IDE: MS Visual Studio

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조 진 성

Integrated Development Environment

- IDE
  - ✓ Editor
  - ✓ Compiler / Linker
  - ✓ Debugger

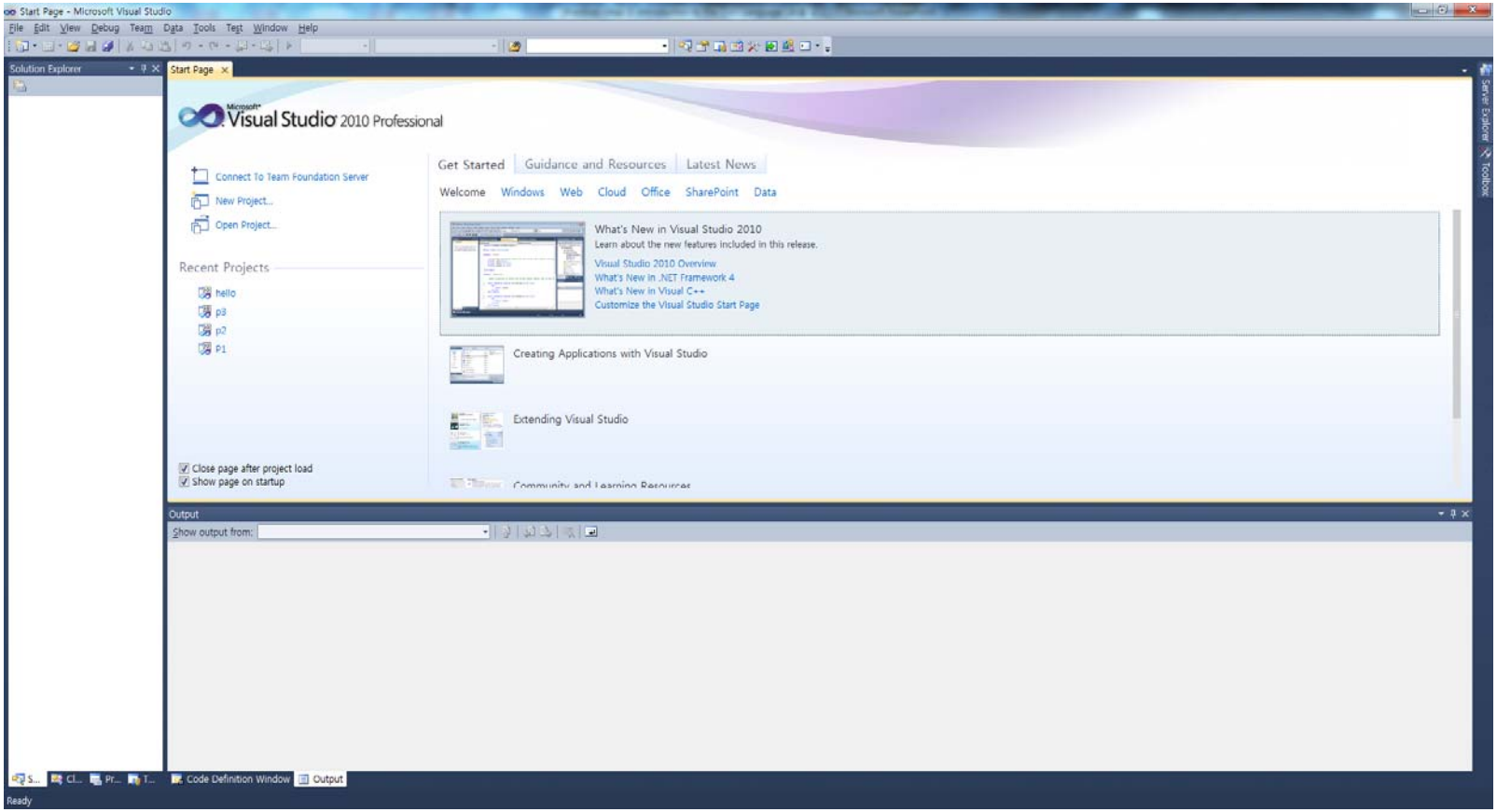
- MS Visual Studio

MS Visual Studio

- Download & Installation
  - ✓ http://ois.khu.ac.kr/03/08.php

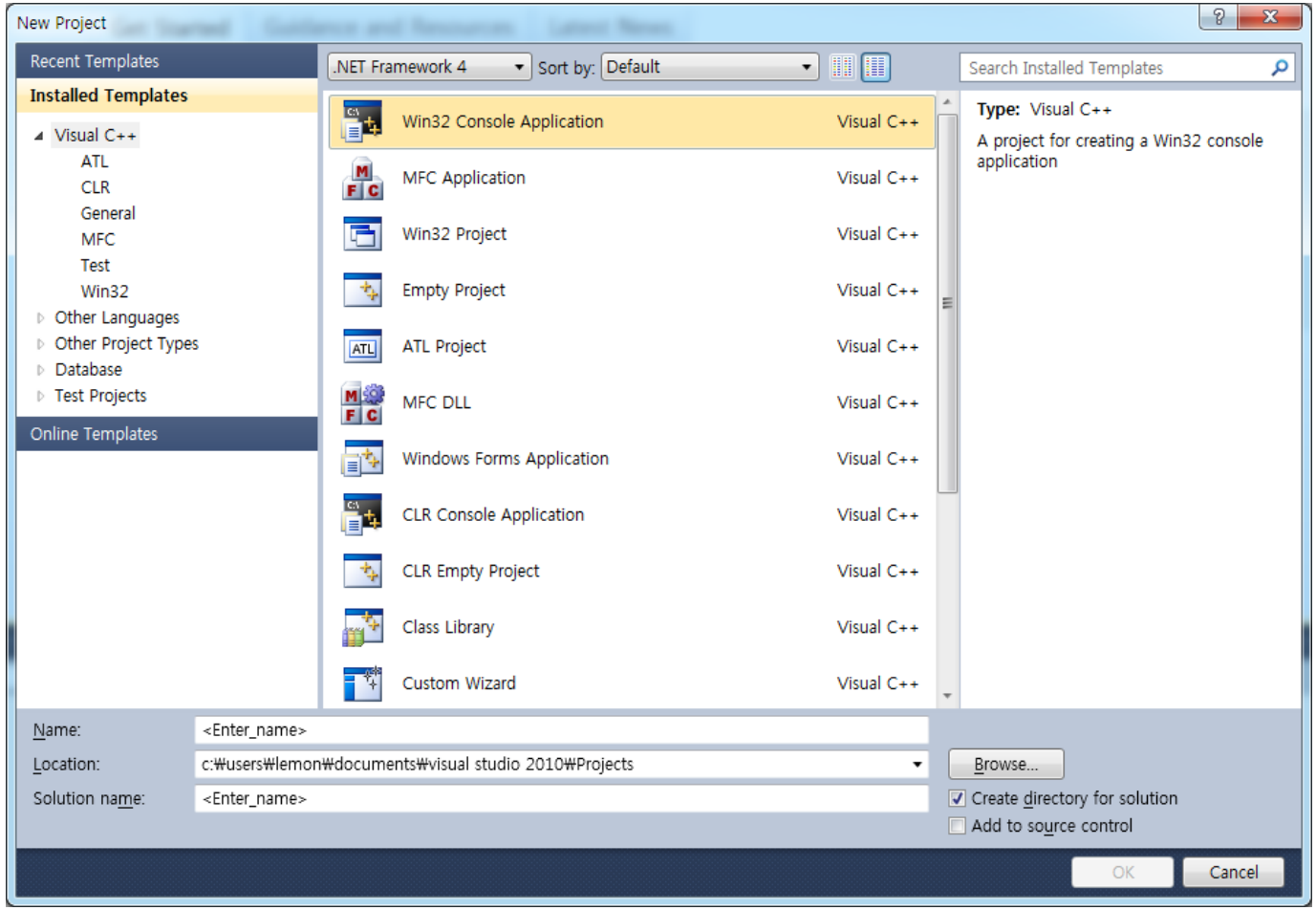
MS Visual Studio

- How to start
  - ✓ Start > All Program > Microsoft Visual Studio 2010 > Microsoft Visual Studio 2010



