

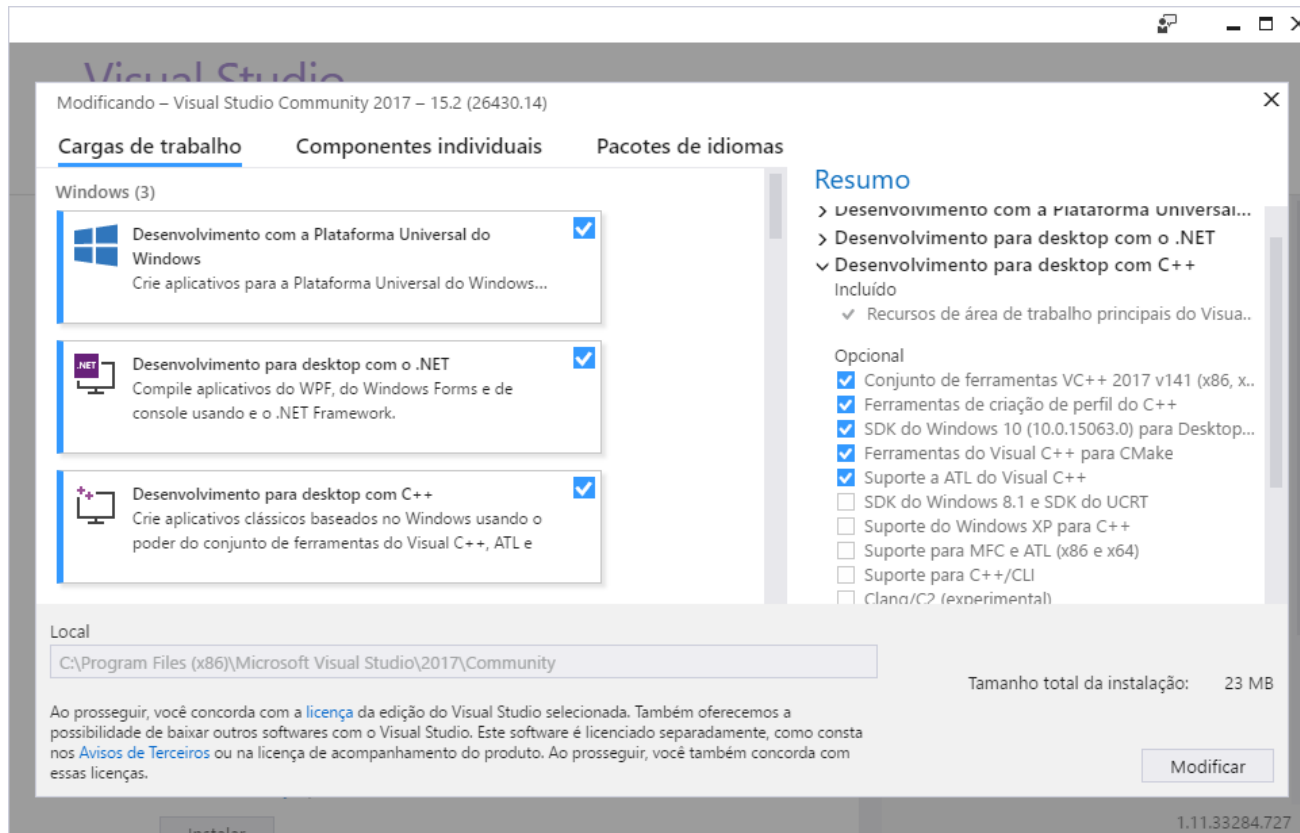
Introdução à Programação

Aula 03 – Introdução ao Ambiente de Desenvolvimento

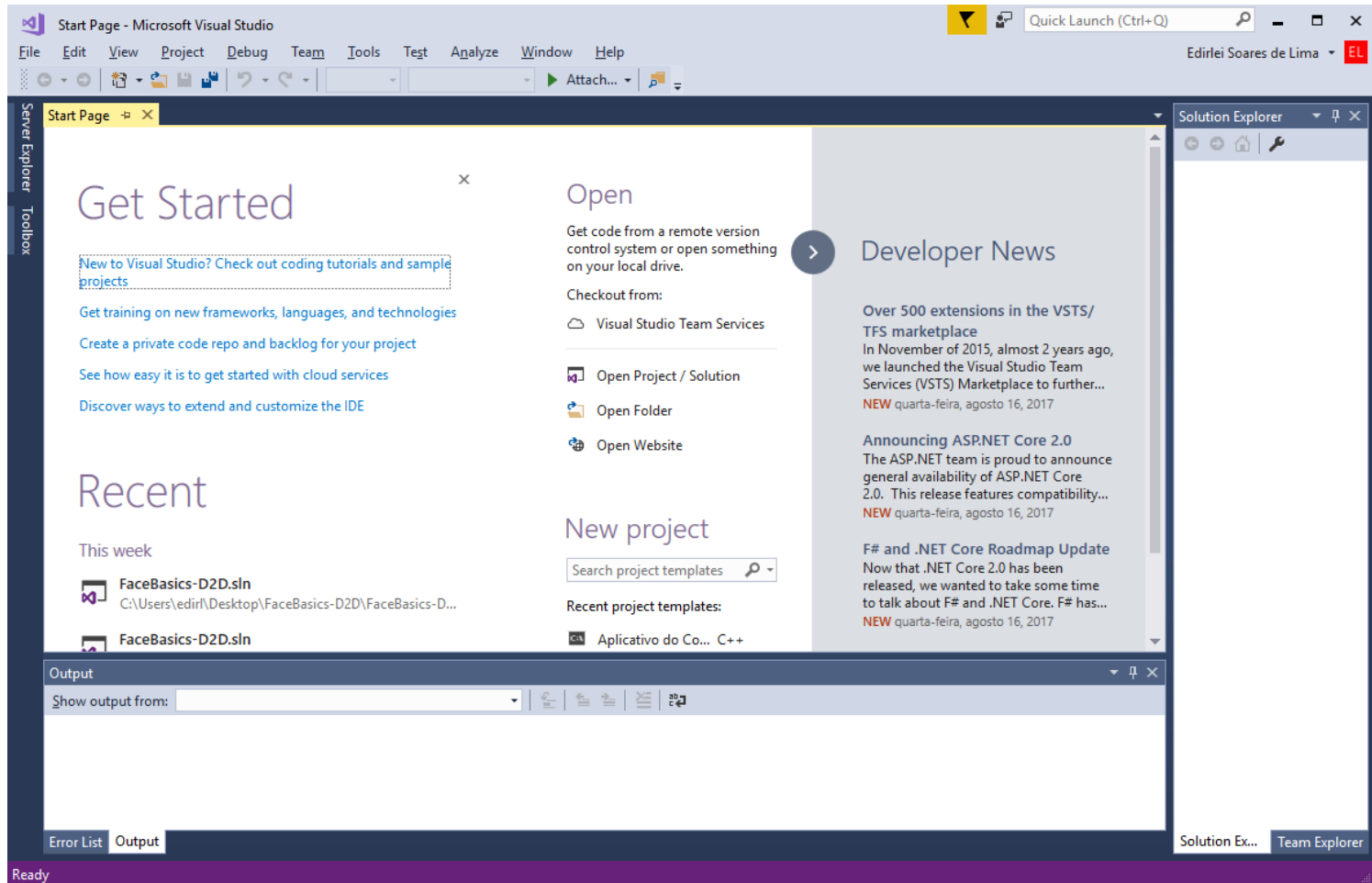
Edirlei Soares de Lima
<edirlei@iprj.uerj.br>

Visual Studio 2017

- O que instalar?

