

User Manual

Barcode Scanning Bot For Library

INDEX

- Setup Com-port
- Using the software
- Adding New Database to program Manually
- Rebuild the code
- Install Code::blocks and OpenCV

Setup Com-port

a) Place bot with camera facing towards books on white line. Camera lens should be nearly 6-7 cm away from barcodes.

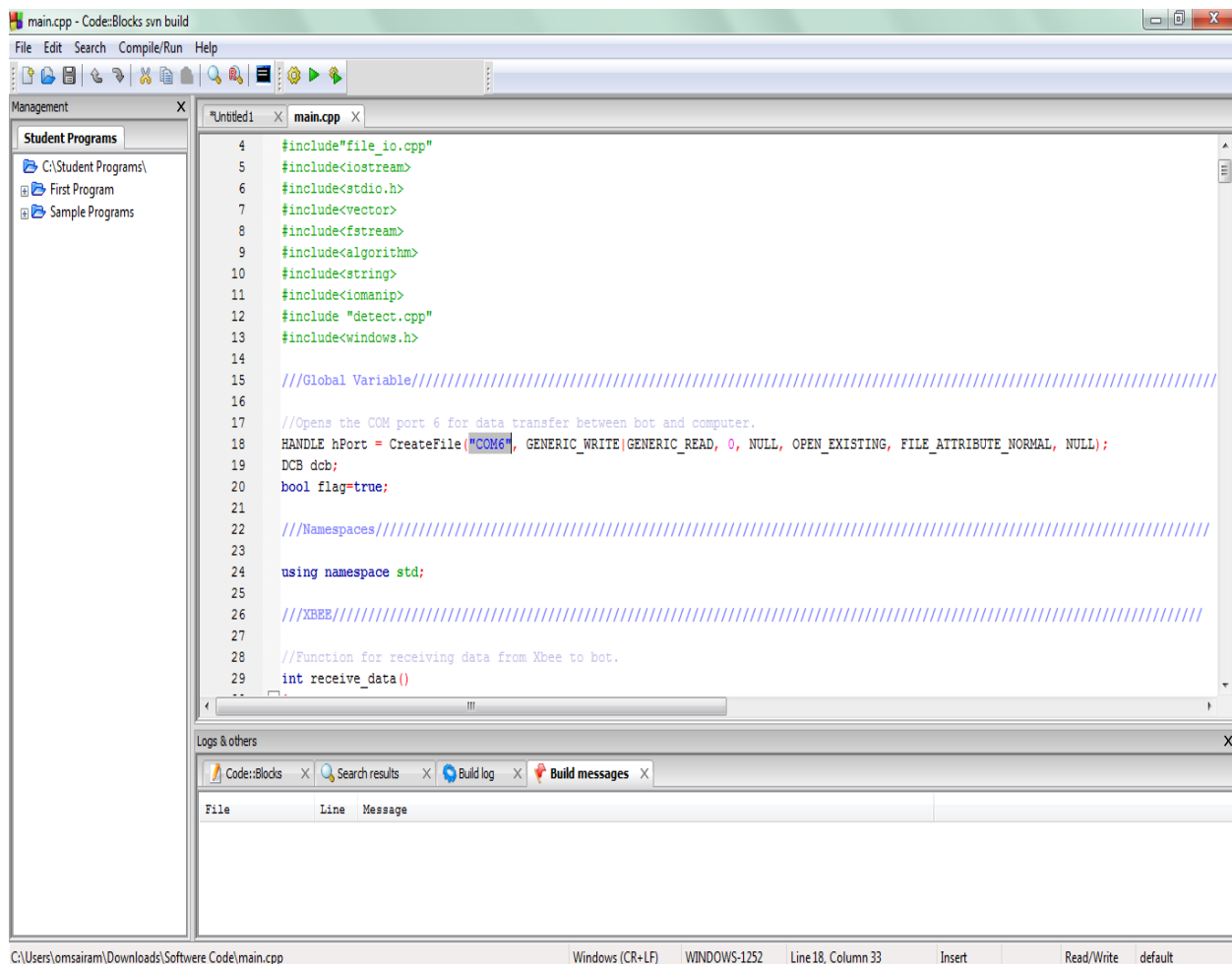
b) Connect camera cable and XBee platform to computer.

Please do check your ComPort in Device Manager, if it is not (6) you have to change it in code change it in code. Look at line just below includes and change COM6 to COM(your_comp_port_here). After changing COMPORT rebuild the program. To rebuild program follow steps given in section Rebuild the code.

You can find device manager in control panel or you can directly search it in search tool.

c) Then run main.exe to start your program.

