

SET 40

# Assignment 1

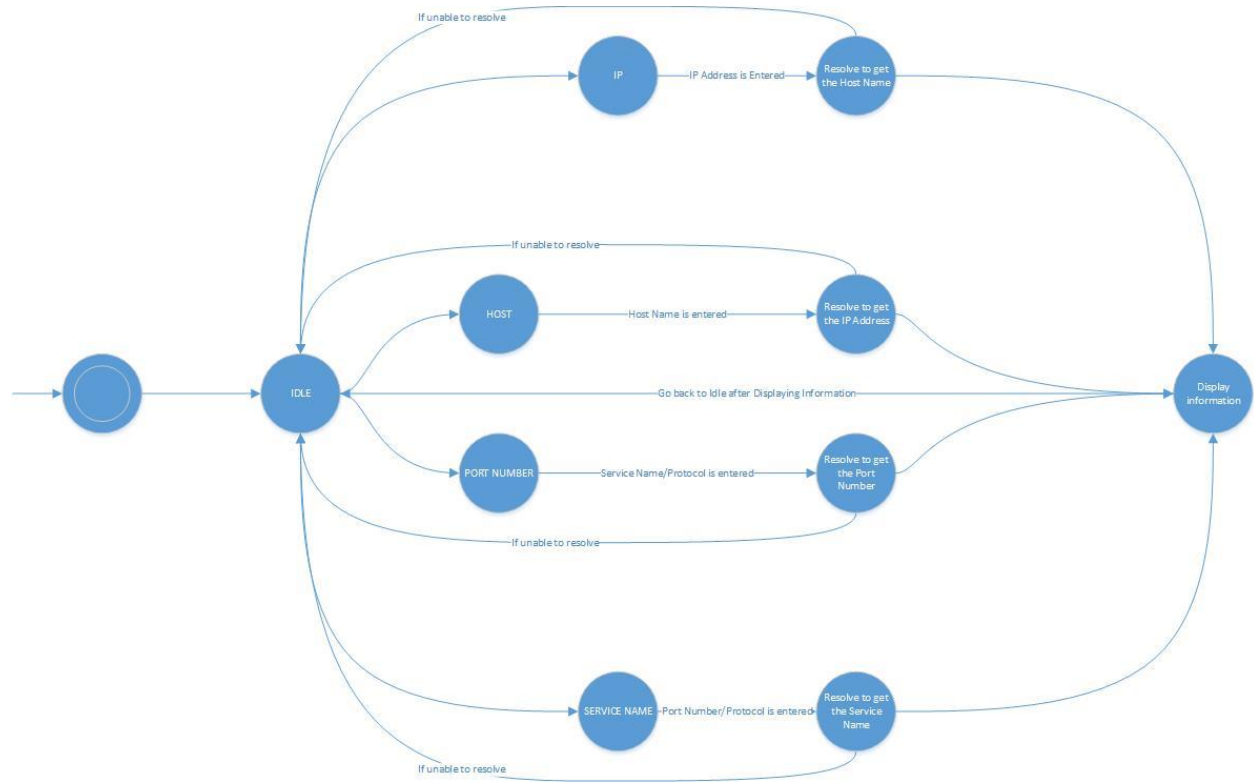
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Comp 4985

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## Design:



## Psuedocode:

```
Int winMain (HINSTANCE, HINSTANCE, LPSTR, int){
    Register the window
    Create the Window
    Read for and Deal with the MSG type
}

Bool Register(HINSTANCE){
    Set the types for the WNDCLASS struct
    Register the class/Window
}

HWND Create(HINSTANCE, int){

    Create the window
    Malloc for the Struct that will be specific to the window
    Malloc any structs within the struct that will be used
}

LRESULT CALLBACK WndProc (HWND, UINT Message, WPARAM, LPARAM){
    Message Crackers for WM_CREATE, WM_COMMAND, WM_DESTROY, WM_PAINT
}

BOOL Window_OnCreate(HWND) {
    Call WSStartup
}

void Window_OnCommand (HWND, int, HWND, UINT) {
    if IP is entered:
        Malloc struct for the IP Address
        If the WSAsyncGetHostByAddr passes
            Store info in struct
        Else
            Error Msg
    if Host Name is entered:
        If the WSAsyncGetHostByName passes
            Store info in struct
        Else
            Error Msg
    if the Service Name and Protocol type is entered:
        If the WSAsyncGetHostByAddr passes
            Store info in struct
        Else
            Error Msg
    if the Port Number and Protocol type is entered:
        If the WSAsyncGetHostByAddr passes
            Store info in struct
        Else
            Error Msg
}
```

```

void Window_onPaint(HWND) {
    Check the information in the struct
    Display the information if it is in the struct
}
void Window_OnDestroy (HWND) {
    WSACleanup
    Close the window
}
BOOL CALLBACK IPDlgProc (HWND, UINT message, WPARAM, LPARAM) {
    Open the Dialog Box
    Get the IP Address and store information in struct
    Pass the information in the struct to the wndProc
}
BOOL CALLBACK HostDlgProc (HWND, UINT message, WPARAM, LPARAM) {
    Open the Dialog Box
    Get the Host name & store information in struct
    Pass the information in the struct to the wndProc
}
BOOL CALLBACK PortNumDlgProc (HWND, UINT message, WPARAM, LPARAM) {
    Open a Dialog Box
    Get the Service Name & store information in Struct
    Get the Protocol Type & store information in Struct
    Pass the information in the struct to the wndProc
}
BOOL CALLBACK ServiceNameDlgProc (HWND, UINT message, WPARAM, LPARAM) {
    Open a dialog Box
    Get the Port Number & store information in Struct
    Get the Protocol Type & store information in Struct
    Pass the information in the struct to the wndProc
}

```

## Test Cases:

Test	Tests Description	Tools Used	Expected Result	Pass/Fail	Notes
1	Open an Initial Window	Windows Protocol	The initial window should open with the menu options	Pass	See Figure 1
2	Get a Host Name by IP Address	Windows Protocol	A dialog box to enter an IP Address should open and when OK is pressed, the Host Name Appears and any Aliases appear	Pass	See Figure 2a/2b
3	Get an IP Address by Host Name	Windows Protocol	A dialog box to enter an Host Name appears and when OK is pressed, the IP Address Appears and any Aliases appear	Pass	See Figure 3a/3b
4	Get A Port Number by Service Name and Protocol Type	Windows Protocol	A dialog box to enter an IP Address appears and when OK is pressed, the Port Number, Service Name and Protocol Type appear	Pass	See Figure 4a/4b
5	Get a Service Name by Port Number and Protocol Type	Windows Protocol	A dialog box to enter an IP Address appears and when OK is pressed, the Port Number, Service Name and Protocol Type appear	Pass	See Figure 5a/5b

## Figures:

Figure 1: Open an Initial Window)

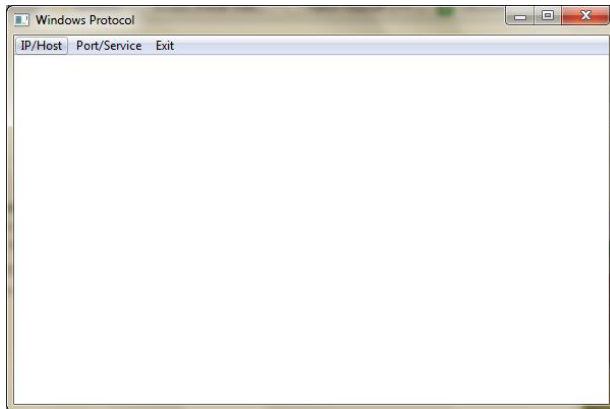


Figure 2a: Get a Host Name by IP Address)

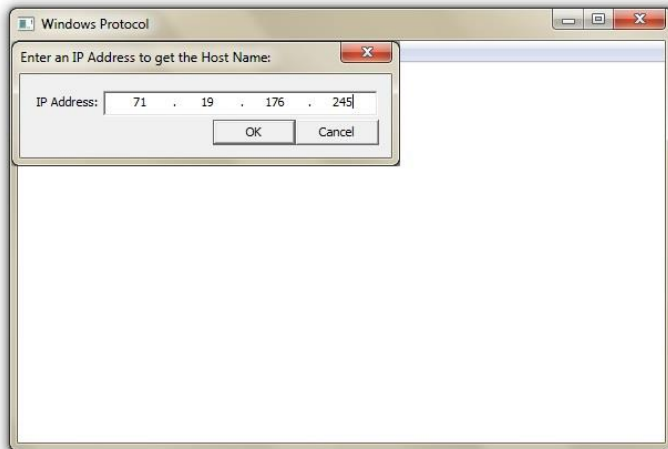


Figure 2b: Get a Host Name by IP Address)