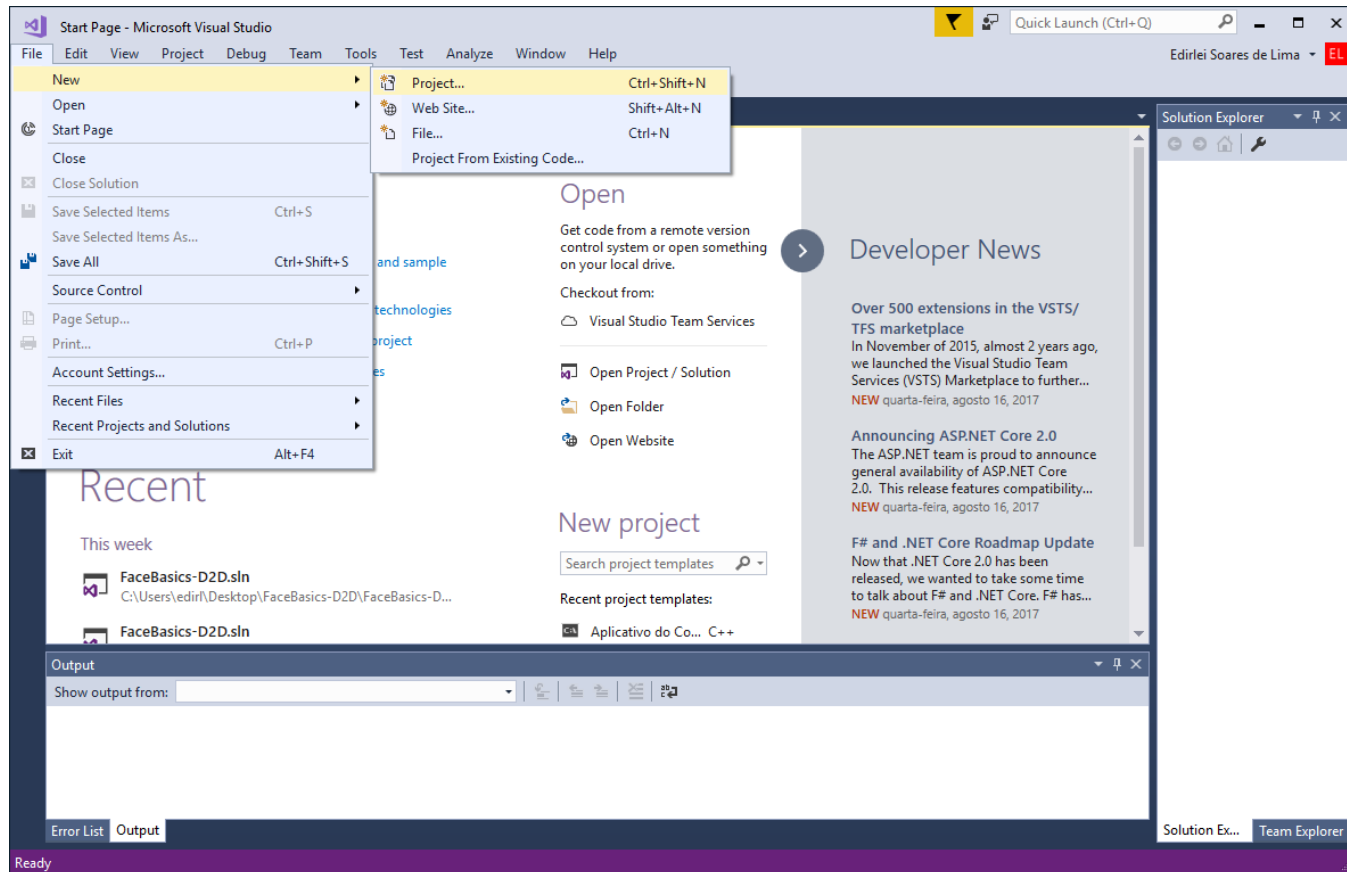


Visual Studio 2017



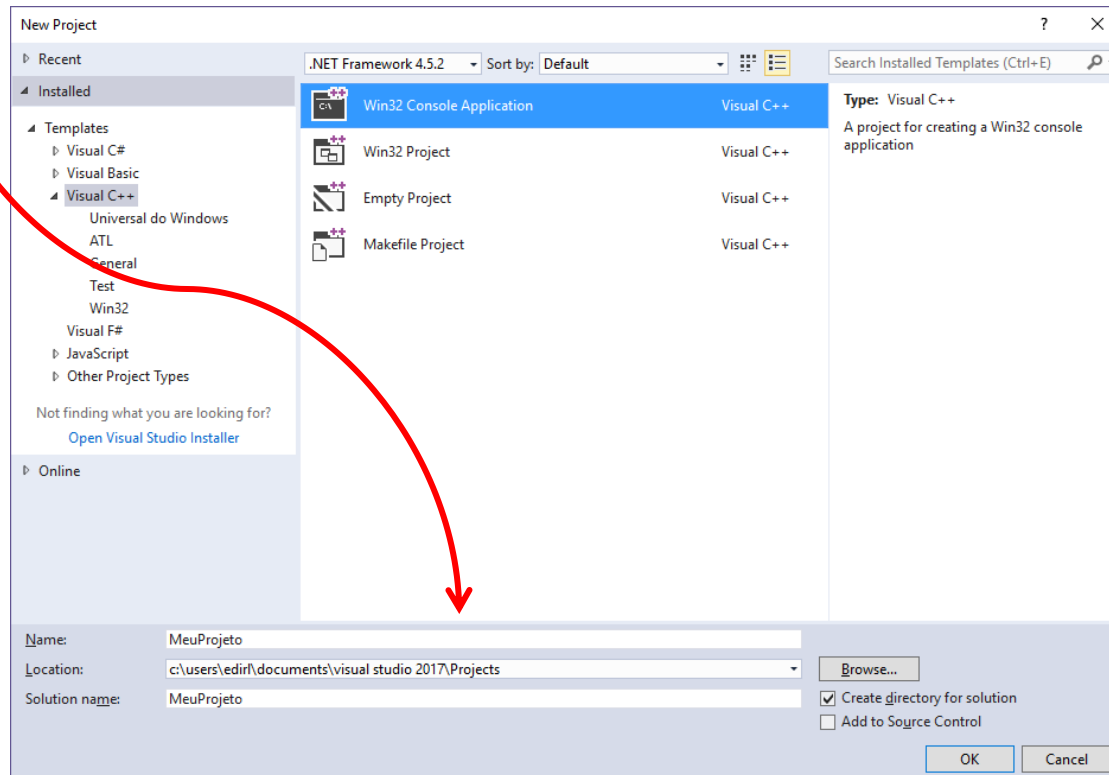
Visual Studio 2017

- **Criar novo projeto: File -> New -> Project**



Visual Studio 2017

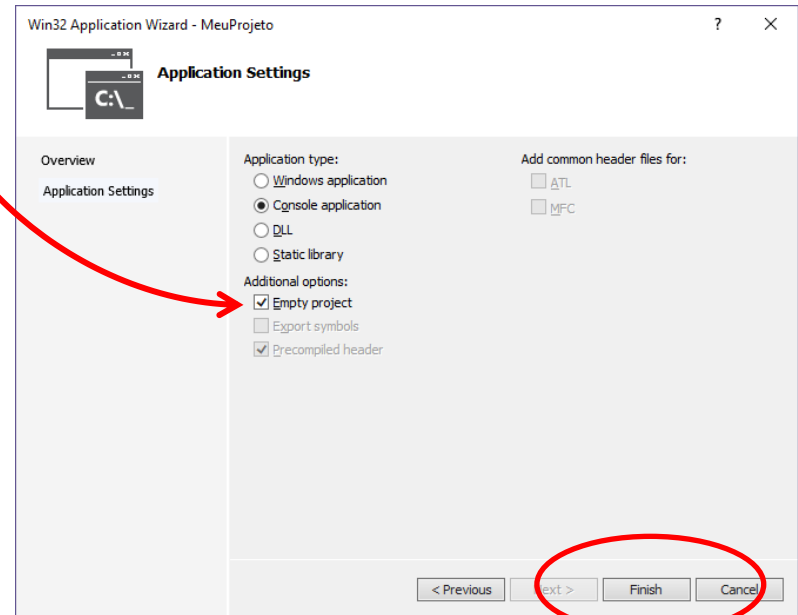
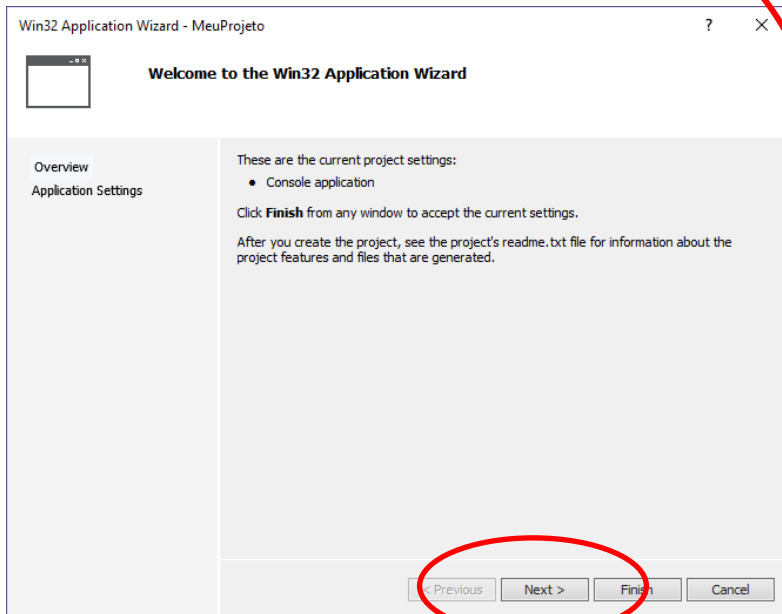
- **Tipo de Projeto:** Templates -> Visual C++ -> Win 32 Console Application
 - Nome do projeto e local onde o projeto será salvo.