(Please refer video tutorial for better understanding)



```
main.cpp - Code::Blocks svn build
File Edit Search Compile/Run Help
Management X
Student Programs
C:\Student Programs\
First Program
Sample Programs
main.cpp X
4 #include"file_io.cpp"
5 #include<iostream>
6 #include<stdio.h>
7 #include<vector>
8 #include<fstream>
9 #include<algorithm>
10 #include<string>
11 #include<iomanip>
12 #include "detect.cpp"
13 #include<windows.h>
14
15 //Global Variable////////////////////////////////////
16
17 //Opens the COM port 6 for data transfer between bot and computer.
18 HANDLE hPort = CreateFile("COM6", GENERIC_WRITE|GENERIC_READ, 0, NULL, OPEN_EXISTING, FILE_ATTRIBUTE_NORMAL, NULL);
19 DCB dcb;
20 bool flag=true;
21
22 //Namespaces////////////////////////////////////
23
24 using namespace std;
25
26 //XBEE////////////////////////////////////
27
28 //Function for receiving data from Xbee to bot.
29 int receive_data()
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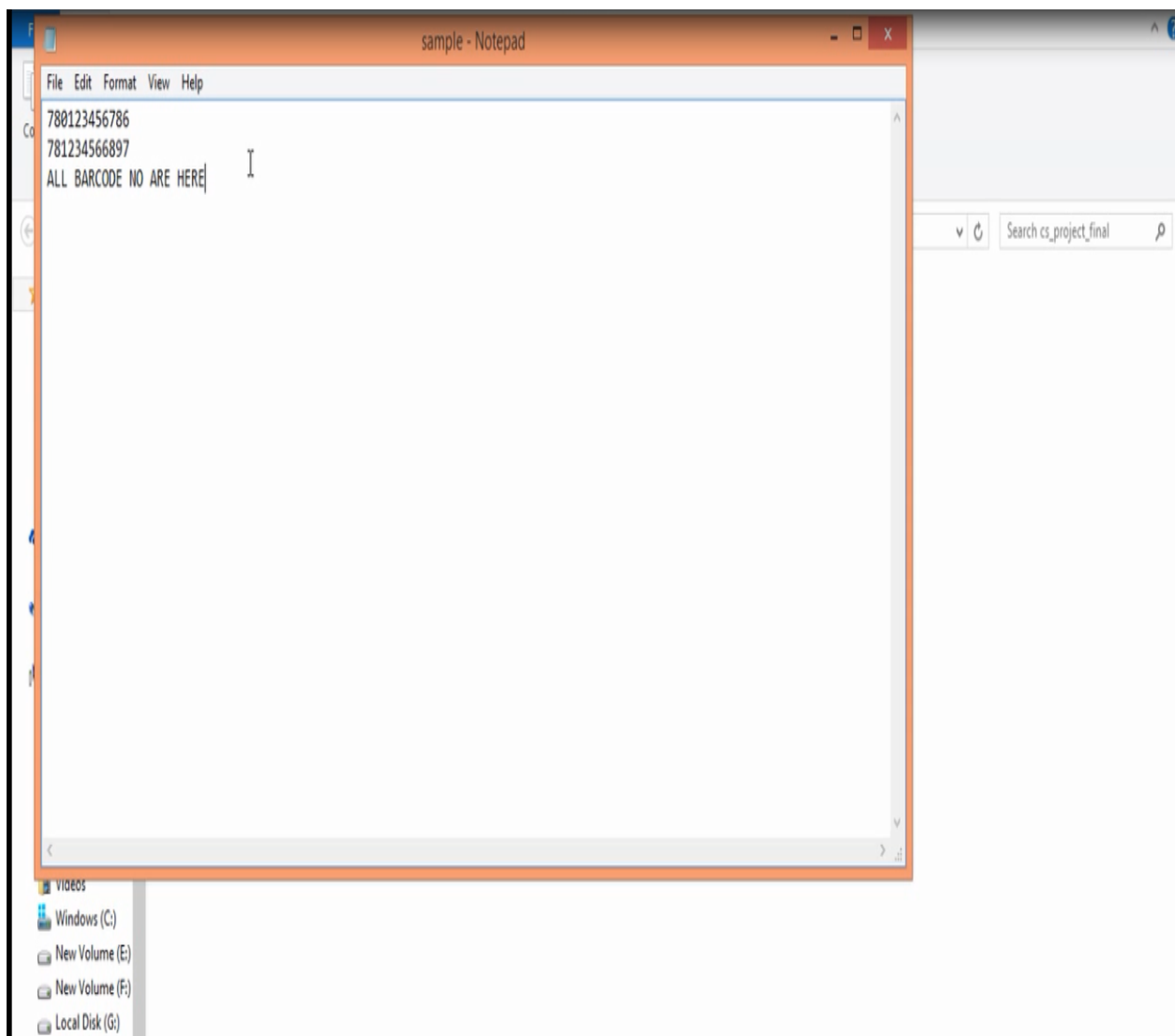
Using the software

There are two modes of operation as follows:

i-> New file mode : To create new database

First enter name of new file you have to create. You must enter extension as txt e.g "sample.txt".

Then enter any character to start scanning.
sample.txt is saved in the source folder itself as .txt file.



Scanning will stop when bot reaches at end or line. All results will be stored in file with name you have given. You can find the file in folder of your main program. Infact all data files will be in same folder.