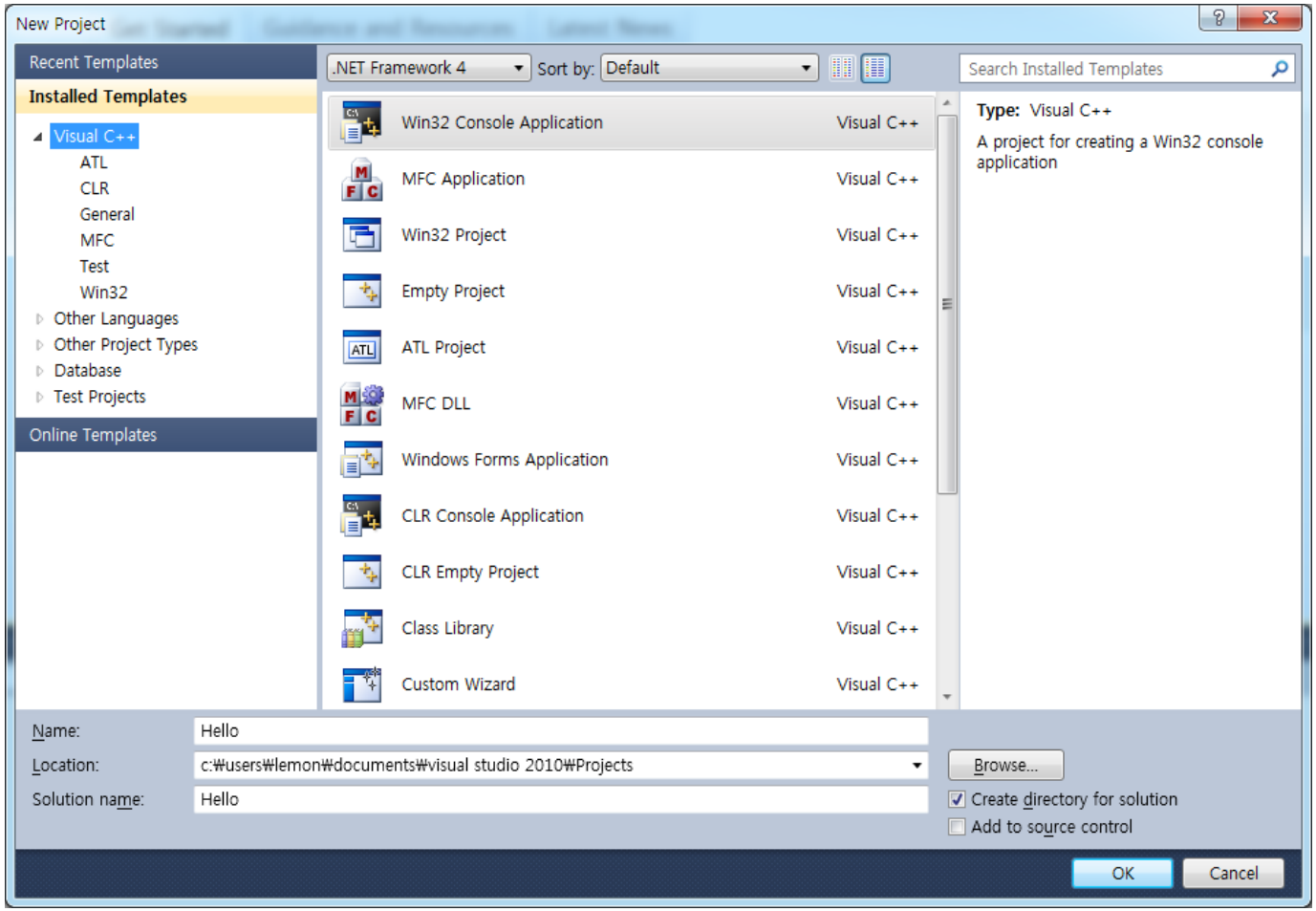
MS Visual Studio

- Create「Project」
  - ✓ Click「New Project」 or 「Ctrl + N」



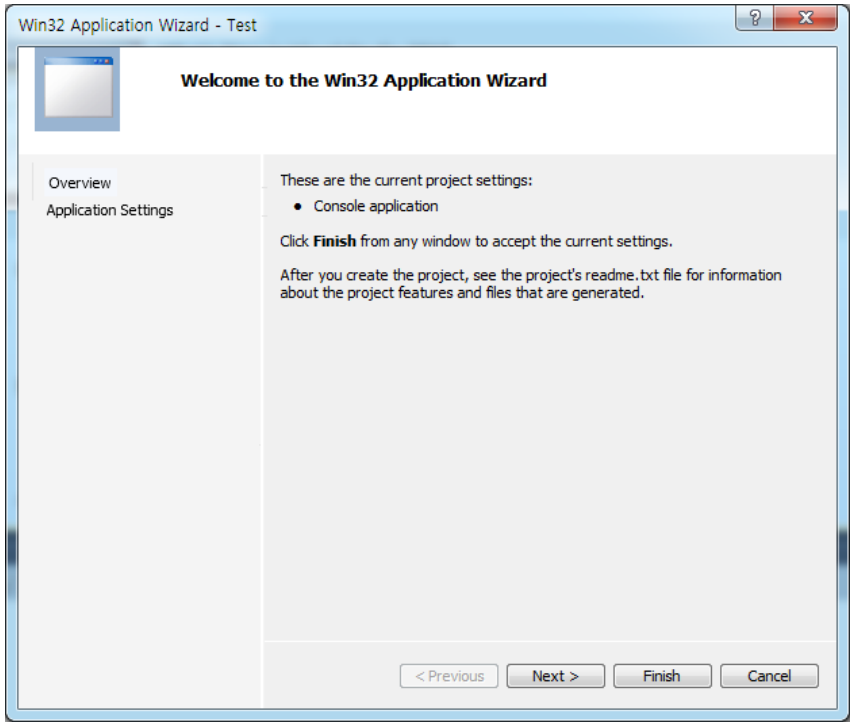
MS Visual Studio

- Create「Project」
  - ✓ Select「Win32 Console Application」and input「Name」



