| **Componența echipei** |
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Pachet care sa contina tip de date colectie pe mai multe niveluri, cursor dinamic, subprogram care sa afiseze arta ASCII cu brad impodobit, Mos Craciun, oameni de zapada, reni, etc. Tratati erorile si apelați subprogramul din pachet.

| set serveroutput on;  CREATE OR REPLACE PACKAGE art\_package IS  TYPE art\_list\_type IS TABLE OF VARCHAR2(4000);  TYPE art\_category\_table\_type IS TABLE OF art\_list\_type INDEX BY VARCHAR2(100);  TYPE art\_ref\_cursor IS REF CURSOR;  PROCEDURE display\_art\_category(category IN VARCHAR2);  PROCEDURE handle\_error(err\_msg IN VARCHAR2);  END art\_package;  /  CREATE OR REPLACE PACKAGE BODY art\_package IS  art\_categories art\_category\_table\_type;  PROCEDURE initialize\_art IS  BEGIN  art\_categories('tree') := art\_list\_type(  ' \* \* () \* \*',  '\* \* /\ \*',  ' \* /i\\ \* \*',  ' \* o/\\ \* \*',  ' \* ///\i\ \*'  );  art\_categories('santa') := art\_list\_type(  ' \_\_',  ' .--\ |',  ' / \',  ' / \',  ' |\_.- o-o\',  ' / C -.) \',  ' /\ |',  '| `-,\_,\_\_,\',  '(,,)====[\_]=|',  ' \. \_\_\_\_/',  ' | -|-|\_',  ' |\_\_\_\_)\_)'  );  art\_categories('snowman') := art\_list\_type(  ' \*',  ' \* \*',  ' \* \*',  ' \* \*',  ' \_\_\_\_\_\_\_\_\_',  ' | o o |',  ' | ^ |',  ' | \\_\_\_/ |',  ' -------'  );    art\_categories('reindeer') := art\_list\_type(  ' ... ... ',  ' ...:=+=..... ....=+=:.... ',  ' ... .:%%%#%%#.. .. ..#%%#%%%:.. ',  ' .... .\*%\*++=\*%#... ..... .#%\*=++\*%\*.. .... ',  ' ... ..=%#=++=+#=... ..... .+%#=++=#%+......... ',  ' ..... ..%%+++==\*#..-%%%=.. ...=%%%-..%%+++=+%%. ........ ',  ' ..... :%%+=+=+\*#%%#\*#%%. .....%%#\*#%%#%\*=+++%%:. ..... .',  ' ... .:%%+++=%%%\*===#%-. ... -%%=+=\*%%%++++%%:.. ..',  ' .-%%++=+%%=+=+%%:. :%%+++=#%+=++%%-.. ',  ' .+%#=+=#+===%%+. .+%%=+++#=+=#%\*. ',  ' .=%%%%#\*%#=++=+=\*%%.. ..#%\*=++++=#%#\*%%%%=. ',  ' .#%#++\*%%%#==++++%%:. ..%%+++++=#%%%\*++#%#.. ',  ' ..%%+++++++=++++=\*%%. .#%\*=++++++=+++++%%.. ',  ' .=%%#+======+++++%%:. .:%%++++=======+#%%=. ',  ' ....=%%%%%%%%%+=+=+%%:. ..%%+=+=+%%%%%%%%%=.. .. ',  ' ........%%%===+%%:. .%%\*++=%%%......... ....... ',  ' ...... ..=%%%%%++#%+=++%%-..::--::..-\*\*===+%%\*+%%%%%=. .... ',  ' ........ :%%\*=-=+#%%%%\*+++#%%%%%%%%%%%\*\*===+%%%%%+=-=\*%%.. ...... ',  ' ....... .#%+-------#%%%++++=-::::::-:-=====%%%#-------\*%\*. ...... ',  ' ..%%--=+++=--\*%+-===-::::::::::-===-=#\*--=+++=--%%...... ',  ' ..%%-=++++++=--::-::::::::::::::::-:::-=++++++--%%... ',  ' .+%%-++++++-::::::::::::::::::::::::::--++++=-%%=. ',  ' .=%%%#\*==-:::::::::::::::::::::::::::::-=\*#%%%=.. ',  ' ..-%%%-:::::::::::::::::::::::::::::::+%%-.. ',  ' .%%=::::::::::::::::::::::::::::::::-#%=. ',  ' .-%#-::::::::::::::::::::::::::-::::::+%\*... ',  ' .+%#-::::::::-=-:::::::::::--:::::::::-%%.. ',  ' .... ..+%\*-::::::::%+=::::::::::=%-\*::::::::-%%... ',  ' ..... ..