(Please DON'T change location of files nor rename them)

ii-> Old File Mode : To compare shelf with database to find absent and extra books
First select the existing file with which scanned record will be checked.

Then enter any character to start scanning.

Scanning will stop when bot reaches at the end of line. All results will be stored in two files, named (name_of_selected_file_here)Absent.txt and (name_of_selected_file_here)Extra.txt for storing absent and extra files for corresponding scan. Both files will be in folder containing main program.

Adding New Database to program Manually

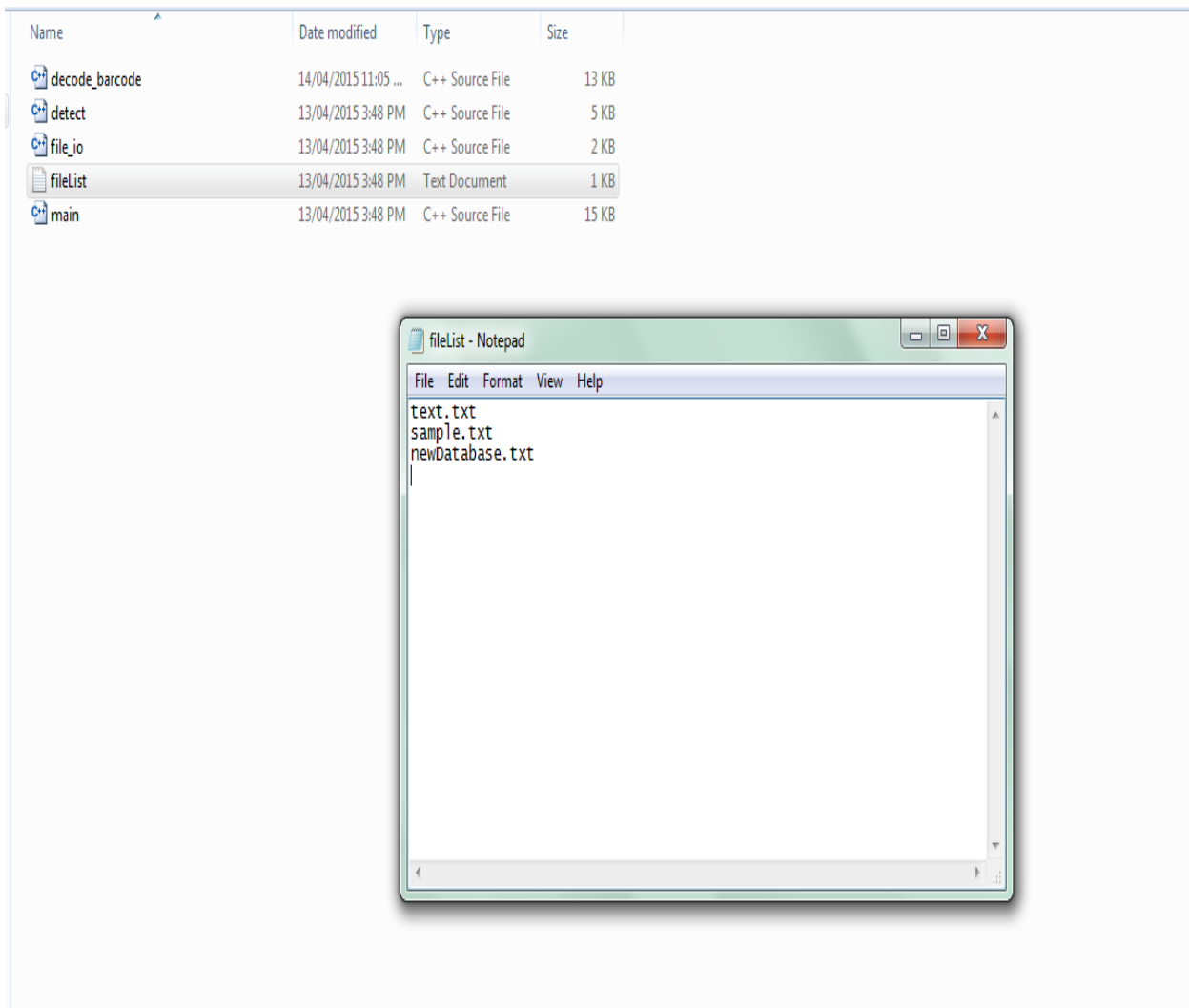
First copy the database text file in folder containing main program.

Open file "fileList.txt" and add the name of new file on new line at the end of list without any blank space.

Don't forget to press enter after typing the name of new file.

Then save the "fileList.txt" and close it.

Now you can access this file through program.



Rebuild the code

- a) First you must have codeblocks and OpenCV installed on your computer.If not refer separate section below.
- b) Extract source code from "source.zip" and open main.cpp using codeblocks.
- c) Do changes you want to do(Preferably change only COMPORT settings) in source code provided.
- d) Press build option and build the code.
- e) Cut "main.exe" from current folder to folder containing old main program executable file and replace it with new file.

Installing Codeblocks and OpenCV

detailed explanation is in installation guide(pdf file in main folder)