/forum/) |

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| |  |  |  | | --- | --- | --- | | http://psoug.org/image/top_lef.gif | http://psoug.org/image/top_mid.gif | http://psoug.org/image/top_rig.gif | | http://psoug.org/image/cen_lef.gif | [CODE](http://psoug.org/browse.htm) Oracle Code Library | http://psoug.org/image/cen_rig.gif | | http://psoug.org/image/bot_lef.gif | http://psoug.org/image/bot_mid.gif | http://psoug.org/image/bot_rig.gif | | |  |  |  | | --- | --- | --- | | http://psoug.org/image/top_lef.gif | http://psoug.org/image/top_mid.gif | http://psoug.org/image/top_rig.gif | | http://psoug.org/image/cen_lef.gif | [JOBS](http://psoug.org/jobs/) Find Or Post Oracle Jobs | http://psoug.org/image/cen_rig.gif | | http://psoug.org/image/bot_lef.gif | http://psoug.org/image/bot_mid.gif | http://psoug.org/image/bot_rig.gif | | |  |  |  | | --- | --- | --- | | http://psoug.org/image/top_lef.gif | http://psoug.org/image/top_mid.gif | http://psoug.org/image/top_rig.gif | | http://psoug.org/image/cen_lef.gif | [FORUM](http://psoug.org/forum/) Oracle Discussion & Chat | http://psoug.org/image/cen_rig.gif | | http://psoug.org/image/bot_lef.gif | http://psoug.org/image/bot_mid.gif | http://psoug.org/image/bot_rig.gif | |

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| http://psoug.org/image/spacer.gif   |  | | --- | |  | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | [**PSOUG Home**](http://psoug.org/index.htm) | [**Code Snippets**](http://psoug.org/browse.htm) | [**Oracle Reference**](http://psoug.org/reference/library.html) | [**Oracle Functions**](http://psoug.org/reference/builtin_functions.html) | [**PSOUG Forum**](http://psoug.org/forum/) | [**Oracle Blogs**](http://psoug.org/blogs/) | **[Bookmark and Share](http://www.addthis.com/bookmark.php?v=250&username=xa-4bb75fa83cf60231)** | | |  | | |  |  | | --- | --- | | **Search the Reference Library pages:** | Top of Form     Bottom of Form | |   http://psoug.org/image/spacer.gif   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  | | --- | | [[http://psoug.org/image/ormc2.gif](http://psoug-org.tradepub.com/?pt=adv&page=Oracle%20Corporation)Free Oracle Magazine Subscriptions and Oracle White Papers](http://psoug-org.tradepub.com/?pt=adv&page=Oracle%20Corporation) |   [http://cdn.fastclick.net/content/adv/cids/969/569969/media1159737.gif](http://media.fastclick.net/w/click.here?cid=569969&mid=1159737&m=3&sid=50979&c=0&tp=7&UD=WhIxNzc1MDI4NzA2MzAxMDIxMzeIAbnkRpAB8eQimAGjjgOgAQOoAQfwAQCyAg0xMDYuNzguMjcuMjQ4&upsid=177502870630102137) | |  | | --- | | **Oracle Ref Cursors** | | **Version 11.1** | |  | | |  |  | | --- | --- | | **Strongly Typed** | | | Note: A REF CURSOR that specifies a specific return type. | | | Package Header | [CREATE](http://psoug.org/definition/CREATE.htm) OR [REPLACE](http://psoug.org/definition/REPLACE.htm) [PACKAGE](http://psoug.org/definition/PACKAGE.htm) strongly\_typed [IS](http://psoug.org/definition/IS.htm)  [TYPE](http://psoug.org/definition/TYPE.htm) return\_cur [IS](http://psoug.org/definition/IS.htm) REF [CURSOR](http://psoug.org/definition/CURSOR.htm) [RETURN](http://psoug.org/definition/RETURN.htm) all\_tables%[ROWTYPE](http://psoug.org/definition/ROWTYPE.htm);   |  | | --- | | [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) child(p\_return\_rec OUT return\_cur); [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) parent(p\_NumRecs [PLS\_INTEGER](http://psoug.org/definition/PLS_INTEGER.htm)); |   [END](http://psoug.org/definition/END.htm) strongly\_typed; / | | Package Body | [CREATE](http://psoug.org/definition/CREATE.htm) OR [REPLACE](http://psoug.org/definition/REPLACE.htm) [PACKAGE](http://psoug.org/definition/PACKAGE.htm) [BODY](http://psoug.org/definition/BODY.htm) strongly\_typed [IS](http://psoug.org/definition/IS.htm)   |  | | --- | | [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) child(p\_return\_rec OUT return\_cur) [IS](http://psoug.org/definition/IS.htm)  [BEGIN](http://psoug.org/definition/BEGIN.htm)   [OPEN](http://psoug.org/definition/OPEN.htm) p\_return\_rec [FOR](http://psoug.org/definition/FOR.htm)    [SELECT](http://psoug.org/definition/SELECT.htm) \* [FROM](http://psoug.org/definition/FROM.htm) all\_tables;  [END](http://psoug.org/definition/END.htm) child; | | --================================================== | | [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) parent (p\_NumRecs [PLS\_INTEGER](http://psoug.org/definition/PLS_INTEGER.htm)) [IS](http://psoug.org/definition/IS.htm)   p\_retcur return\_cur;  at\_rec   all\_tables%[ROWTYPE](http://psoug.org/definition/ROWTYPE.htm); [BEGIN](http://psoug.org/definition/BEGIN.htm)   child(p\_retcur);    [FOR](http://psoug.org/definition/FOR.htm) i [IN](http://psoug.org/definition/IN.htm) 1 .. p\_NumRecs   [LOOP](http://psoug.org/definition/LOOP.htm)     [FETCH](http://psoug.org/definition/FETCH.htm) p\_retcur     [INTO](http://psoug.org/definition/INTO.htm) at\_rec;      dbms\_output.put\_line(at\_rec.table\_name ||      ' - ' || at\_rec.tablespace\_name ||      ' - ' || [TO\_CHAR](http://psoug.org/definition/TO_CHAR.htm)(at\_rec.initial\_extent) ||      ' - ' || [TO\_CHAR](http://psoug.org/definition/TO_CHAR.htm)(at\_rec.next\_extent));   [END](http://psoug.org/definition/END.htm) [LOOP](http://psoug.org/definition/LOOP.htm); [END](http://psoug.org/definition/END.htm) parent; |   [END](http://psoug.org/definition/END.htm) strongly\_typed; / | | To Run The Demo | set serveroutput on  exec strongly\_typed.parent(1) exec strongly\_typed.parent(8) | |  | | | **Weakly Typed** | | | Note: A REF CURSOR that does not specify the return type such as [SYS\_REFCURSOR](http://psoug.org/definition/SYS_REFCURSOR.htm). | | | Child Procedure | [CREATE](http://psoug.org/definition/CREATE.htm) OR [REPLACE](http://psoug.org/definition/REPLACE.htm) [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) child (  p\_NumRecs [IN](http://psoug.org/definition/IN.htm) [PLS\_INTEGER](http://psoug.org/definition/PLS_INTEGER.htm),  p\_return\_cur OUT [SYS\_REFCURSOR](http://psoug.org/definition/SYS_REFCURSOR.htm)) [IS](http://psoug.org/definition/IS.htm)  [BEGIN](http://psoug.org/definition/BEGIN.htm)   [OPEN](http://psoug.org/definition/OPEN.htm) p\_return\_cur [FOR](http://psoug.org/definition/FOR.htm)    '[SELECT](http://psoug.org/definition/SELECT.htm) \* [FROM](http://psoug.org/definition/FROM.htm) all\_tables [WHERE](http://psoug.org/definition/WHERE.htm) rownum <= ' || p\_NumRecs ;  [END](http://psoug.org/definition/END.htm) child; / | | Parent Procedure | [CREATE](http://psoug.org/definition/CREATE.htm) OR [REPLACE](http://psoug.org/definition/REPLACE.htm) [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) parent (pNumRecs [VARCHAR2](http://psoug.org/definition/VARCHAR2.htm)) [IS](http://psoug.org/definition/IS.htm)   p\_retcur  [SYS\_REFCURSOR](http://psoug.org/definition/SYS_REFCURSOR.htm);  at\_rec    all\_tables%[ROWTYPE](http://psoug.org/definition/ROWTYPE.htm);  [BEGIN](http://psoug.org/definition/BEGIN.htm)   child(pNumRecs, p\_retcur);    [FOR](http://psoug.org/definition/FOR.htm) i [IN](http://psoug.org/definition/IN.htm) 1 .. pNumRecs   [LOOP](http://psoug.org/definition/LOOP.htm)     [FETCH](http://psoug.org/definition/FETCH.htm) p\_retcur     [INTO](http://psoug.org/definition/INTO.htm) at\_rec;      dbms\_output.put\_line(at\_rec.table\_name ||      ' - ' || at\_rec.tablespace\_name ||      ' - ' || [TO\_CHAR](http://psoug.org/definition/TO_CHAR.htm)(at\_rec.initial\_extent) ||      ' - ' || [TO\_CHAR](http://psoug.org/definition/TO_CHAR.htm)(at\_rec.next\_extent));   [END](http://psoug.org/definition/END.htm) [LOOP](http://psoug.org/definition/LOOP.htm);  [END](http://psoug.org/definition/END.htm) parent; / | | To Run The Demo | set serveroutput on  exec parent(1) exec parent(17) | |  | | | **Passing Ref Cursors** | | | Ref Cursor Passing Demo | [CREATE](http://psoug.org/definition/CREATE.htm) [TABLE](http://psoug.org/definition/TABLE.htm) employees ( empid   [NUMBER](http://psoug.org/definition/NUMBER.htm)(5), empname [VARCHAR2](http://psoug.org/definition/VARCHAR2.htm)(30));  [INSERT](http://psoug.org/definition/INSERT.htm) [INTO](http://psoug.org/definition/INTO.htm) employees (empid, empname) [VALUES](http://psoug.org/definition/VALUES.htm) (1, 'Dan Morgan'); [INSERT](http://psoug.org/definition/INSERT.htm) [INTO](http://psoug.org/definition/INTO.htm) employees (empid, empname) [VALUES](http://psoug.org/definition/VALUES.htm) (2, 'Hans Forbrich'); [INSERT](http://psoug.org/definition/INSERT.htm) [INTO](http://psoug.org/definition/INTO.htm) employees (empid, empname) [VALUES](http://psoug.org/definition/VALUES.htm) (3, 'Caleb Small'); [COMMIT](http://psoug.org/definition/COMMIT.htm);   |  | | --- | | [CREATE](http://psoug.org/definition/CREATE.htm) OR [REPLACE](http://psoug.org/definition/REPLACE.htm) [PROCEDURE](http://psoug.org/definition/PROCEDURE.htm) pass\_ref\_cur(p\_cursor[SYS\_REFCURSOR](http://psoug.org/definition/SYS_REFCURSOR.htm)) [IS](http://psoug.org/definition/IS.htm)  [TYPE](http://psoug.org/definition/TYPE.htm) array\_t [IS](http://psoug.org/definition/IS.htm) [TABLE](http://psoug.org/definition/TABLE.htm) OF [VARCHAR2](http://psoug.org/definition/VARCHAR2.htm)(4000) [INDEX](http://psoug.org/definition/INDEX.htm) BY [BINARY\_INTEGER](http://psoug.org/definition/BINARY_INTEGER.htm);  rec\_array array\_t;  [BEGIN](http://psoug.org/definition/BEGIN.htm)   [FETCH](http://psoug.org/definition/FETCH.htm) p\_cursor BULK COLLECT [INTO](http://psoug.org/definition/INTO.htm) rec\_array;    [FOR](http://psoug.org/definition/FOR.htm) i [IN](http://psoug.org/definition/IN.htm) rec\_array.[FIRST](http://psoug.org/definition/FIRST.htm) .. rec\_array.[LAST](http://psoug.org/definition/LAST.htm)   [LOOP](http://psoug.org/definition/LOOP.htm)     dbms\_output.put\_line(rec\_array(i));   [END](http://psoug.org/definition/END.htm) [LOOP](http://psoug.org/definition/LOOP.htm); [END](http://psoug.org/definition/END.htm) pass\_ref\_cur; / |   set serveroutput on  [DECLARE](http://psoug.org/definition/DECLARE.htm)  rec\_array [SYS\_REFCURSOR](http://psoug.org/definition/SYS_REFCURSOR.htm); [BEGIN](http://psoug.org/definition/BEGIN.htm)   [OPEN](http://psoug.org/definition/OPEN.htm) rec\_array [FOR](http://psoug.org/definition/FOR.htm)   '[SELECT](http://psoug.org/definition/SELECT.htm) empname [FROM](http://psoug.org/definition/FROM.htm) employees';    pass\_ref\_cur(rec\_array);   [CLOSE](http://psoug.org/definition/CLOSE.htm) rec\_array; [END](http://psoug.org/definition/END.htm); / | | |  | | |  | | --- | | **Related Topics** | | [Packages](http://psoug.org/reference/packages.html) | | [Procedures](http://psoug.org/reference/procedures.html) | | [Types](http://psoug.org/reference/type.html) | | |  | |  |  | | --- | |  | | [Home](http://psoug.org/)      :      [Code Library](http://psoug.org/browse.htm)      :      [Sponsors](http://psoug.org/sponsor.htm)      :      [Privacy](http://psoug.org/w3c/privacy.htm)      :      [Terms of Use](http://psoug.org/w3c/tos.htm)      :      [Contact Us](http://psoug.org/contact.htm) | [53 users online]    © 2010 psoug.org | |

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