+%\*::::::::+%%#-:::::::::\*%%\*::::::::-%%... ...... ',  ' ... ..+%=::::::::+%%%-:::::::::\*%%#::::::::-%%... ....... ',  ' .... .+#+::::::::-%%#::::::::::+###::::::::-%%.. ........ ',  ' ..... .+%#:::::::::-\*-::--====-::+\*:::::::::-%%.. ....... .',  ' ... -%#-::::::::--=\*\*\*+----=\*\*---:::::::-+%#.. ..',  ' .%%-:------.:\*\*\*\*\*\*-------\*+.:-----:-\*%\*. ',  ' .\*%+--:....:\*\*\*\*\*\*\*\*\*\*\*=--+\*\*....:---#%-... ',  ' .=%%#.......\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*-......-%%\*... ',  ' .#%#.........#\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*........=%%-. ',  ' ..%%=..........\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*-.........:%%+.. ',  ' .%%-...........=\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*...........:%%-. ',  ' .-%#.............=#\*\*\*\*\*\*\*\*\*\*\*\*\*\*..............%%. ',  ' .\*%=...............+#\*\*\*\*\*\*\*\*\*#:...............%%:. ...... ',  ' ...... .+%+..................-+++++:..................%%:.. ..... ',  ' ........ -%%:.........................................-%#. .... ',  ' ....... .\*%#........................................:%%:. ..... ',  ' .. .+%#-.....................................\*%%:. ..... ',  ' ..#%%+.................................#%%+... ... ',  ' ...+%%%#-:.......................:=%%%#-.... ',  ' ...-\*%%%%%#\*++==-----==++\*#%%%%%+:.... ',  ' .....=\*%%%%%%%%%%%%%\*-...... ',  ' ...... ',  ' ',  '......... .... .......... .... ....... .......... . .......... .. . ...... ..... .... ... ...... ',  '.:----:........................................................:--.:................................',  '.:-::-:.:::.:::..::. ...:... ..::::--:. ',  '.:=:--::----------:--:........... ..... ..::..................',  '................................. ..................... '  );  END initialize\_art;  PROCEDURE display\_art\_category(category IN VARCHAR2) IS  rc\_art\_lines art\_ref\_cursor;  art\_line VARCHAR2(4000);  i INTEGER := 1;  BEGIN  IF art\_categories.EXISTS(category) THEN  OPEN rc\_art\_lines FOR  SELECT COLUMN\_VALUE  FROM TABLE(art\_categories(category));  LOOP  FETCH rc\_art\_lines INTO art\_line;  EXIT WHEN rc\_art\_lines%NOTFOUND;  DBMS\_OUTPUT.PUT\_LINE(art\_line);  i := i + 1;  END LOOP;  CLOSE rc\_art\_lines;  ELSE  handle\_error('Category not found: ' || category);  END IF;  END display\_art\_category;  PROCEDURE handle\_error(err\_msg IN VARCHAR2) IS  BEGIN  DBMS\_OUTPUT.PUT\_LINE('Error: ' || err\_msg);  END handle\_error;  BEGIN  initialize\_art;  END art\_package;  /  BEGIN  art\_package.display\_art\_category('tree');  art\_package.display\_art\_category('snowman');  art\_package.display\_art\_category('elf');    art\_package.display\_art\_category('santa');    art\_package.display\_art\_category('reindeer');  END;  / |
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