Visual Studio 2017

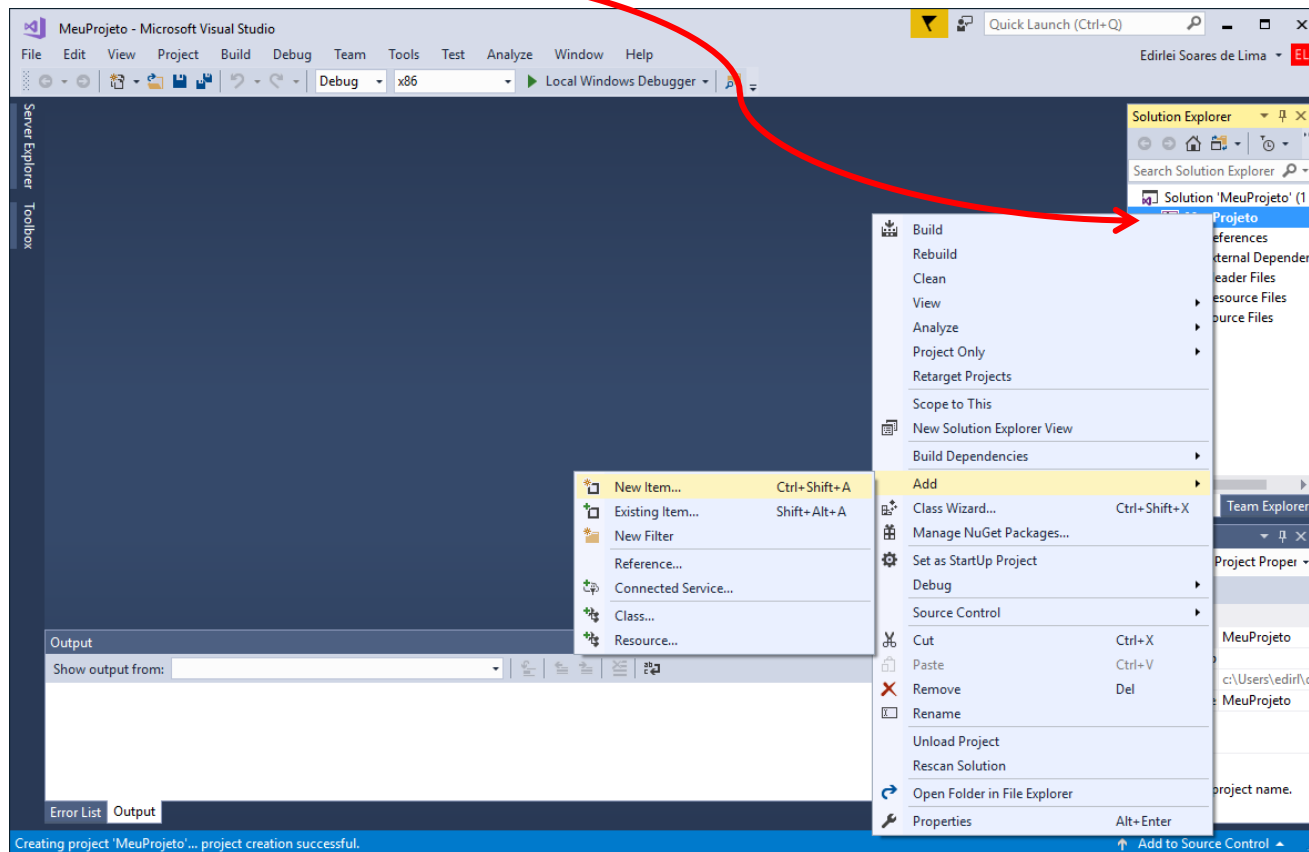
- **Criação do Projeto**

- Next...
- Empty Project
- Finish



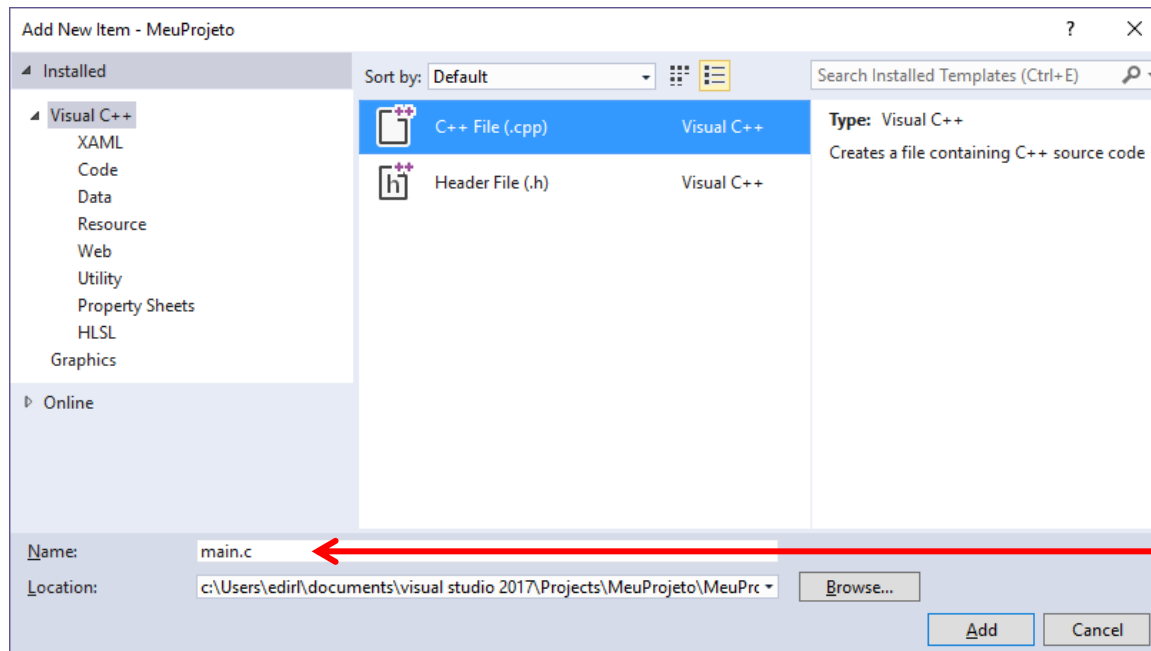
Visual Studio 2017

- **Criar Novo Arquivo .C: Add -> New Item**
 - Clicar com o botão direito do mouse sobre o nome do projeto para acessar o menu.



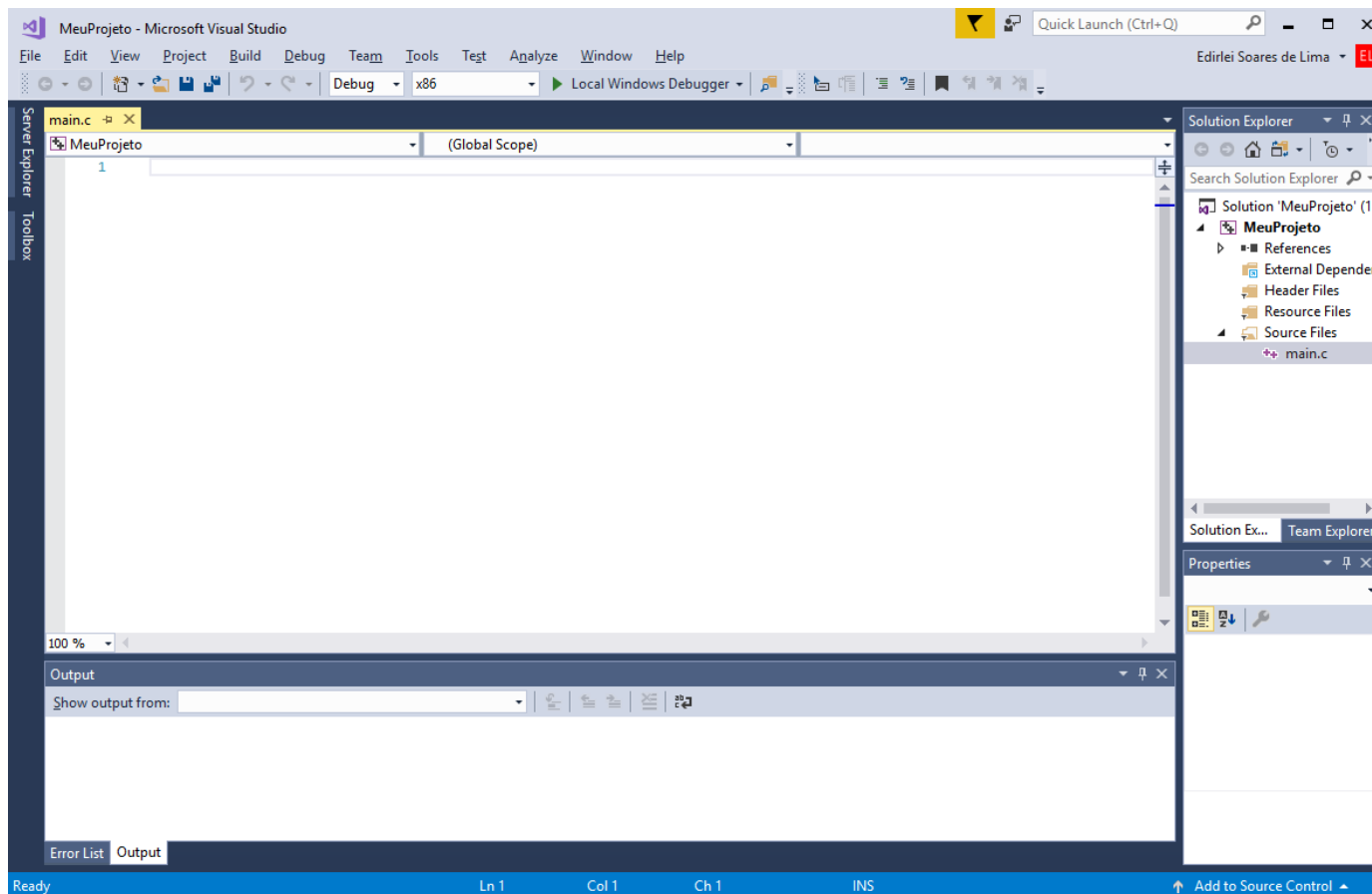
Visual Studio 2017

- **Criar Novo Arquivo .C:** Visual C++ - > C++ File (.cpp)
 - Dar um nome para o arquivo e modificar a extensão para .c



Visual Studio 2017

- Pronto para programar!



Visual Studio 2017

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

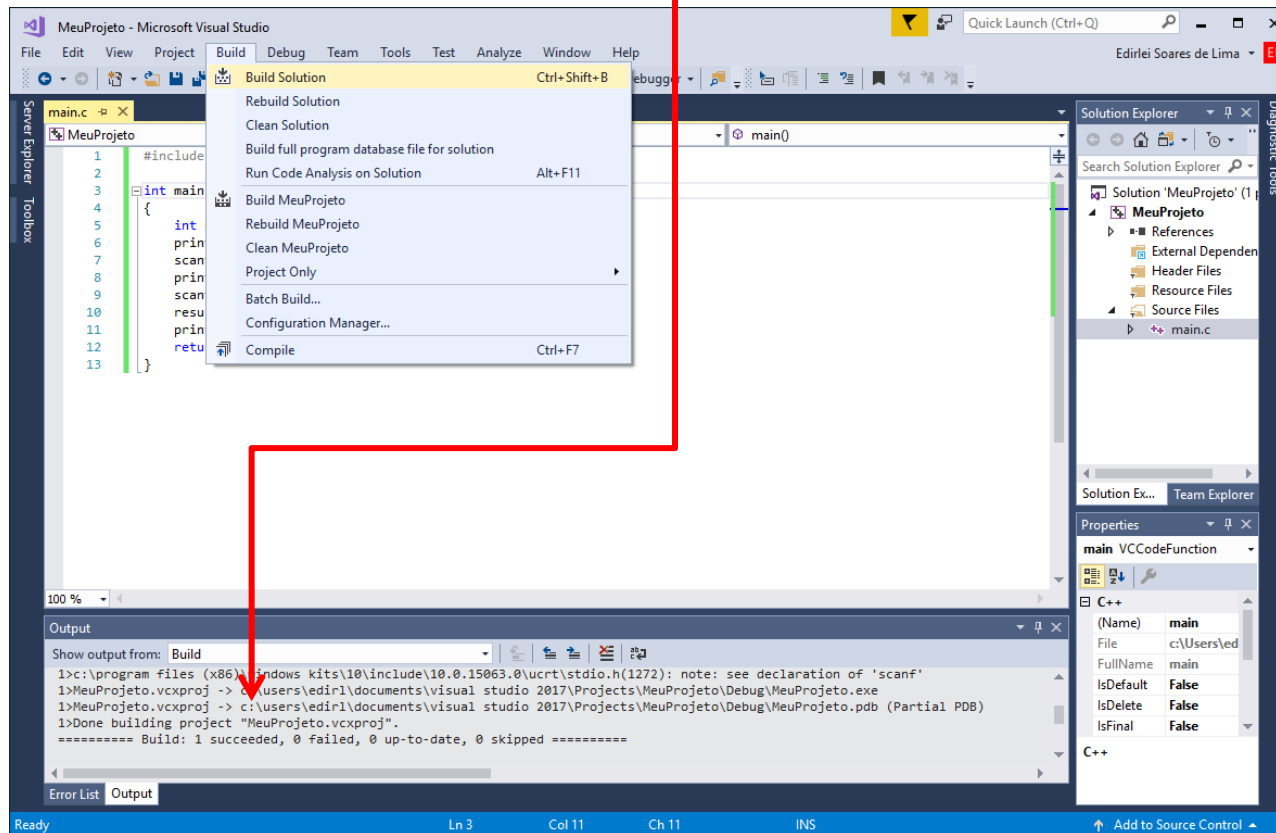
    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado);