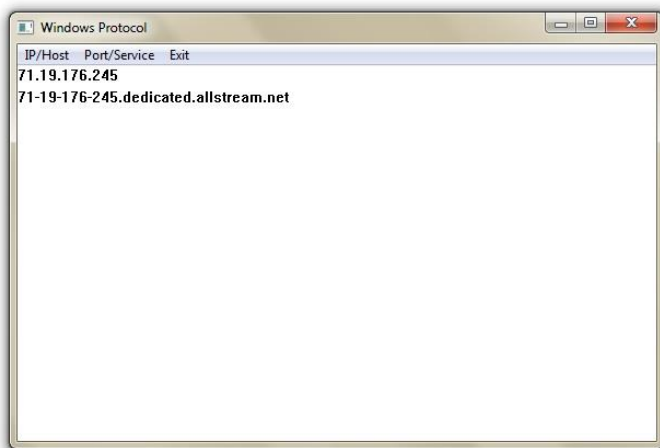


Figure 3a: Get an IP Address by Host Name)

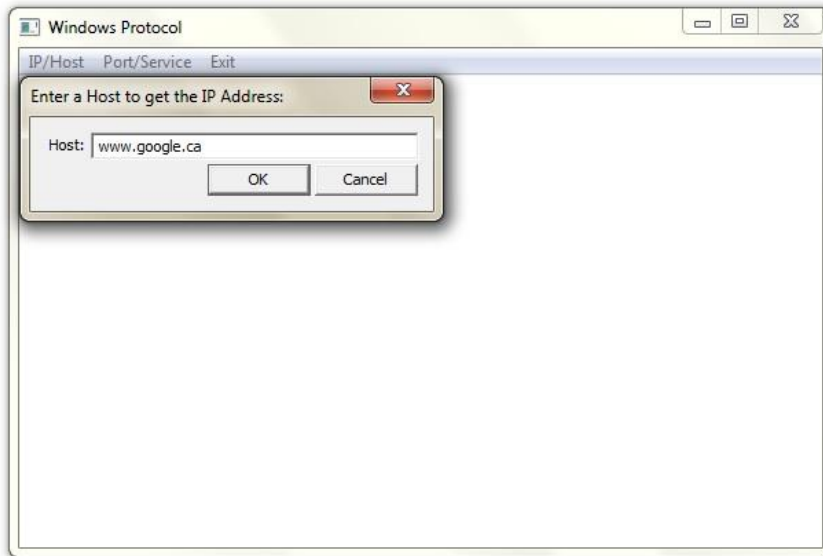


Figure 3b: Get an IP Address by Host Name)

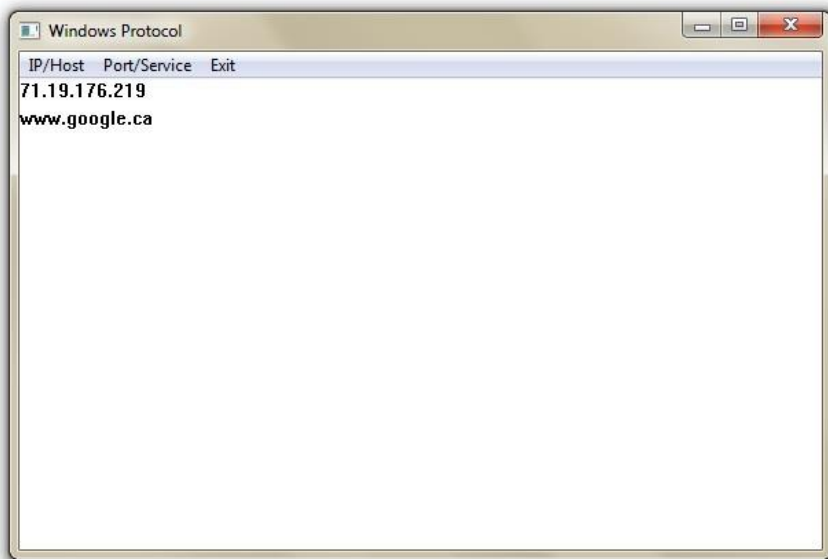


Figure 4a: Get A Port Number by Service Name and Protocol Type)

