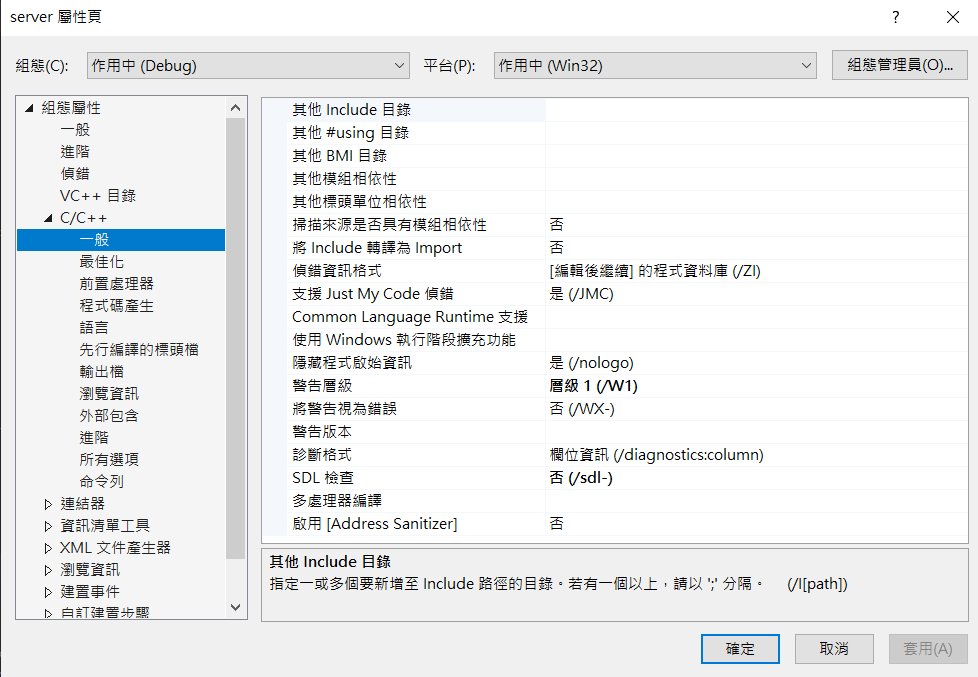
B0829060黃至祥

由於許多編譯器需要特別設定或是編譯的標頭檔並不滿足需求，故使用visual stdio作為編譯的工具

注意!要進入偵錯->server偵錯->c/c++一般 將SDL檢查設定為否



程式碼

#define WIN32\_LEAN\_AND\_MEAN

#include <windows.h>

#include <winsock2.h>

#include <ws2tcpip.h>

#include <stdlib.h>

#include <stdio.h>

// Need to link with Ws2\_32.lib, Mswsock.lib, and Advapi32.lib

#pragma comment (lib, "Ws2\_32.lib")

#pragma comment (lib, "Mswsock.lib")

#pragma comment (lib, "AdvApi32.lib")

int merror(int redata, int error,char\* showinfo) {

if (redata == error) {

perror(showinfo);

getchar();

return -1;

}

return 0;

}

void sendhtml(SOCKET s, char\* filename);

int main() {

printf("歡迎使用webser\n");

WSADATA wsdata;

int isok=WSAStartup(MAKEWORD(2,2),&wsdata);//確定socket版本

//short 2 character 2.2

char\* str1 = (char\*)"申請socket失敗";

merror(isok, WSAEINVAL, str1);

//第一個:協議族，決定socket地址類型

//第二個:傳輸類型,SOC\_STREAM傳輸

//第三個:指定傳輸協議,tcp

SOCKET server = socket(AF\_INET, SOCK\_STREAM, IPPROTO\_TCP);

char\* str2 = (char\*)"創建socket失敗";

merror(server, INVALID\_SOCKET, str2);

struct sockaddr\_in seraddr;

seraddr.sin\_family = AF\_INET;

seraddr.sin\_port = htons(80);

seraddr.sin\_addr.s\_addr = INADDR\_ANY;//監聽任意地址

isok=bind(server, (sockaddr\*)&seraddr, sizeof(seraddr));

char\* str3 = (char\*)"綁定失敗...\n";

merror(isok, SOCKET\_ERROR, str3);

isok = listen(server, 5);

char\* str4 = (char\*)"監聽失敗...\n";

merror(isok, SOCKET\_ERROR, str4);

struct sockaddr\_in claddr;

int cllen = sizeof(claddr);

while (1) {

SOCKET client = accept(server, (sockaddr\*)&claddr, &cllen);

char\* str5 = (char\*)"連接失敗...\n";

merror(client, INVALID\_SOCKET, str5);

char revdata[1024] = "";

recv(client, revdata, 1024, 0);

printf("%s 共接收到%d字節數據\n",revdata,strlen(revdata));

char sendata[1024] = "<h1 style=\ color:red;\">你好，我成功了!</h1>";