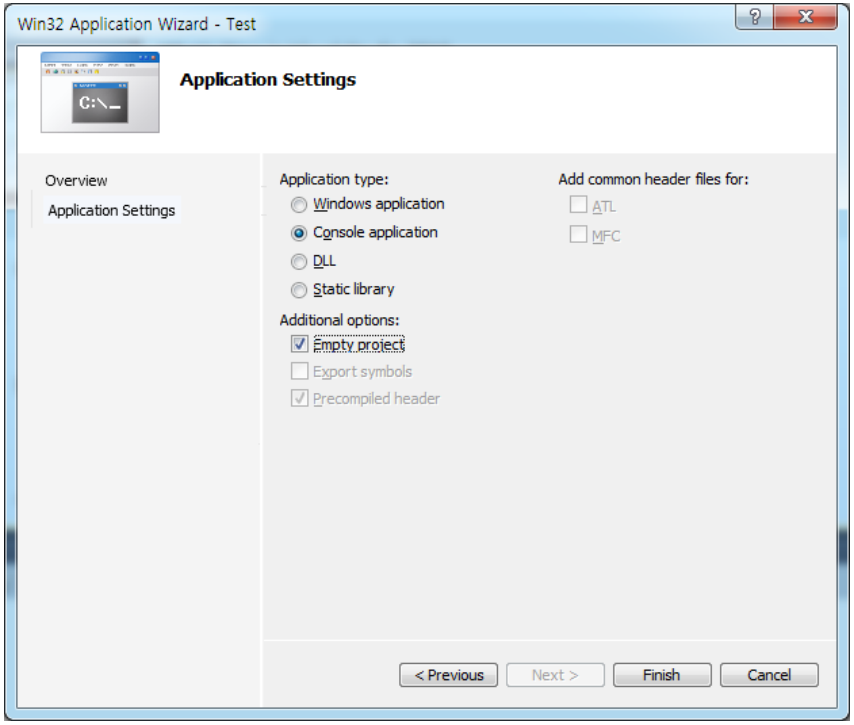
MS Visual Studio

- Create empty「Project」
  - ✓ Start「Win32 Application Wizard」
  - ✓ Click「NEXT」



MS Visual Studio

- Create empty「Project」
  - ✓ 「Win32 Application Wizard」on the screen