    return 0;
}
```

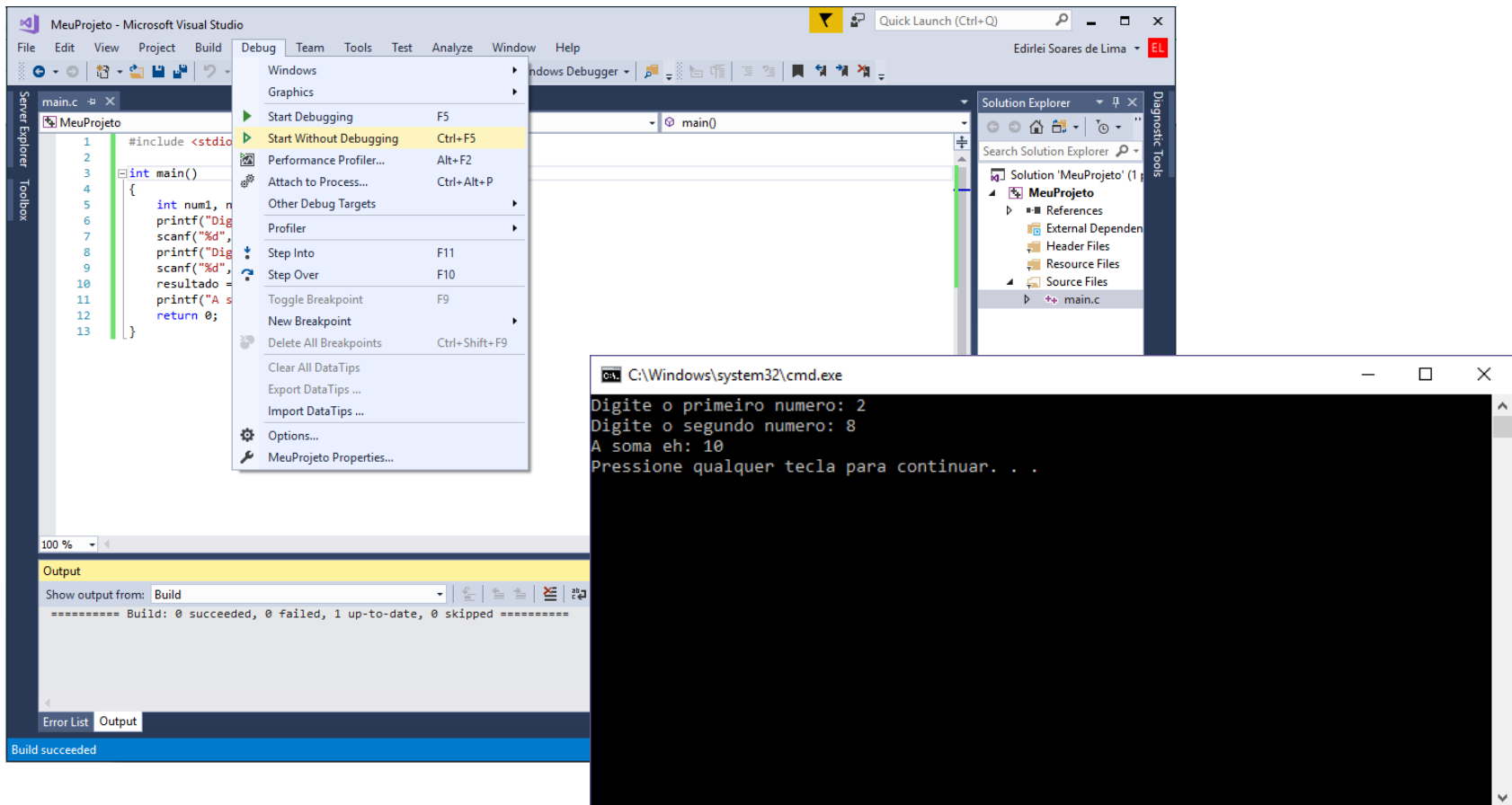
Visual Studio 2017

- **Compilar programa: Build -> Build Solution**
 - Resultado do processo de compilação



Visual Studio 2017

- Executar programa: Debug -> Start Without Debugging



Visual Studio 2017

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

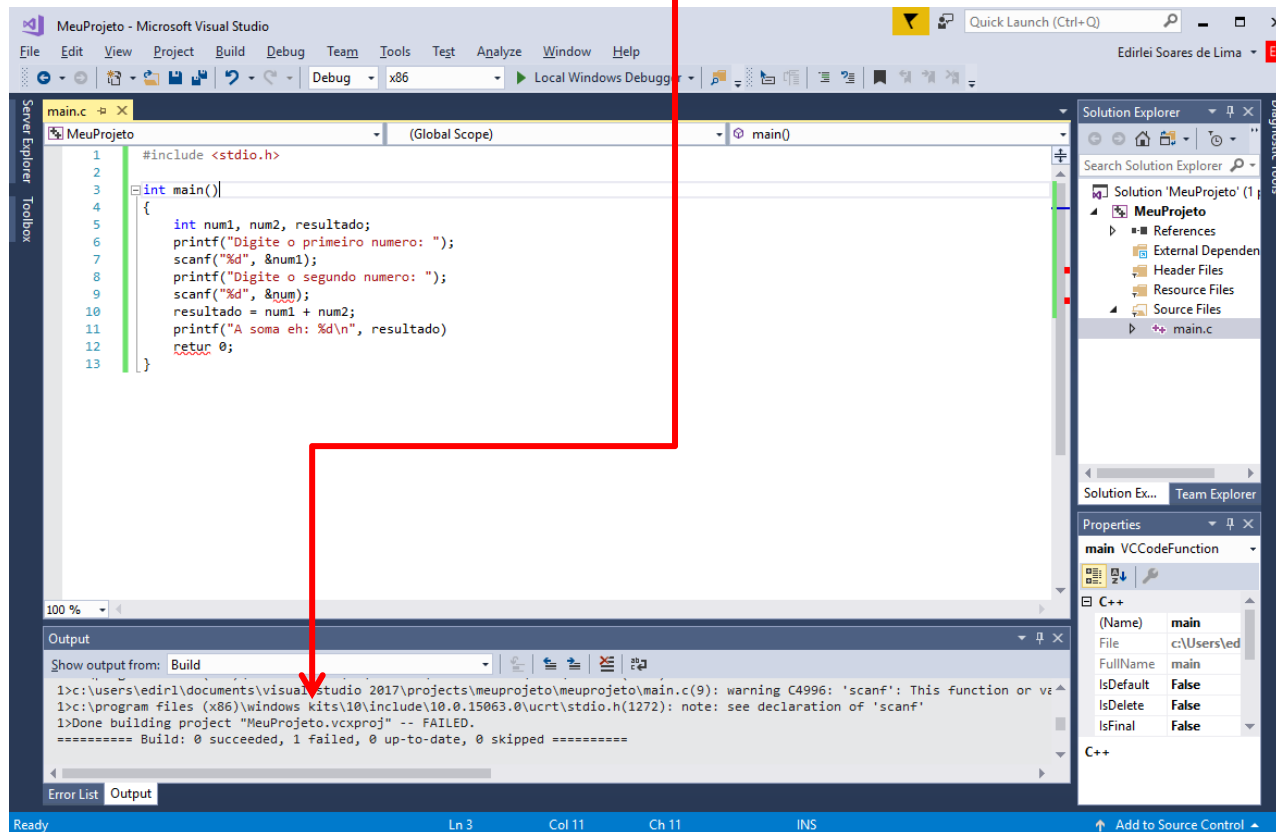
    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado)

    retur 0;
}
```

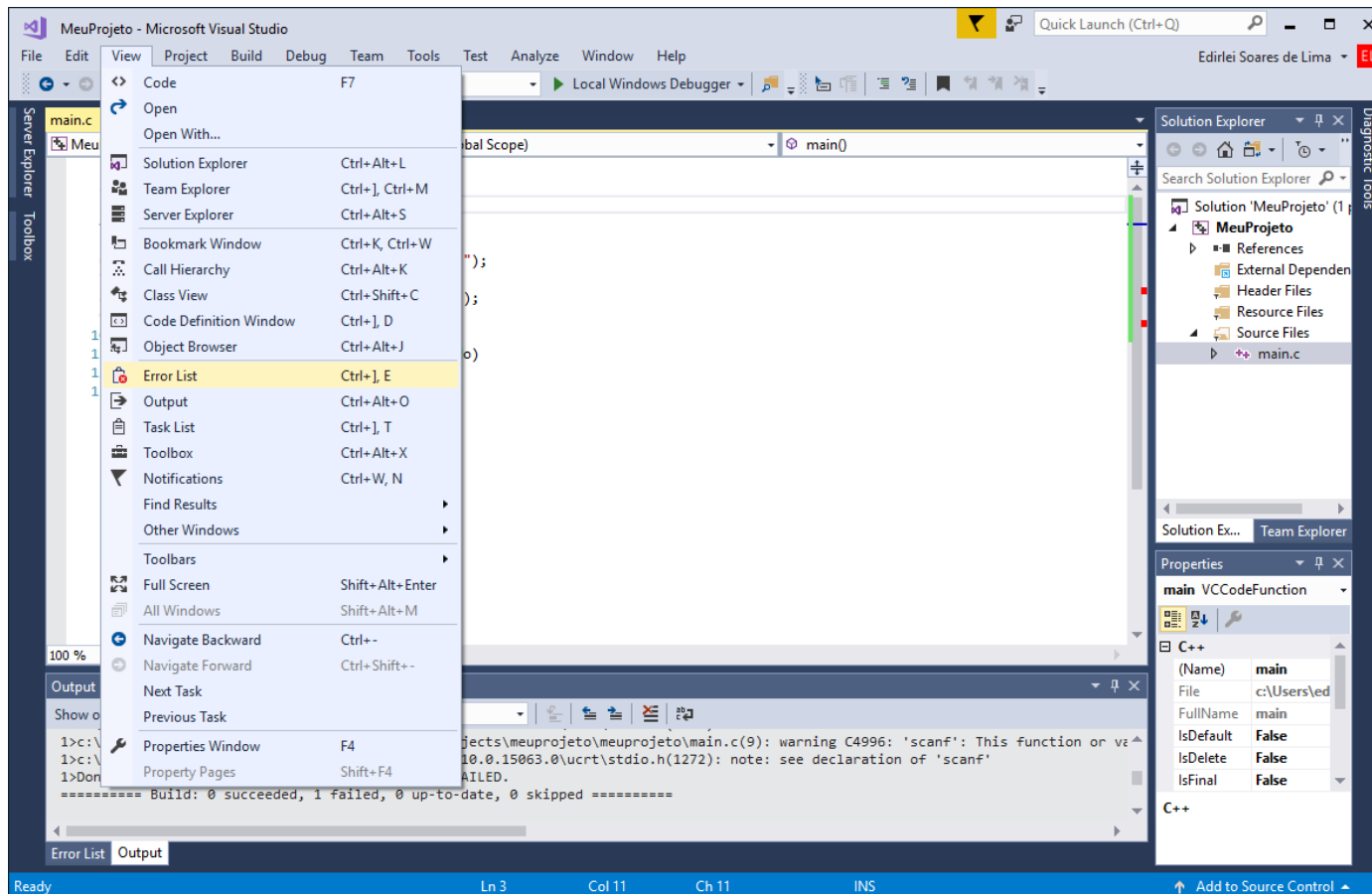
Visual Studio 2017

- **Compilar programa: Build -> Build Solution**
 - Falha no processo de compilação