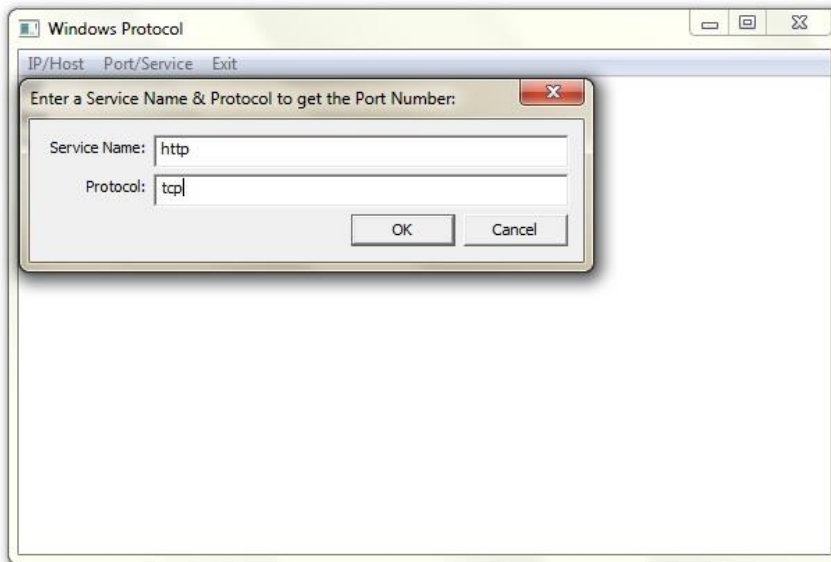


Figure 4b: Get a Port Number by Service Name and Protocol Type)

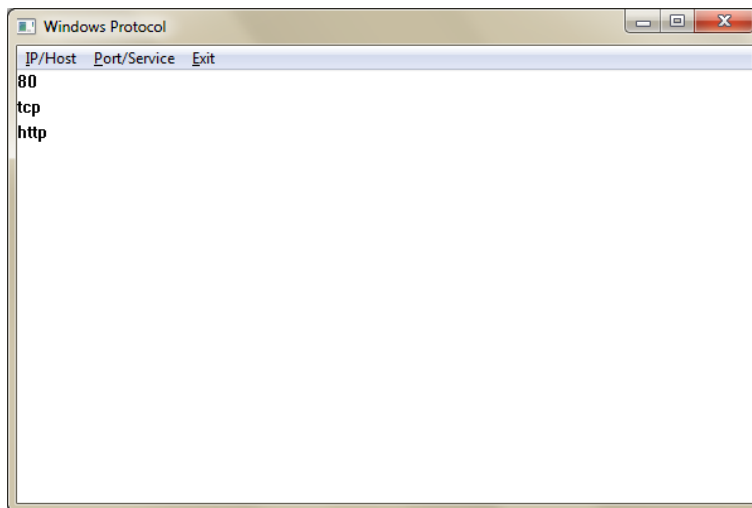




Figure 5a: Get a Service Name by Port Number and Protocol Type)

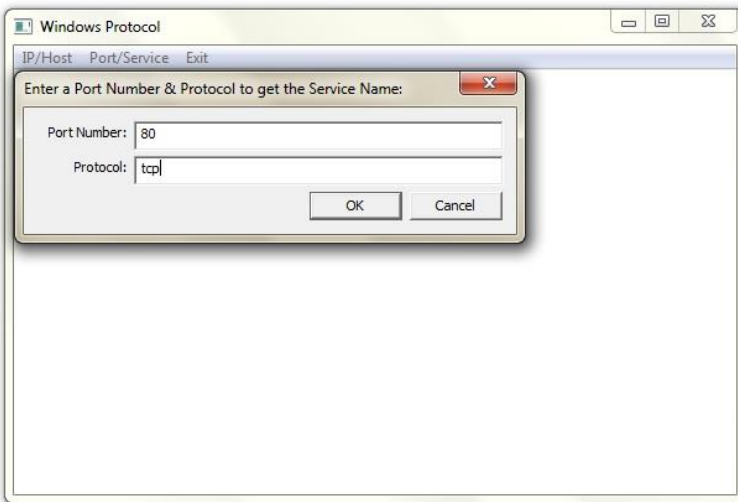


Figure 5b: Get a Service Name by Port Number and Protocol Type)