  - ✓ Select「Empty project」and click 「Finish」



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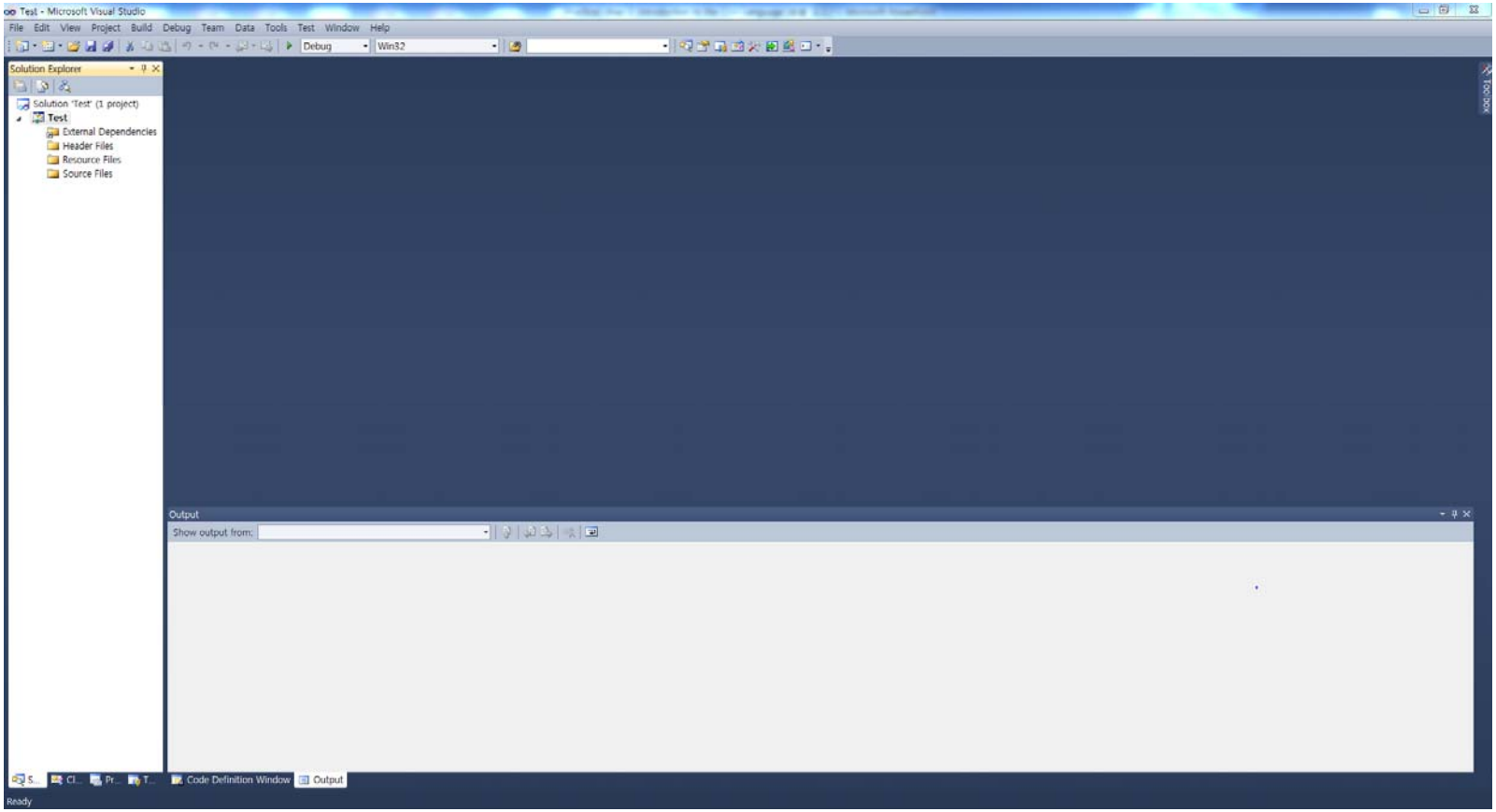
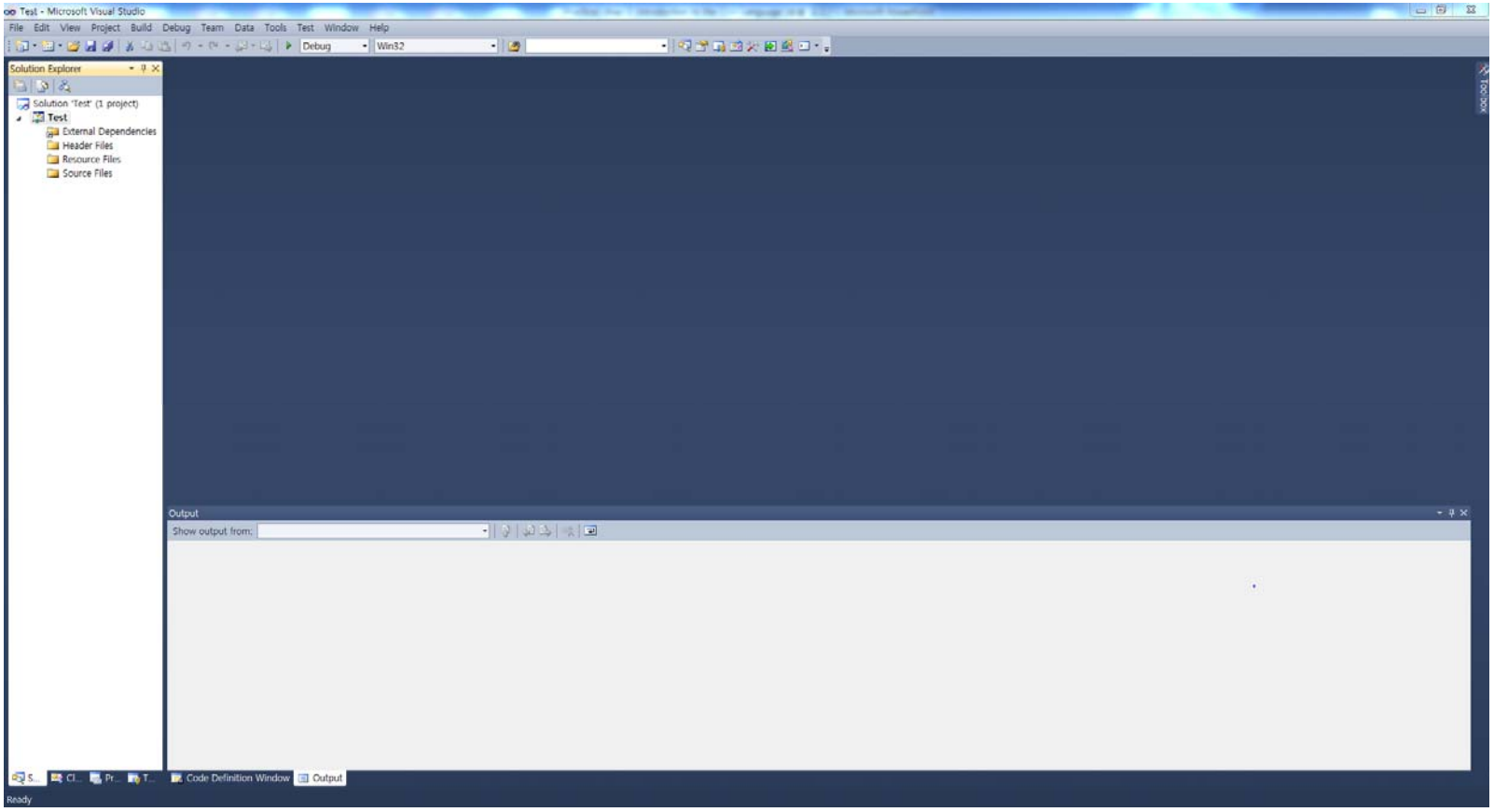
- Create empty 「Project」
  - ✓ Complete 「Project」 creation