Visual Studio 2017

- **Lista de Erros: View -> Error List**



Visual Studio 2017

- **Lista de Erros: View -> Error List**

The screenshot shows the Visual Studio 2017 interface. The main window displays the source code for a C program named 'main.c'. The code is as follows:

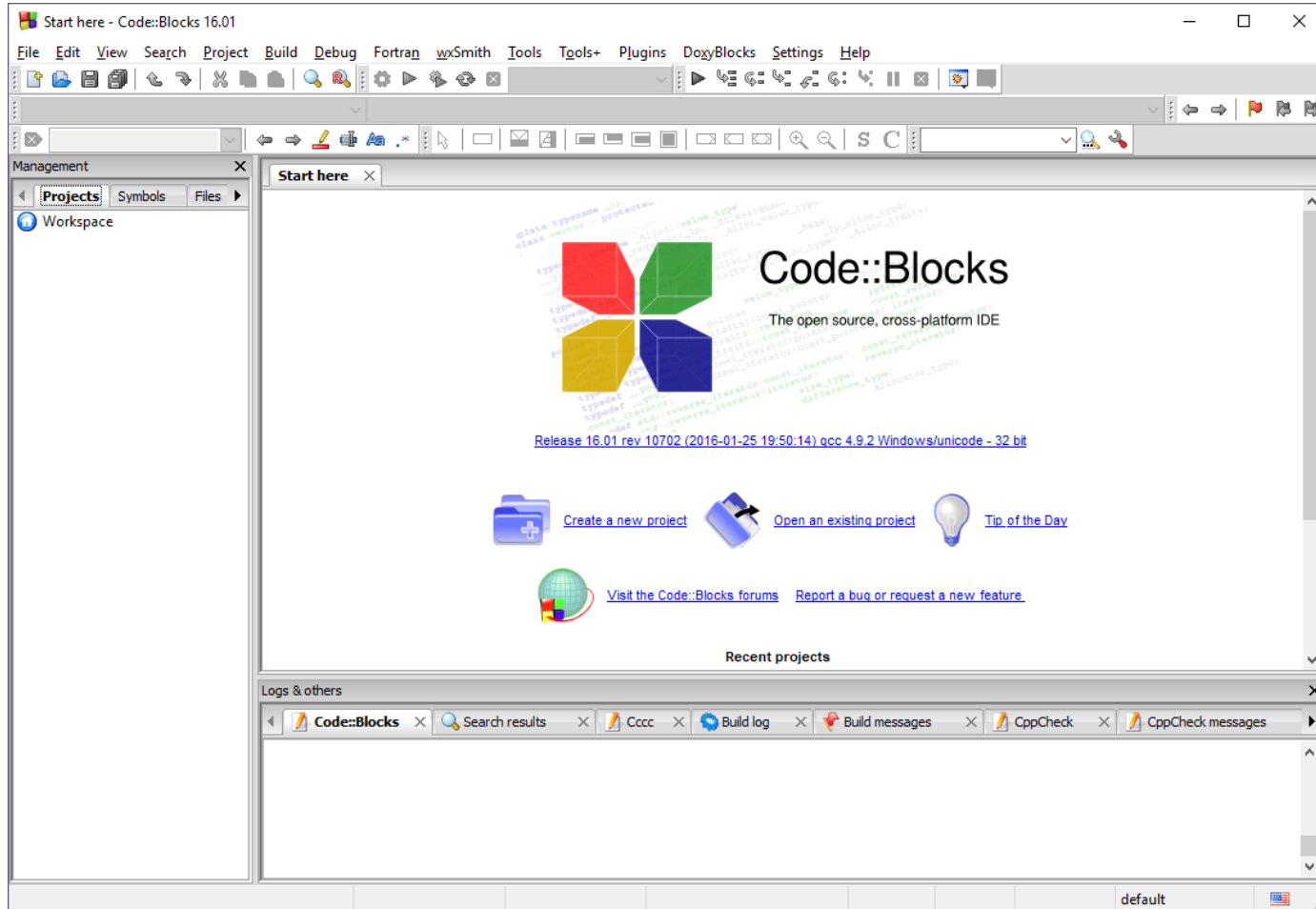
```
1 #include <stdio.h>
2
3 int main()
4 {
5     int num1, num2, resultado;
6     printf("Digite o primeiro numero: ");
7     scanf("%d", &num1);
8     printf("Digite o segundo numero: ");
9     scanf("%d", &num);
10    resultado = num1 + num2;
11    printf("A soma eh: %d\n", resultado)
12    retur 0;
13 }
```

The Error List window at the bottom shows 6 errors:

Code	Description	Project	File	Line	Suppression State
E0020	identifier "num" is undefined	MeuProjeto	main.c	9	
E0065	expected a ','	MeuProjeto	main.c	12	
C2065	'num': undeclared identifier	MeuProjeto	main.c	9	
C2146	syntax error: missing ';' before identifier 'retur'	MeuProjeto	main.c	12	
C2065	'retur': undeclared identifier	MeuProjeto	main.c	12	
C2143	syntax error: missing ';' before 'constant'	MeuProjeto	main.c	12	

The interface also shows the Solution Explorer on the right, displaying the project structure for 'MeuProjeto', including source files and headers. The Properties window at the bottom right shows the properties for the 'main' VCodeFunction, such as Name, File, FullName, IsDefault, IsDelete, and IsFinal.

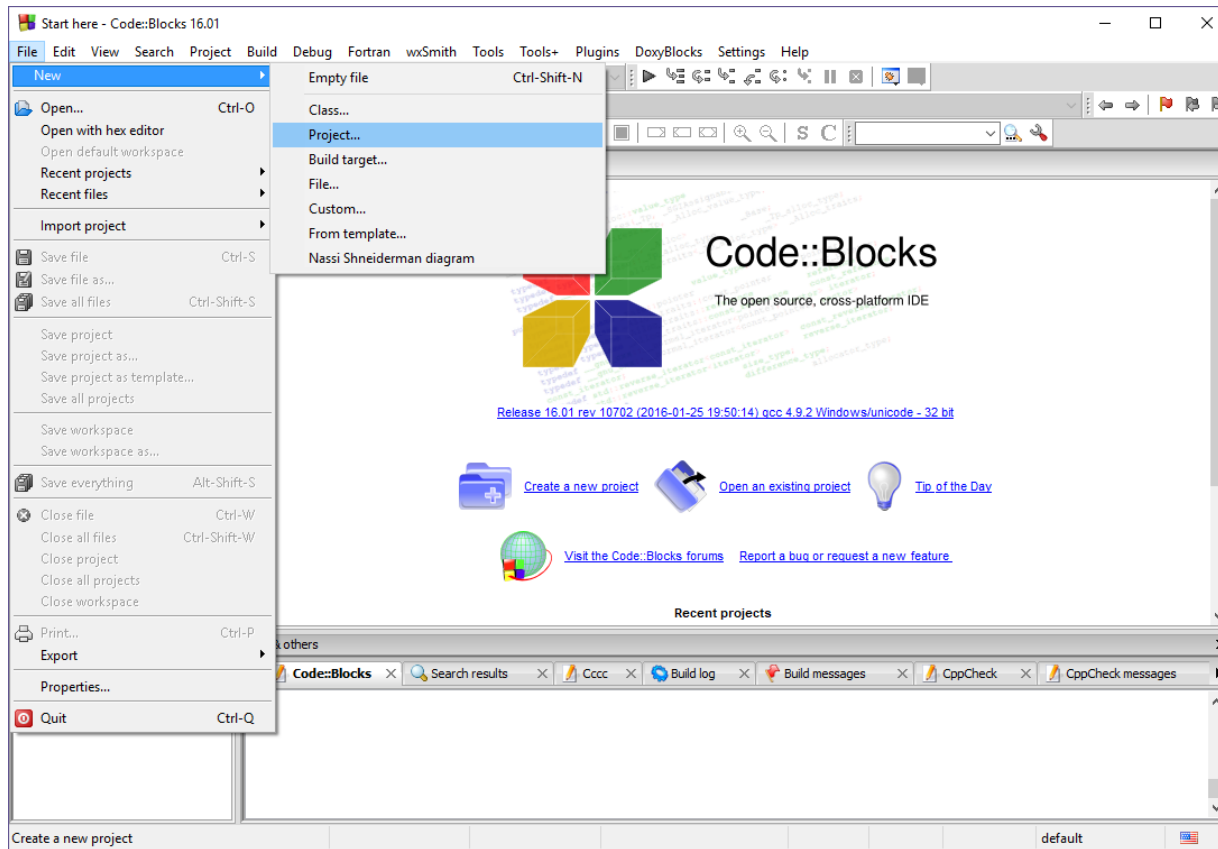
CodeBlocks



- Lembre-se de instalar a versão [codeblocks-16.01mingw-setup.exe](#)