//send(client, sendata, strlen(sendata), 0);

char \*filename = (char\*)"./index.html";

sendhtml(client, filename);

closesocket(client);

}

closesocket(server);

WSACleanup();

getchar();

return 0;

}

void sendhtml(SOCKET s, char\* filename) {

FILE \*pfile = fopen(filename,"r");

if (pfile == NULL) {

printf("開啟文件失敗\n");

return;

}

char temp[1024] = "new";

do {

fgets(temp, 1024, pfile);

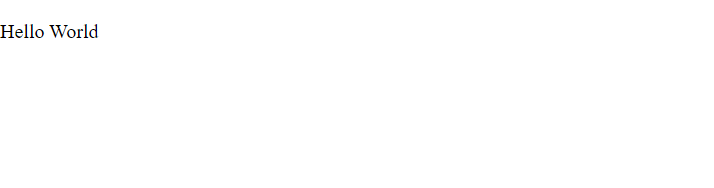
send(s, temp, strlen(temp), 0);

} while (!feof(pfile));

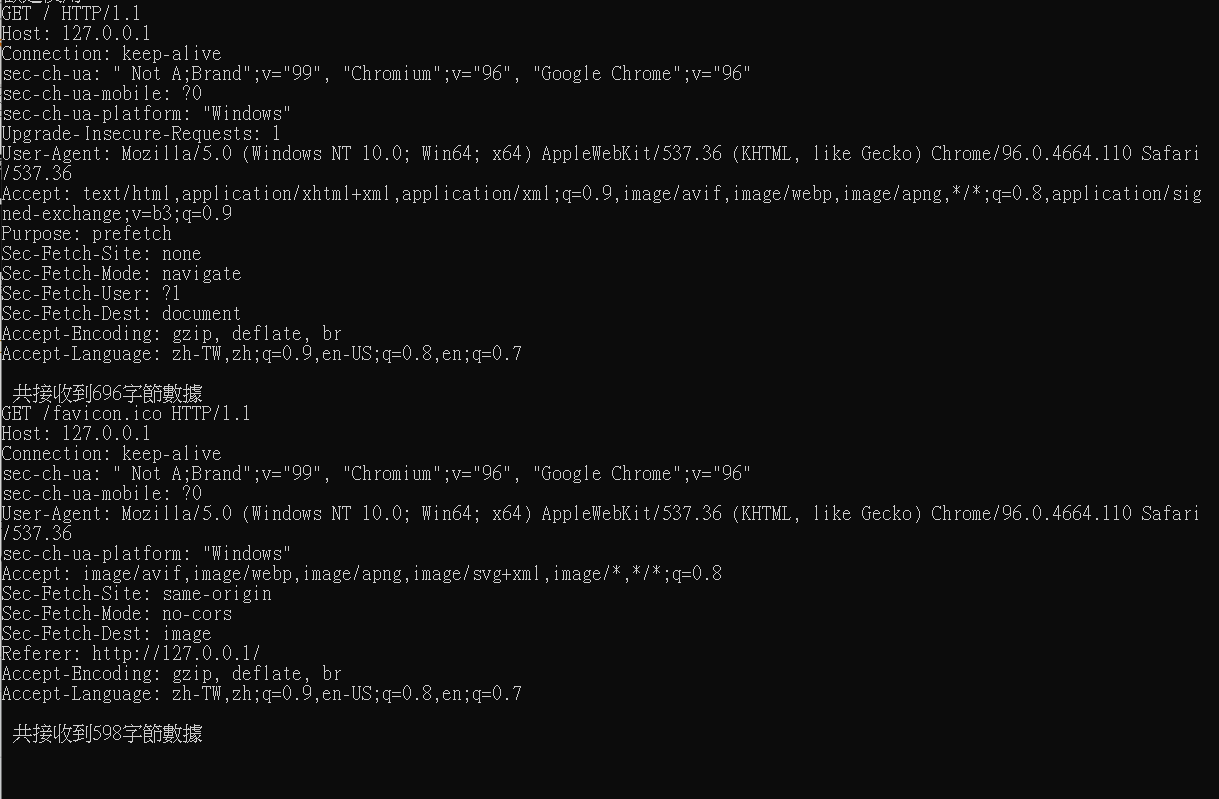
}}編譯結果



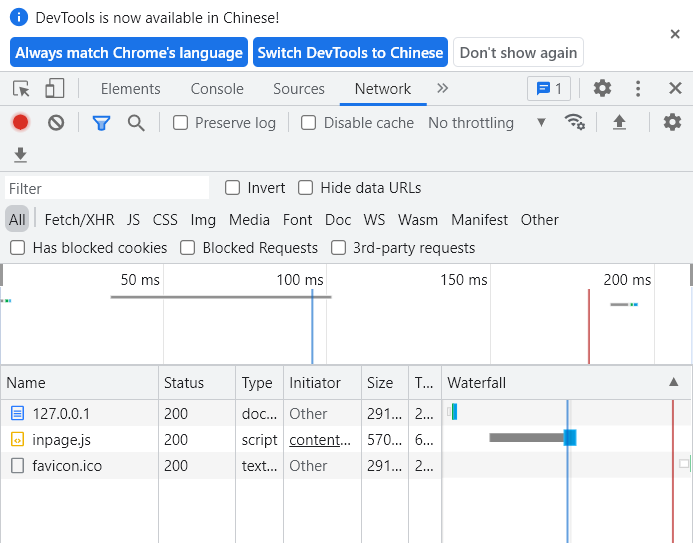
到local host127.0.0.1可以看到網頁



視窗改變



chrome顯示status200



參考資料:

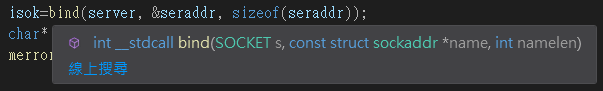
**C/C++知识分享：用c实现的极简的web server，搭建超简单的web服务器！**  
<https://www.bilibili.com/s/video/BV1464y1f7uT>

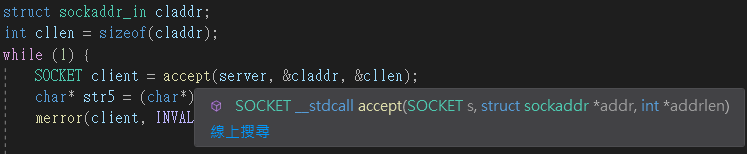
