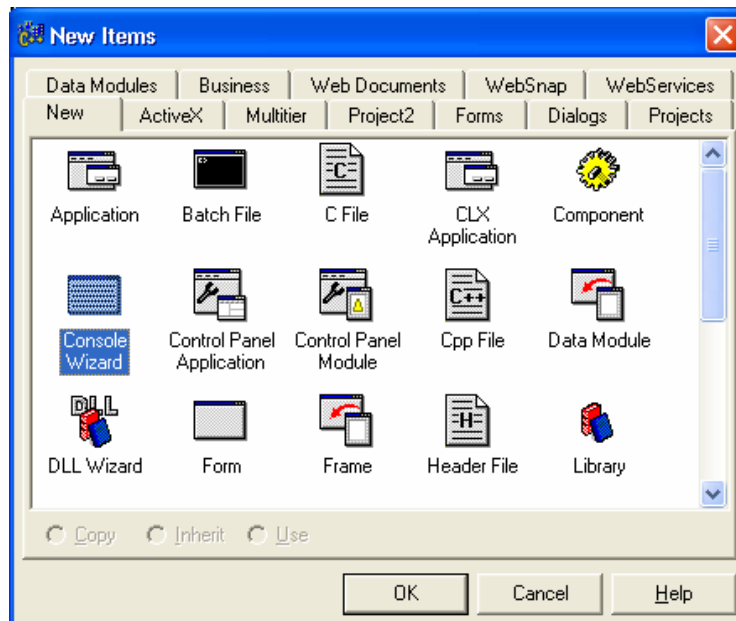
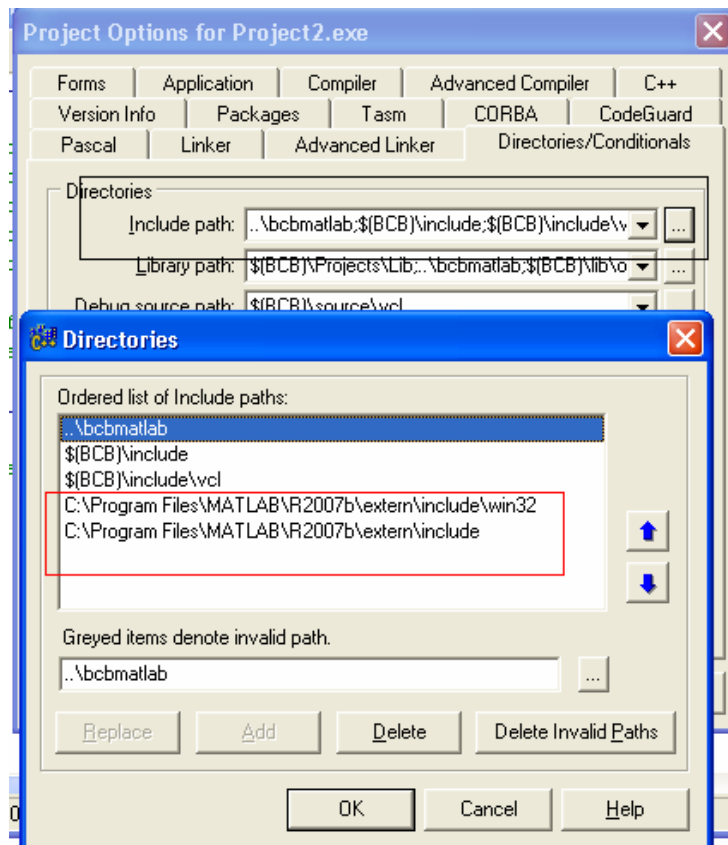