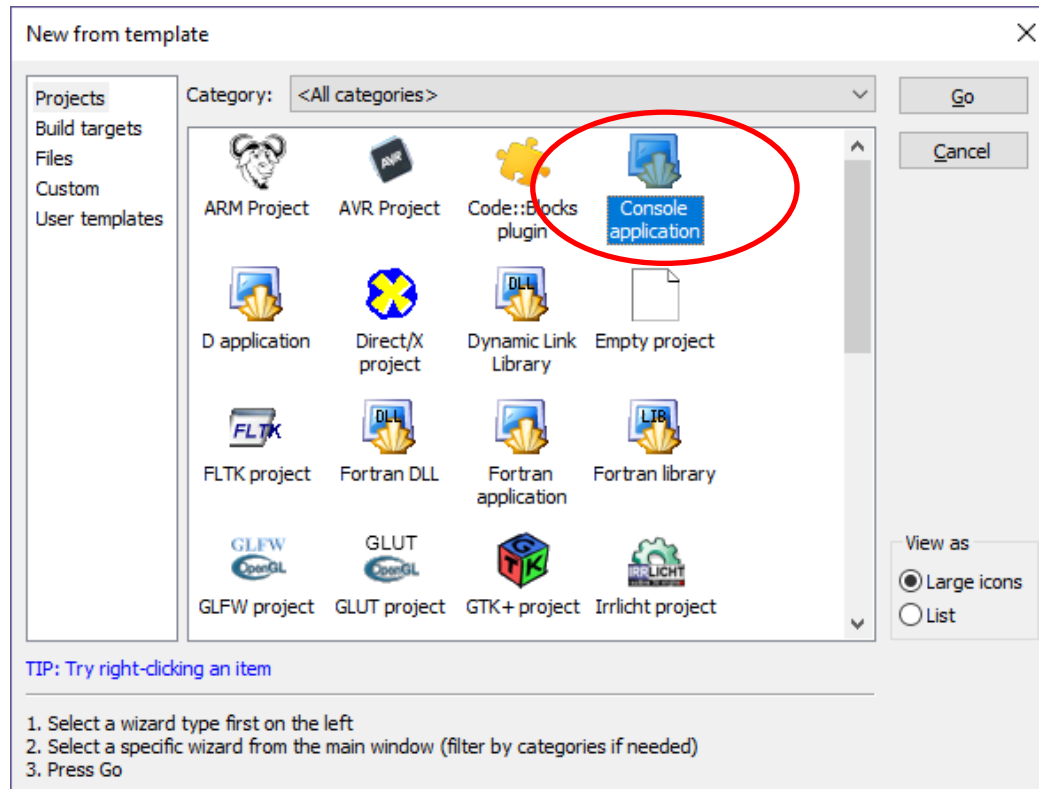
CodeBlocks

- **Criar novo projeto: File -> New -> Project**



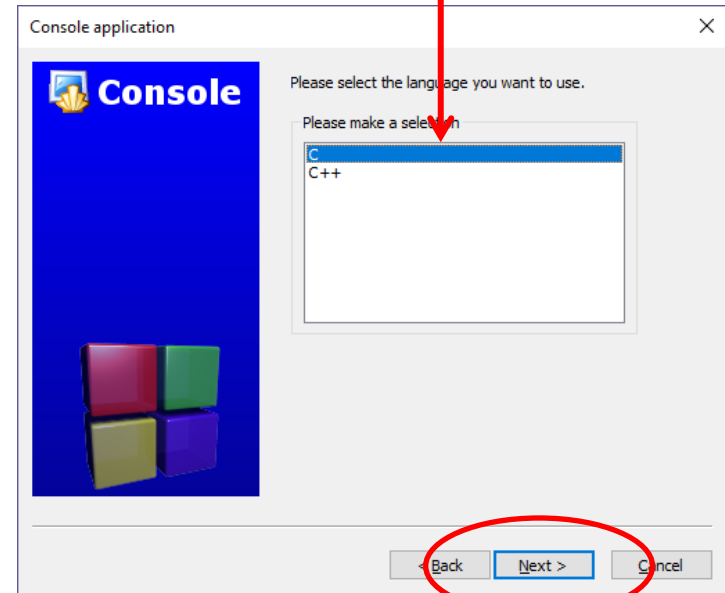
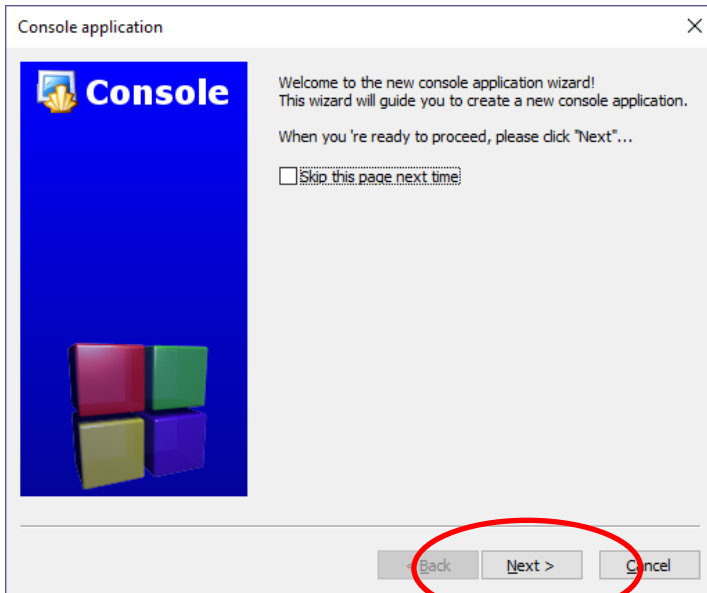
CodeBlocks

- **Tipo de projeto:** Console Application



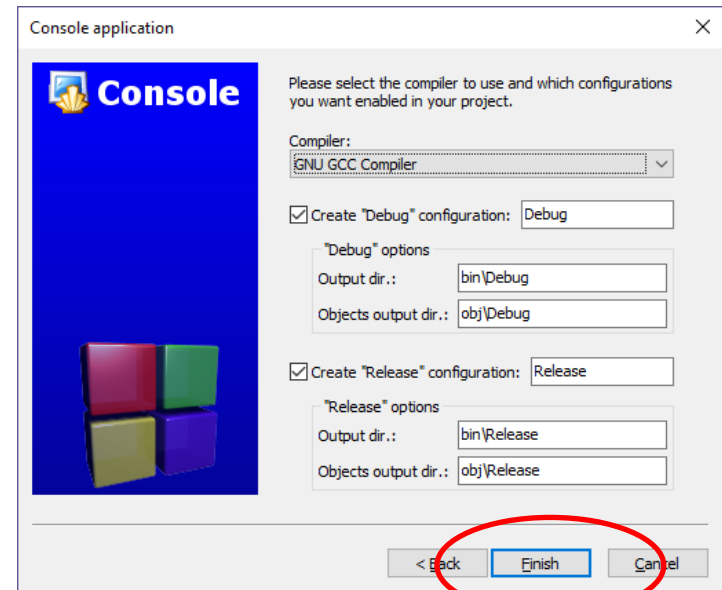
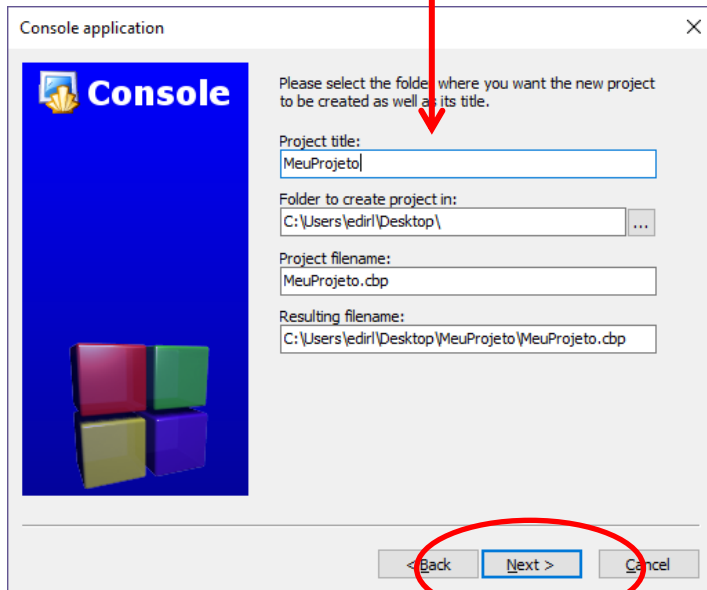
CodeBlocks

- Criação do projeto
 - Next
 - C
 - Next



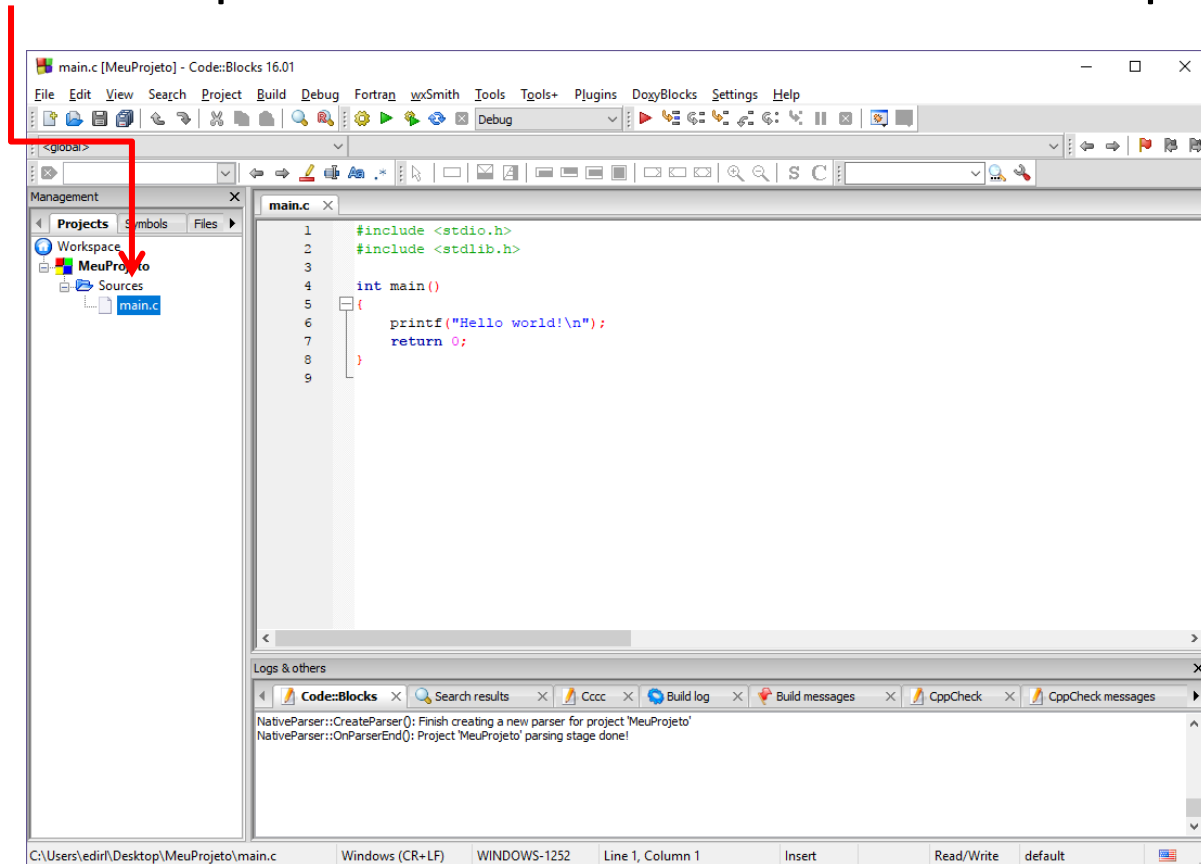
CodeBlocks

- **Criação do projeto**
 - Nome do projeto e local onde o projeto será salvo.
 - Next
 - Finish