MS Visual Studio

- Create「File」
  - ✓ In order to write the code, source code and header files should be added to the project



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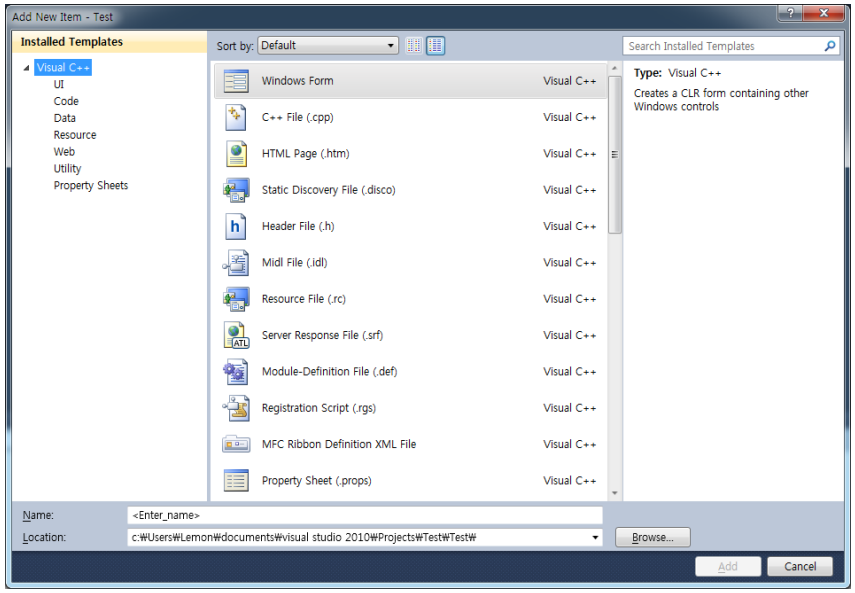
- Create「File」
  - ✓ 「Add New Item」on the screen
  - ✓ Press「Ctrl」+「Shift」+「A」