遇到的問題:

我在將其改為cpp檔的過程中，遇到了回傳錯誤字串需要使用\*char，但string被視為constant char的情況，透過強制轉換型態就解決了。

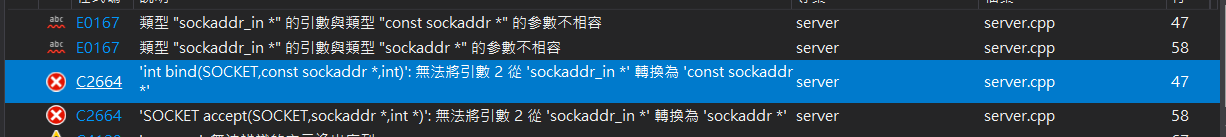
另外遇到了sockaddr\_in與sin\_family的設定產生變化

原本:

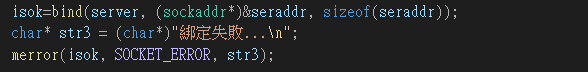




後來:



在c/c++中，sockaddr與sockaddr\_in屬於同構的struct，可透過強轉換達成需求



內部結構:

typedef struct sockaddr\_in {

#if(\_WIN32\_WINNT < 0x0600)

short sin\_family;

#else //(\_WIN32\_WINNT < 0x0600)

ADDRESS\_FAMILY sin\_family;

#endif //(\_WIN32\_WINNT < 0x0600)

USHORT sin\_port;

IN\_ADDR sin\_addr;

CHAR sin\_zero[8];

} SOCKADDR\_IN, \*PSOCKADDR\_IN;

typedef struct sockaddr {

#if (\_WIN32\_WINNT < 0x0600)

u\_short sa\_family;

#else

ADDRESS\_FAMILY sa\_family; // Address family.

#endif //(\_WIN32\_WINNT < 0x0600)

CHAR sa\_data[14]; // Up to 14 bytes of direct address.

} SOCKADDR, \*PSOCKADDR, FAR \*LPSOCKADDR;