CodeBlocks

- **Pronto para programar!**
 - Abra o arquivo .c criado automaticamente no projeto



CodeBlocks

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

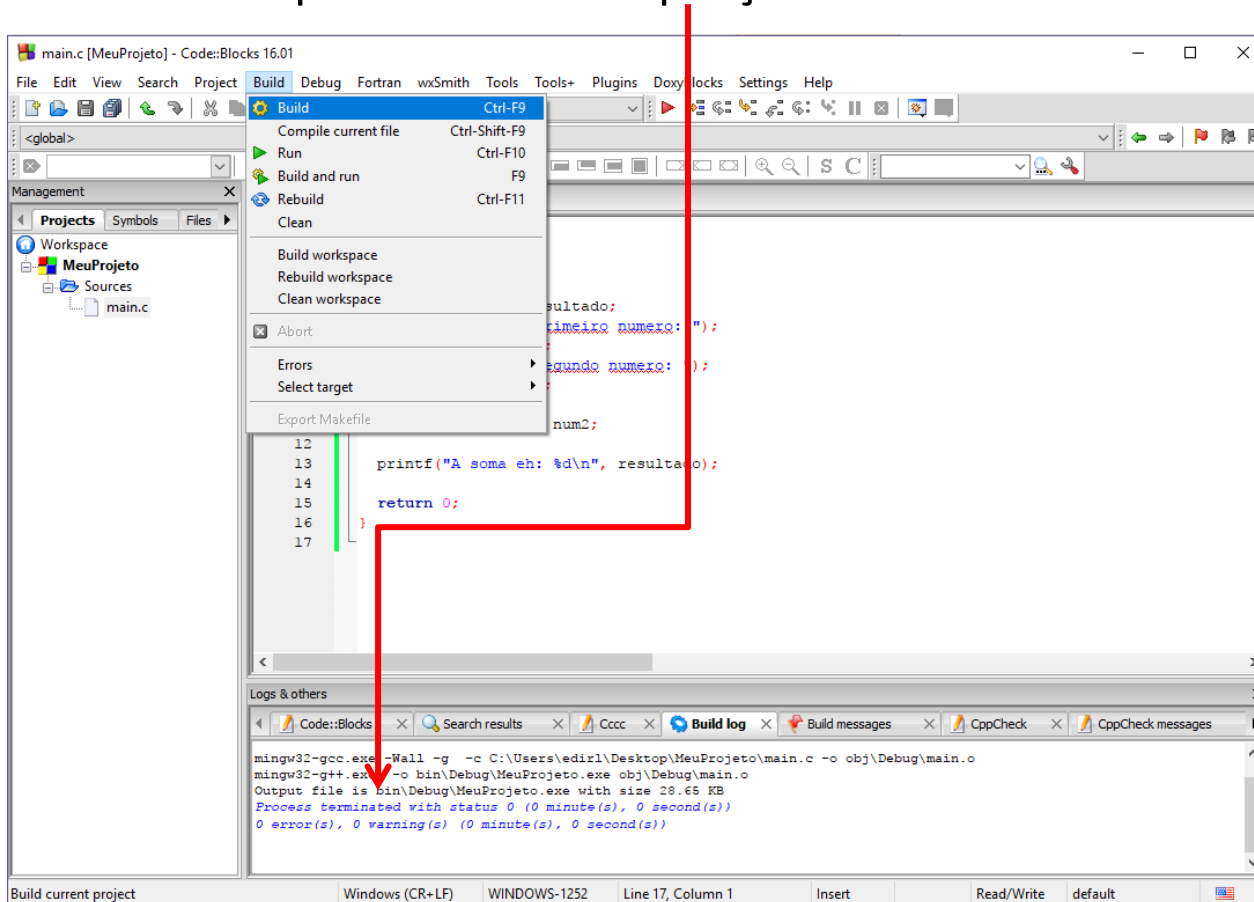
    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado);

    return 0;
}
```

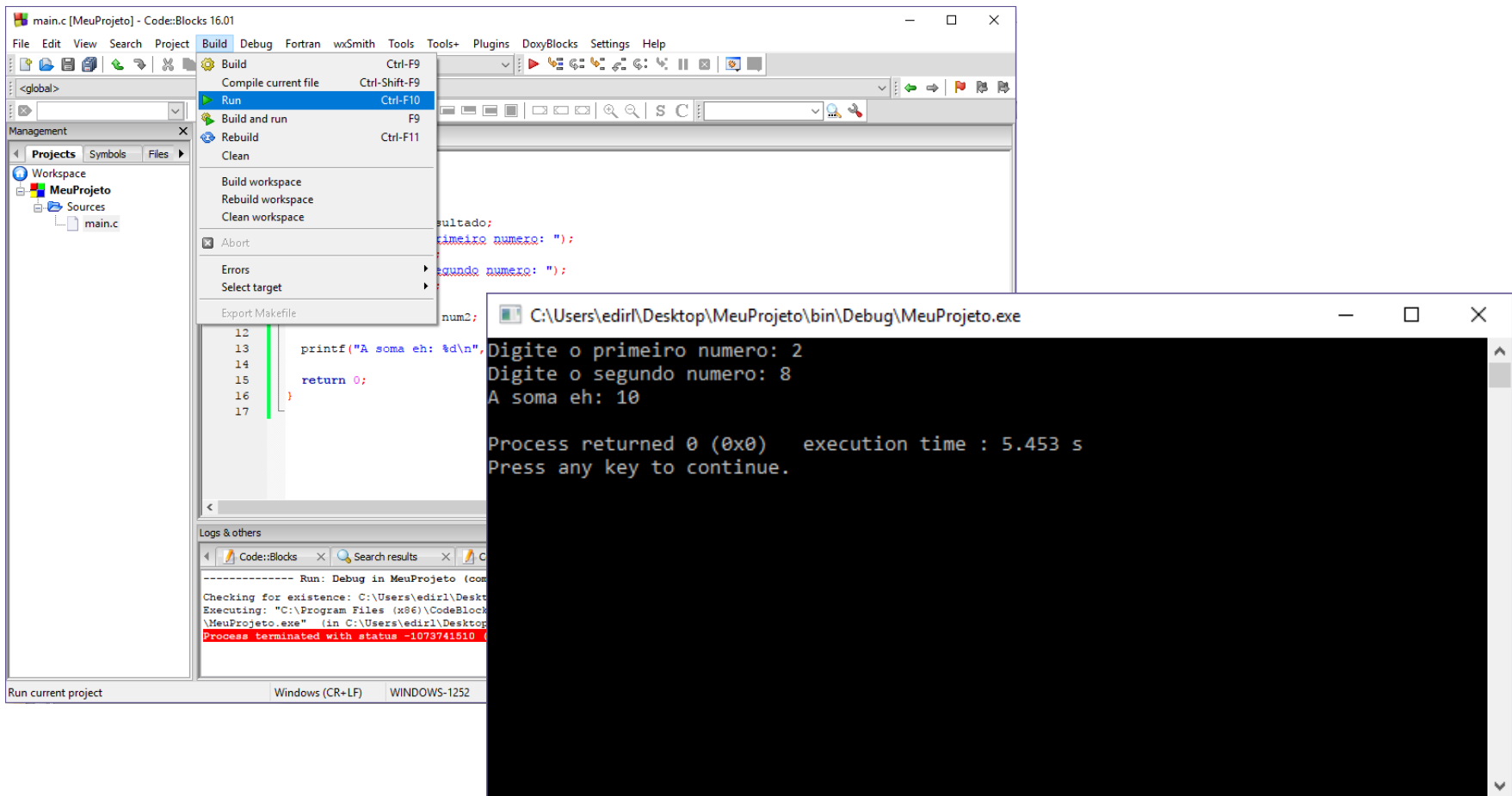
CodeBlocks

- **Compilar programa: Build -> Build**
 - Resultado do processo de compilação



CodeBlocks

- Executar programa: Debug -> Run



CodeBlocks

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

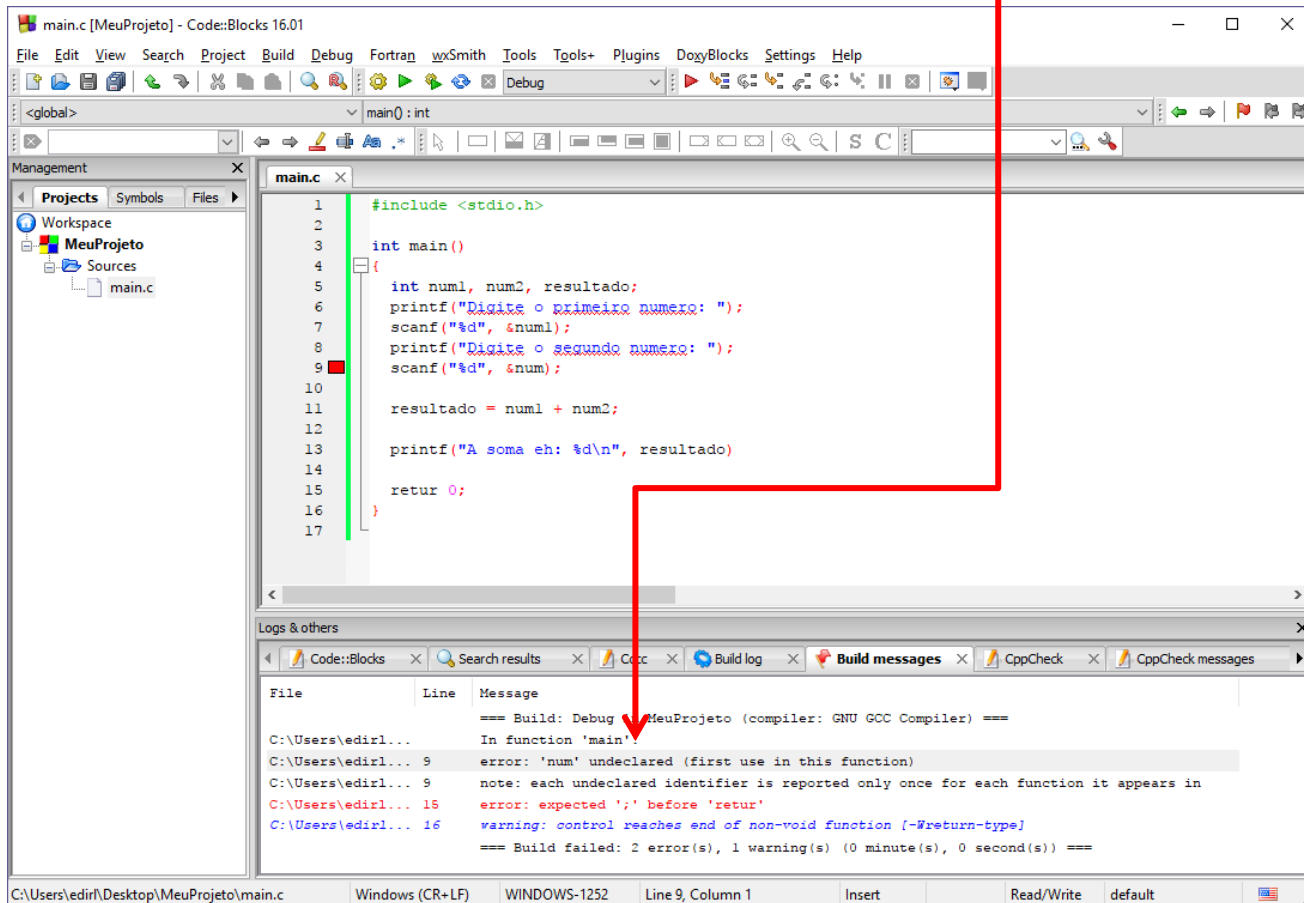
    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado)

    retur 0;
}
```