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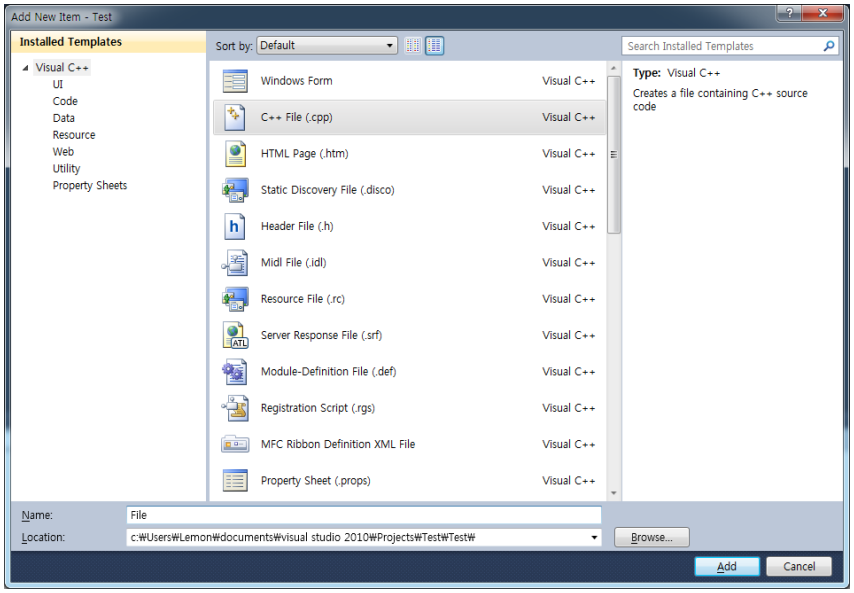
- Create「File」
  - ✓ Select「C++ File(.cpp)」
  - ✓ Input「File Name」and click「Add」



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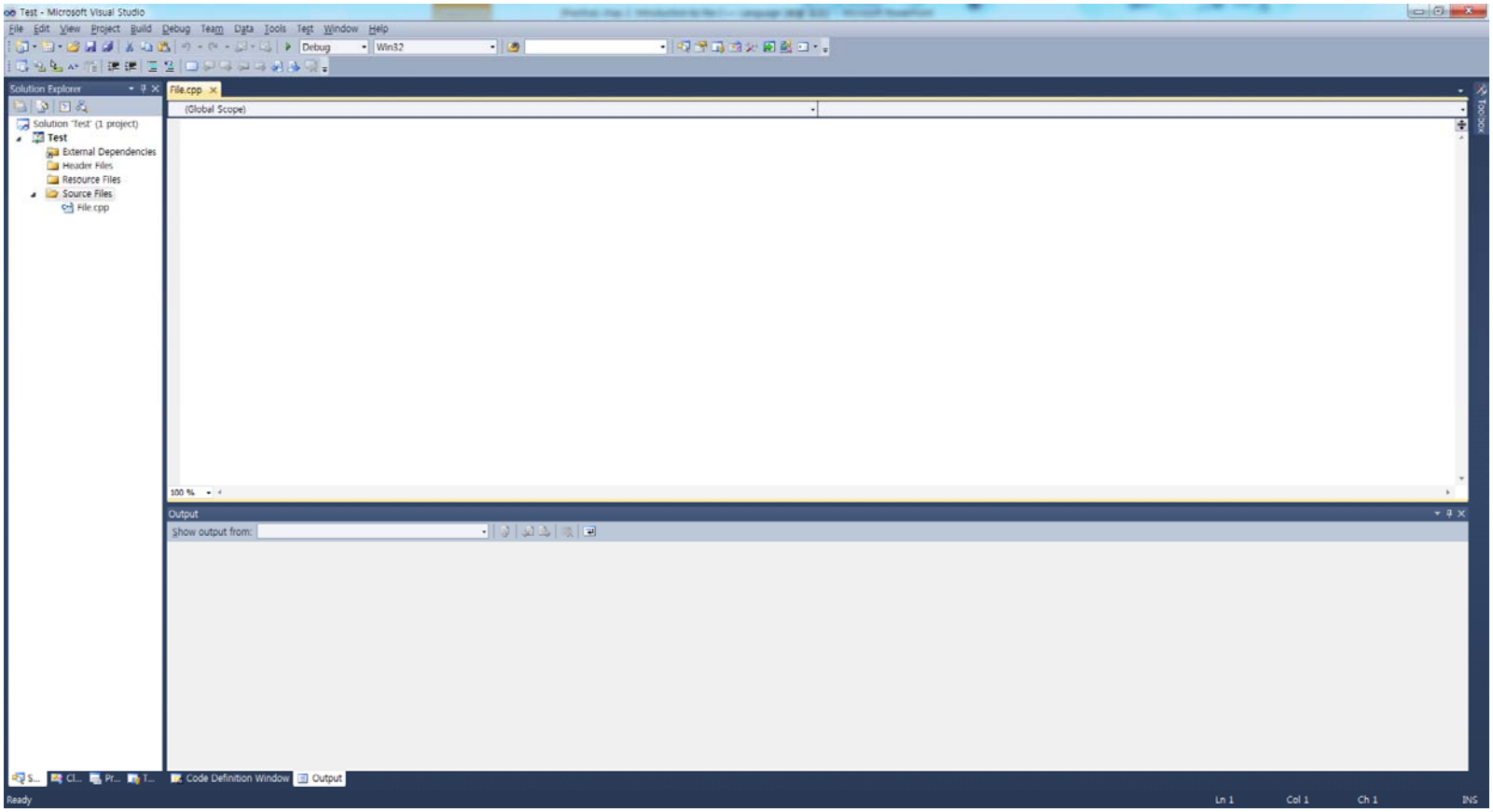
- Create「File」
  - ✓ Create code editing window



