Temă laborator 1 – Sisteme de Operare

#undef UNICODE

#include <windows.h>

#include "resource.h"

LRESULT CALLBACK WndProc(HWND, UINT, WPARAM, LPARAM);

BOOL CALLBACK DlgProc(HWND hDlg, UINT iMsg, WPARAM wParam, LPARAM lParam);

BOOL dlgActive = FALSE;

INT randomNumber; // definim variabila pentru numarul random pe care-l vom genera

BOOL selectSucces; // definim variabila de tip BOOL pentru a afla daca am selectat vreun numar

INT selectedNumber; // definim variabila numarului selectat

INT factorial; // definim variabila factorial pentru a-l calcula

HWND hwndMain;

int WINAPI WinMain(HINSTANCE hInstance, HINSTANCE hPrevInstance,

PSTR szCmdLine, int iCmdShow)

{

static char szAppName[] = "Dialog";

HWND hwnd;

MSG msg;

WNDCLASSEX wndclass;

wndclass.cbSize = sizeof(wndclass);

wndclass.style = CS\_HREDRAW | CS\_VREDRAW;

wndclass.lpfnWndProc = WndProc;

wndclass.cbClsExtra = 0;

wndclass.cbWndExtra = 0;

wndclass.hInstance = hInstance;

wndclass.hIcon = LoadIcon(NULL, IDI\_APPLICATION);

wndclass.hCursor = LoadCursor(NULL, IDC\_ARROW);

wndclass.hbrBackground = (HBRUSH)GetStockObject(WHITE\_BRUSH);

wndclass.lpszMenuName = NULL;

wndclass.lpszClassName = szAppName;

wndclass.hIconSm = LoadIcon(NULL, IDI\_APPLICATION);

RegisterClassEx(&wndclass);

hwnd = CreateWindow(szAppName,

"Factorialul unui numar generat",

WS\_OVERLAPPEDWINDOW,

CW\_USEDEFAULT,

CW\_USEDEFAULT,

CW\_USEDEFAULT,

CW\_USEDEFAULT,

NULL,

NULL,

hInstance,

NULL);

SetWindowPos(hwnd, HWND\_BOTTOM, 0, 0, 0, 0, SWP\_NOACTIVATE);

ShowWindow(hwnd, SW\_HIDE);

UpdateWindow(hwnd);

hwndMain = hwnd;

while (GetMessage(&msg, NULL, 0, 0))

{

TranslateMessage(&msg);

DispatchMessage(&msg);

}

return msg.wParam;

}

LRESULT CALLBACK WndProc(HWND hwnd, UINT iMsg, WPARAM wParam, LPARAM lParam)

{

static HINSTANCE hInstance;

switch (iMsg)

{

case WM\_CREATE:

hInstance = ((LPCREATESTRUCT)lParam)->hInstance;

if (!dlgActive) {

DialogBox(hInstance, MAKEINTRESOURCE(IDD\_DIALOG),

hwnd, DlgProc);

PostMessage(hwnd, WM\_CLOSE, 0, 0);

}

return 0;

case WM\_DESTROY:

PostQuitMessage(0);

return 0;

}

return DefWindowProc(hwnd, iMsg, wParam, lParam);

}

BOOL CALLBACK DlgProc(HWND hDlg, UINT iMsg, WPARAM wParam, LPARAM lParam) {

char text[100];

switch (iMsg) {

case WM\_INITDIALOG:

return TRUE;

case WM\_CLOSE:

dlgActive = FALSE;

EndDialog(hDlg, 0);

return TRUE;

case WM\_COMMAND:

switch (LOWORD(wParam)) {

case ID\_RANDOM:

randomNumber = rand() % 16; // se va genera un nou numar din intervalul [0, 15]

SetDlgItemInt(hDlg, IDC\_EDIT\_NR, randomNumber, true); // setam numarul generat in campul IDC\_EDIT\_NR

break;

case ID\_CALC:

selectedNumber = GetDlgItemInt(hDlg, IDC\_EDIT\_NR, &selectSucces, false); // selectam numarul(care este de tip INT din campul IDC\_EDIT\_NR, ne vom folosi de o variabila de verificare selectSucces sa vedem daca s-a selectat ceva din campul respectiv si nu este gol)

if (selectSucces) { // daca s-a selectat(selectSuccess == true) si selectedNumber nu este NULL

if (selectedNumber == 0) factorial = 1; // daca numarul selectat este 0, atunci factorial este 1

else {

factorial = 1;

for (int i = 1; i <= selectedNumber; ++i) {

factorial \*= i;

}

}

SetDlgItemInt(hDlg, IDC\_EDIT\_REZ, factorial, true); // trimitem rezultatul factorialului calculat anterior

}

else {

MessageBox(hDlg, "Nu ati generat niciun numar!", "Eroare", MB\_OK | MB\_ICONSTOP); // eroare in caz in care nu s-a generat niciun numar

}

break;

case ID\_CANCEL:

dlgActive = FALSE;

EndDialog(hDlg, 0);

return TRUE;

}

break;

}

return FALSE;

}

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| **Exemplu de execuție cu succes** | **Exemplu de execuție cu eroare** |
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