Matlab API (R2007b) on Borland C++ Builder 6

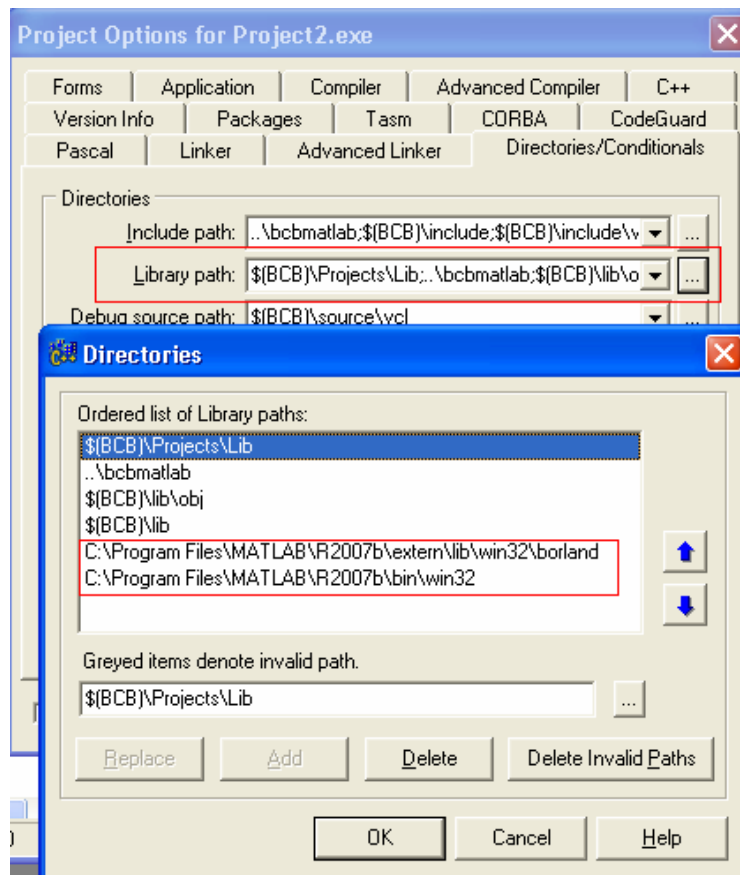
1. Create console application (console wizard) from File → New → Other



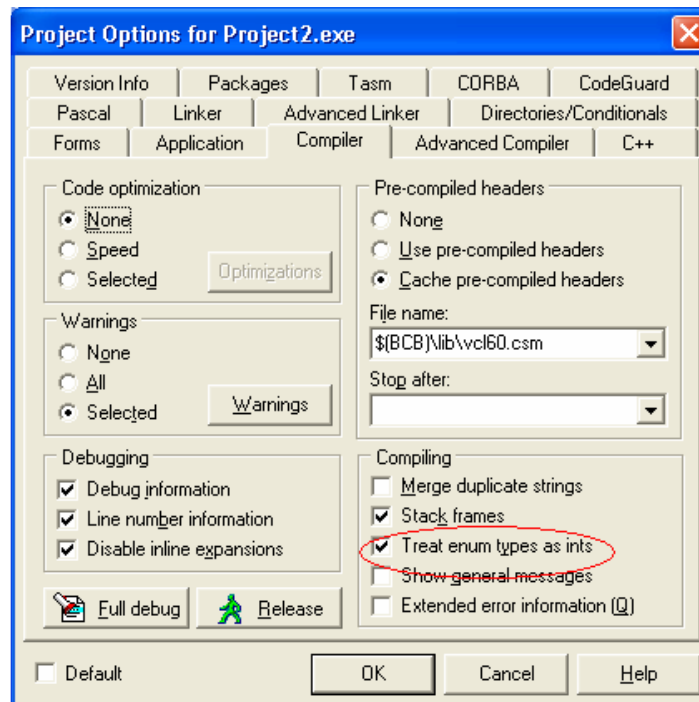
2. Select “Directories/Conditionals” tab. Enter include path for Matlab installation as shown below :



