Practical 4

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Aim: a. Write a program that would draw a line by joining the new point where you have clicked the
left mouse button with the last point where you clicked the left mouse button.

```
#include <stdio.h>
#include <windows.h>
#include <stdlib.h>
#include <wingdi.h>
#include <gdiplus.h>
HMENU hMenu;
int flag =0;
int x, y;
void AddMenu(HWND hwnd){
     hMenu = CreateMenu();
     HMENU hFileMenu = CreateMenu();
     HMENU NewFileMenu = CreateMenu();
     AppendMenu(hFileMenu, MF_POPUP, (UINT_PTR)NewFileMenu,
"New");
     AppendMenu(NewFileMenu, MF_STRING, NULL, "C file");
     AppendMenu(NewFileMenu, MF_STRING, NULL, "Java file");
     AppendMenu(hFileMenu, MF_SEPARATOR, NULL, NULL);
     AppendMenu(hFileMenu, MF_STRING, NULL, "Open");
     AppendMenu(hMenu, MF_POPUP, (UINT_PTR)hFileMenu, "File");
     AppendMenu(hMenu, MF_STRING, 2, "Edit");
     AppendMenu(hMenu, MF_STRING, 3, "View");
     SetMenu(hwnd, hMenu);
}
LRESULT CALLBACK WindowProcedure(HWND hwnd, UINT umsg, WPARAM
wparam, LPARAM lparam){
     POINT pt2;
     PAINTSTRUCT ps;
     HPEN pen = CreatePen(PS_SOLID, 1, RGB(0, 0, 0));
```

```
HDC handle;
switch(umsg){
case WM_CREATE:
AddMenu(hwnd);
case WM_COMMAND:
switch(wparam){
case 1:
    MessageBeep(2);
    break;
case 2:
    MessageBeep(2);
    break;
case 3:
    MessageBeep(2);
    break;
}
break;
case WM_DESTROY:
PostQuitMessage(0);
break;
case WM_LBUTTONDOWN:
//ha = BeginPaint(hwnd, &ps);
if (flag == 0)
{
    x = LOWORD(lparam);
    y = HIWORD(lparam);
    flag = 1;
}
else
{
    handle = GetDC(hwnd);
    SelectObject(handle, pen);
    pt2.x = LOWORD(lparam);
    pt2.y = HIWORD(lparam);
    MoveToEx(handle, x,y, 0);
    LineTo(handle,pt2.x, pt2.y);
    ReleaseDC(hwnd, handle);
    flag = 0;
}
break;
default:
```
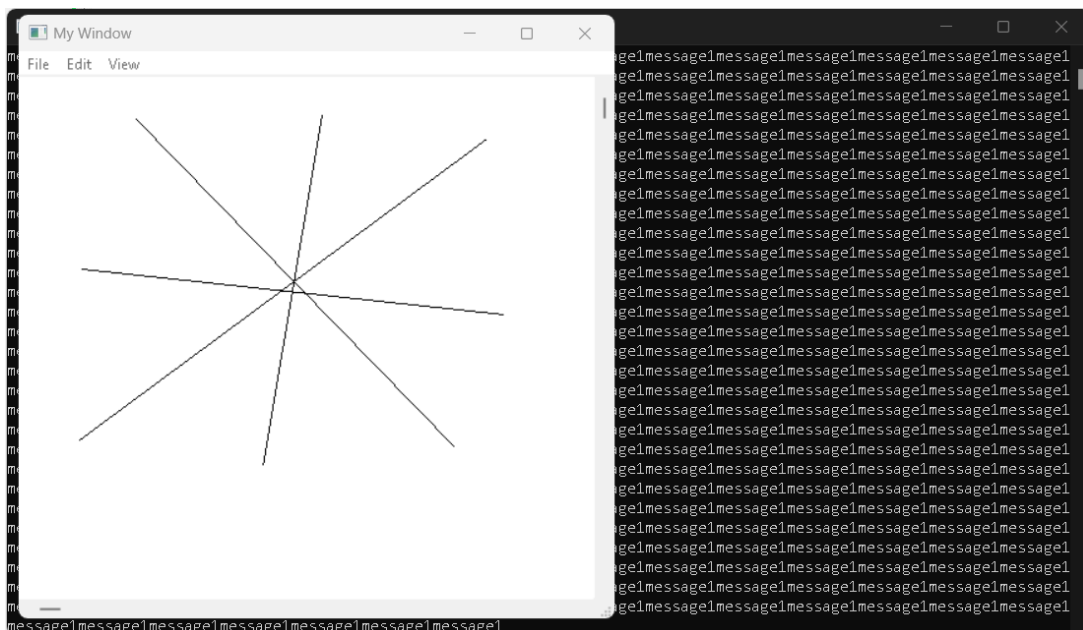
```
        return DefWindowProc(hwnd, umsg, wparam, lparam);
        }
}
int WINAPI WinMain(HINSTANCE i, HINSTANCE prev, LPSTR lp, int
cmd){
        HWND hld;
        const wchar_t CLASS_NAME[] = L"SAMPLE WINDOW CLASS";
        MSG msg = {};
        WNDCLASS wc ={};
        wc.lpfnWndProc = WindowProcedure;
        wc.hInstance = i;
        wc.lpszClassName = CLASS_NAME;
        // Register class
        RegisterClass(&wc);
        hld = CreateWindow(CLASS_NAME, "My Window",
        WS_OVERLAPPEDWINDOW | WS_HSCROLL | WS_VSCROLL
        | WS_ICONIC,
        100, 100, 500, 500, 0, 0, i, 0);
        ShowWindow(hld, cmd);
        while(GetMessage(&msg, NULL, 0, 0) > 0){
        printf("message1");
        TranslateMessage(&msg);
        DispatchMessage(&msg);
        }
        return 0;
}
```

b. Write a program, which displays "hello" at any place in the window where you click the left
mouse button. If you click the right mouse button the color of subsequent hellos should change.

```c
#include <stdio.h>
#include <stdlib.h>
#include <windows.h>
LRESULT CALLBACK WindowProcedure(HWND hwnd, UINT umsg, WPARAM wparam,
LPARAM lparam){
POINT pt;
POINT pt2;
HPEN pen = CreatePen(PS_DOT,1,RGB(0,255,0));
HDC handle;
switch(umsg){
case WM_DESTROY:
PostQuitMessage(0);
break;
case WM_LBUTTONDOWN:
handle = GetDC(hwnd);
pt.x = LOWORD(lparam);
pt.y = HIWORD(lparam);
printf("%d",pt.x);
TextOutA(handle, pt.x, pt.y, "Click", 5);
ReleaseDC(hwnd, handle);
break;
default:
return DefWindowProc(hwnd, umsg, wparam, lparam);
}
}
int WINAPI WinMain(HINSTANCE i, HINSTANCE prev, LPSTR lp, int cmd){
HWND hld;
const wchar_t CLASS_NAME[] = L"SAMPLE WINDOW CLASS";
MSG msg = {};
WNDCLASS wc ={};
wc.lpfnWndProc = WindowProcedure;
wc.hInstance = i;
```

```
wc.lpszClassName = CLASS_NAME;
// Register class
RegisterClass(&wc);
hld = CreateWindow(CLASS_NAME, "My Window",
WS_OVERLAPPEDWINDOW | WS_HSCROLL | WS_VSCROLL
| WS_ICONIC,
100, 100, 500, 500, 0, 0, i, 0);
ShowWindow(hld, cmd);
while(GetMessage(&msg, NULL, 0, 0) > 0){
printf("message1");
TranslateMessage(&msg);
DispatchMessage(&msg);
}
return 0;
}
```