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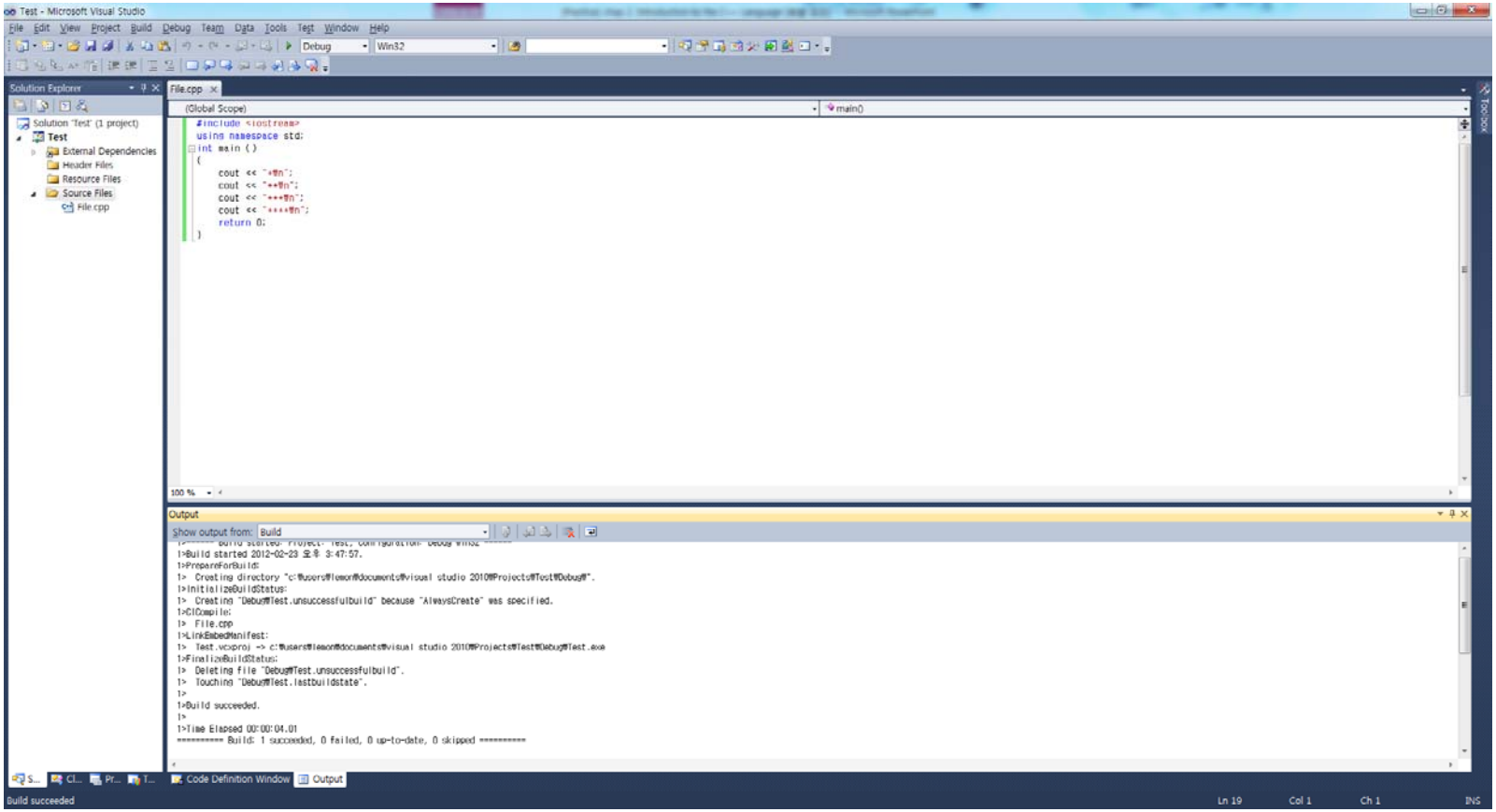
- Editing 「Code」
  - ✓ program in the source code editor