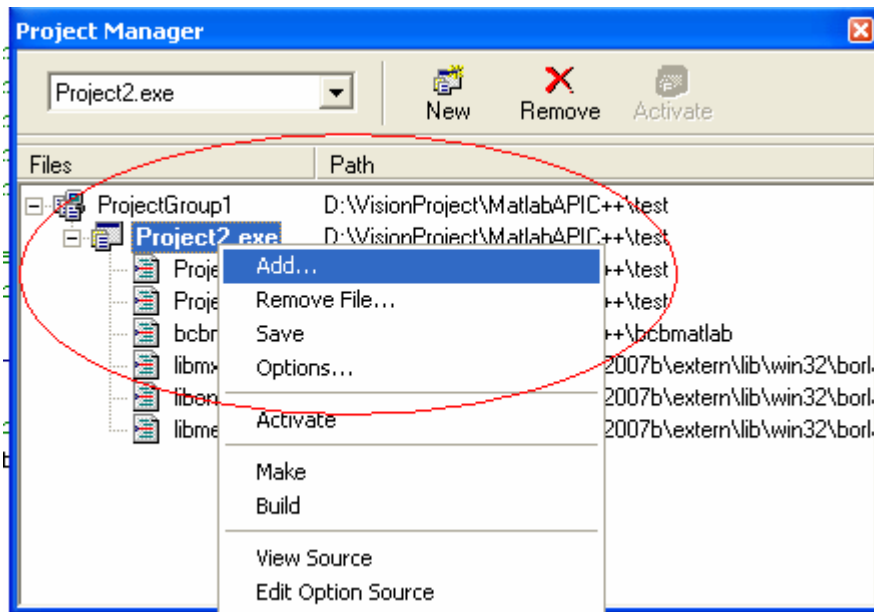
3. Enter library path for Matlab



4. Select option in compiler : “treat enum types as ints”



5. Include all library file needed. Click View → Project Manager. Right click on Project.exe, then add library



6. Insert the source code below to make sure that the configuration done well.

```
#include <vc1.h>
#include <stdio.h>
#include <conio.h>
#include <memory.h>
#include <engine.h> //Located in $Matlab$\extern\include

#define SIZE 50
#pragma hdrstop

//-----

#pragma argsused
int main(int argc, char* argv[])
{
    double x[SIZE], y1[SIZE], y2[SIZE];
    for (int i=0; i<SIZE; i++)
    {
        x[i]=((double)i)*0.1;
        y1[i]=x[i]*x[i];
        y2[i]=y1[i]*x[i];
    }

    Engine *m_pEngine;
    m_pEngine = engOpen(NULL);
    if (m_pEngine == NULL)
    {
        //Error! Fail to connect to MATLAB engine.
        // The plot function will be disabled!
        printf("Fail to open MATLAB Engine!\n");
        exit(0);
    }

    //Translate data from C++ to Matlab
    mxArray *m_X, *m_Y1, *m_Y2;
    m_X=mxCreateDoubleMatrix(1, SIZE, mxREAL);
    memcpy((void *)mxGetPr(m_X), (void *)x, sizeof(double)*SIZE);
    engPutVariable(m_pEngine, "x", m_X);
```

```

m_Y1=mxCreateDoubleMatrix(1, SIZE, mxREAL);
memcpy((void *)mxGetPr(m_Y1), (void *)y1, sizeof(double)*SIZE);
engPutVariable(m_pEngine, "y1", m_Y1);

m_Y2=mxCreateDoubleMatrix(1, SIZE, mxREAL);
memcpy((void *)mxGetPr(m_Y2), (void *)y2, sizeof(double)*SIZE);
engPutVariable(m_pEngine, "y2", m_Y2);

//Plot by sending command to engine
engEvalString(m_pEngine, "plot(x, y1, '-', x, y2, ':')");
engEvalString(m_pEngine, "title('y_1/y_2 vs. x')");
engEvalString(m_pEngine, "xlabel('x')");
engEvalString(m_pEngine, "ylabel('y (Unit:10)')");

printf("Press any key to close the plot...\n");
getch();

//Close plot window
engEvalString(m_pEngine, "close;");

engClose(m_pEngine);

printf("Press any key to exit...\n");
getch();
return 0;
}

```