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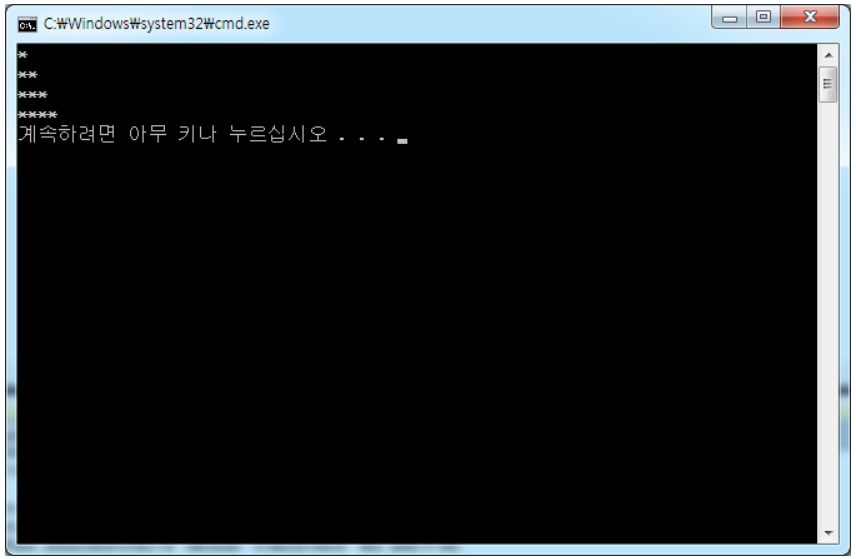
- Compile
  - ✓ Click 「Start Debugging」 or 「F5」



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Debugging

Type	Documentation
Syntax Errors	▪ Errors in code due to not following the rules of the language. ▪ These errors are caught by the compiler or interpreter.
Semantic Errors	▪ Code follows the rules, but it does not do as you intended. ▪ These errors are NOT caught by the compiler or interpreter. ▪ They can cause a program to crash or hang.
Logic Errors	▪ Variables do not contain correct data or program doesn't go down right path.
Debugger	▪ Allows you to see what is happening when you run your program so that you can determine the location of semantic errors. ▪ Can break (suspend) the execution of the program to examine code, view or change variable values, etc.
Breakpoints	▪ "A breakpoint is a signal that tells the debugger to temporarily suspend execution of your program at a certain point." ▪ Allows you to suspend exececution so that your program runs until it reaches a breakpoint (in the form of a place or condition that you would like to examine in more detail). You can then walk

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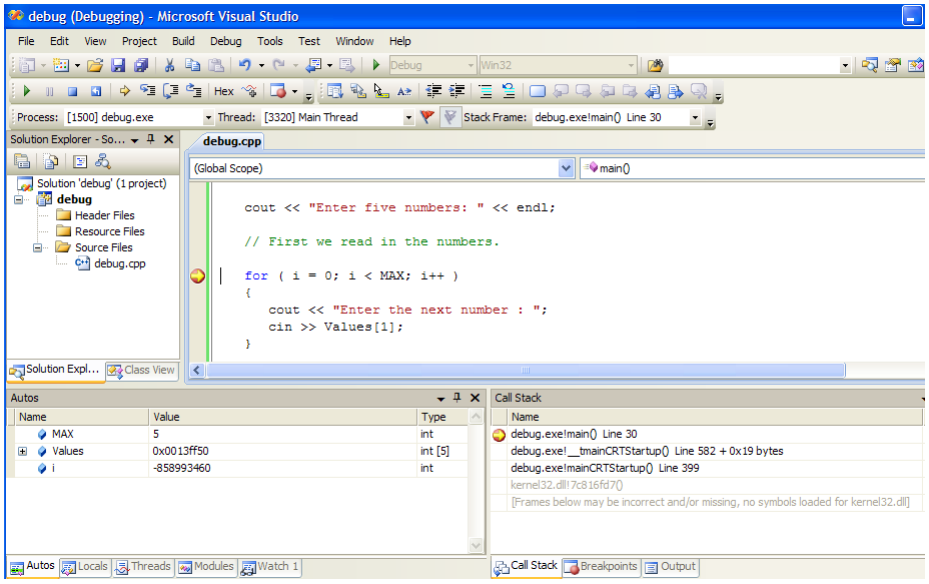
1) Set up a project for this program
2) Set up a break point

```
// First we read in the numbers.

for ( i = 0; i < MAX; i++ )
{
   cout << "Enter the next number : ";
   cin >> Values[1];
}
```

3) Build debug
4) Run the program with debug mode (Press 'F5')



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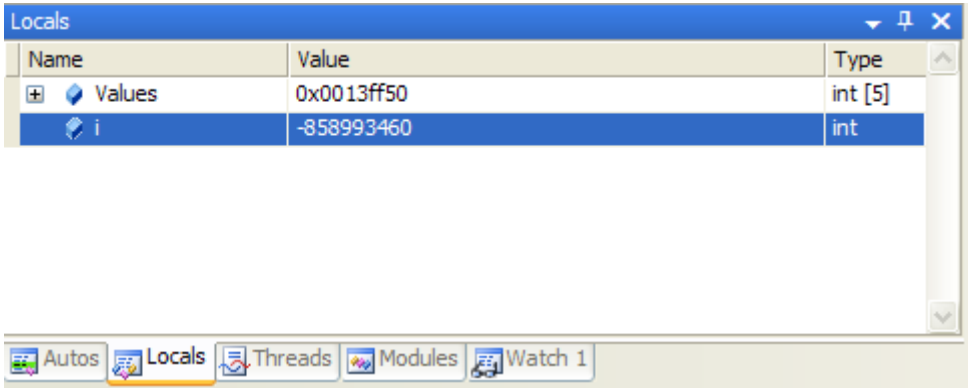
5) Use what windows to trace the values of variables



6) Stepping through the code. (Press ‘F10’ / ‘F11’)