CodeBlocks

- **Compilar programa: Build -> Build Solution**
 - Falha no processo de compilação e lista de erros



The screenshot shows the CodeBlocks IDE interface. The main editor displays a C program named `main.c` with the following code:

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int num1, num2, resultado;
6     printf("Digite o primeiro numero: ");
7     scanf("%d", &num1);
8     printf("Digite o segundo numero: ");
9     scanf("%d", &num);
10
11     resultado = num1 + num2;
12
13     printf("A soma eh: %d\n", resultado)
14
15     retur 0;
16 }
17
```

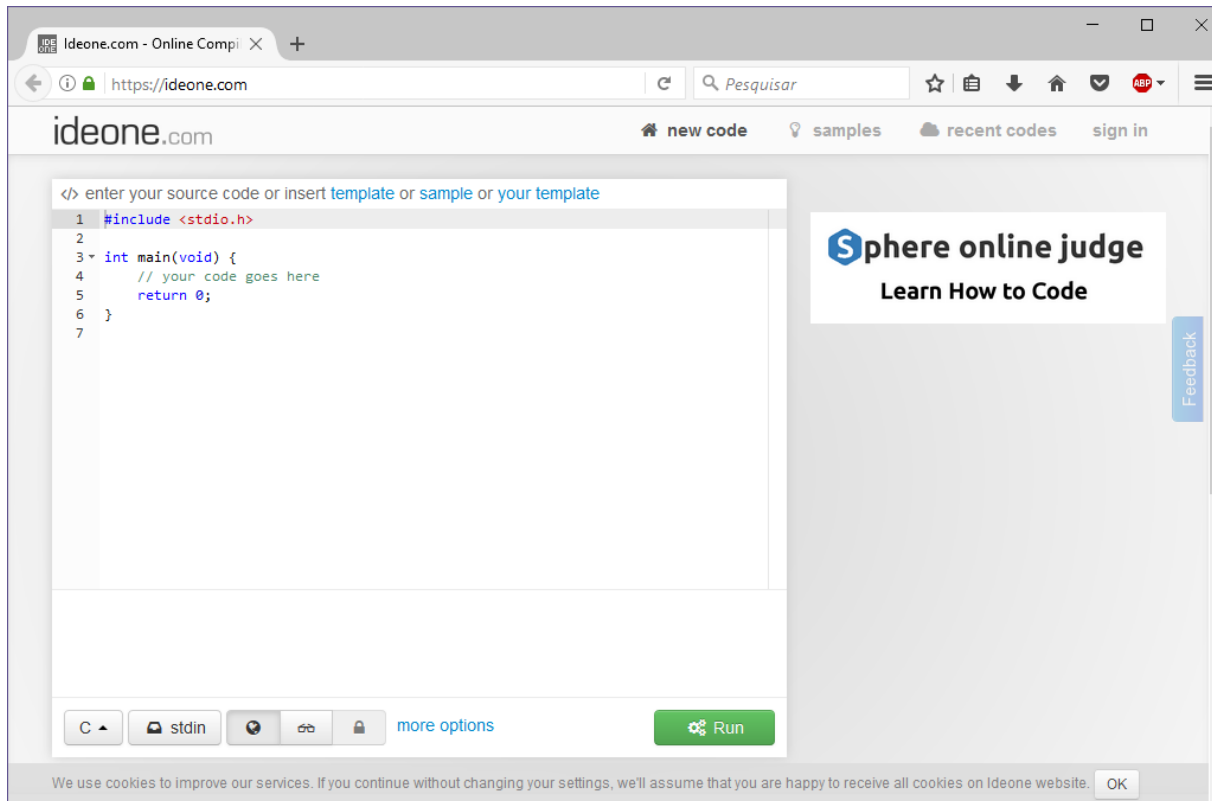
The `Build messages` window at the bottom shows the following output:

```
==== Build: Debug MeuProjeto (compiler: GNU GCC Compiler) ====
C:\Users\edirl... In function 'main':
C:\Users\edirl... 9 error: 'num' undeclared (first use in this function)
C:\Users\edirl... 9 note: each undeclared identifier is reported only once for each function it appears in
C:\Users\edirl... 15 error: expected ';' before 'retur'
C:\Users\edirl... 16 warning: control reaches end of non-void function [-Wreturn-type]
==== Build failed: 2 error(s), 1 warning(s) (0 minute(s), 0 second(s)) ====
```

A red arrow points from the `scanf("%d", &num);` line in the code to the `error: 'num' undeclared` message in the logs. Another red arrow points from the `retur 0;` line in the code to the `error: expected ';' before 'retur'` message in the logs.

IDEOne

- <https://ideone.com/>



IDEOne

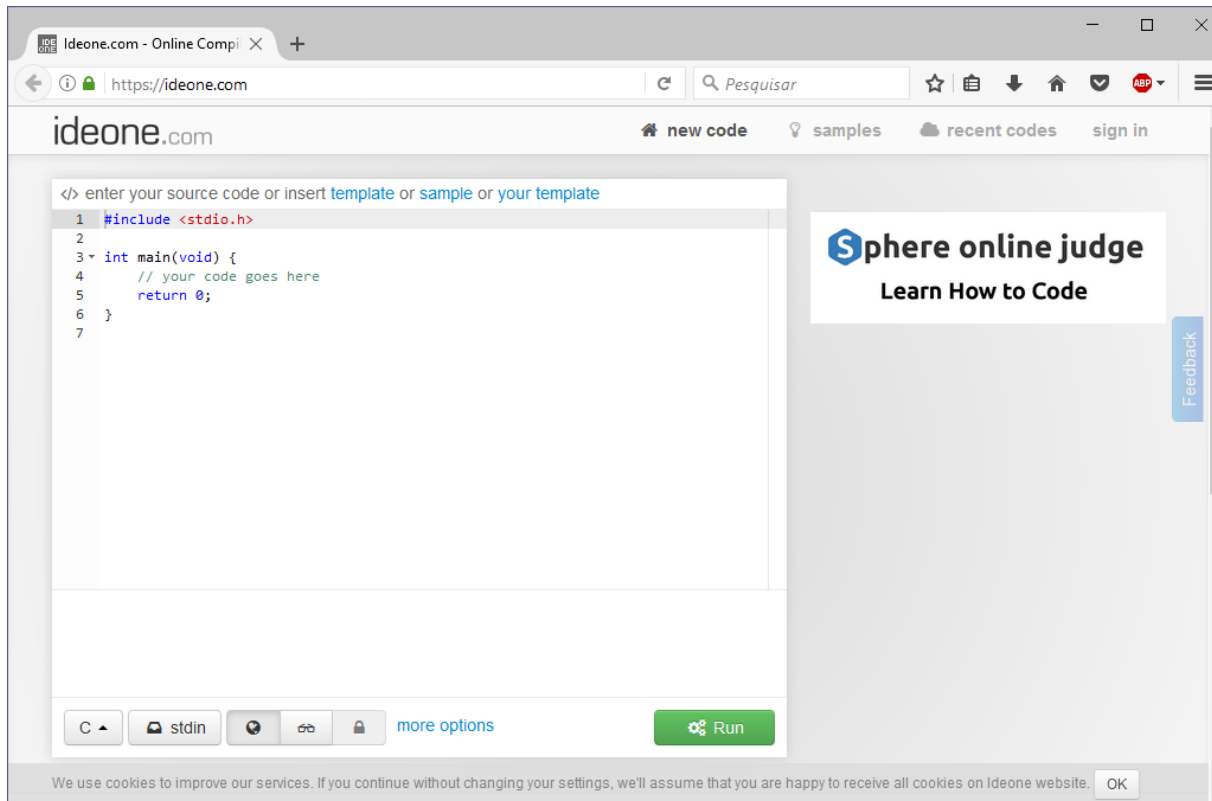
- Selecionar linguagem: C

The screenshot shows the IDEOne website interface. At the top, there is a browser window with the URL `https://ideone.com`. Below the browser, the website header includes the IDEOne logo and navigation links: `new code`, `samples`, `recent codes`, and `sign in`. The main content area features a code editor with a text input field containing the prompt `</> enter your source code or insert template or sample or your template`. Below the code editor, a dropdown menu is open, displaying a list of programming languages. The `popular` section of the dropdown menu is circled in red, and the `C` language is selected. The `others` section lists various other languages. At the bottom of the dropdown menu, the `C` language is also circled in red. The `Run` button is visible at the bottom right of the dropdown menu. A cookie consent banner is visible at the very bottom of the page.

popular	others
Bash	Ada95
C	Assembler 32t
C#	Assembler 32t D
C++	Assembler 64t D
C++14	AWK
C++14	AWK
Haskell	BC
Java	Brain**k
Objective-C	C
Pascal	C++ 4.3.2
	C++14
	C99
	Clips
	Clojure
	Cobol
	COBOL 85
	CoffeeScript
	Common Lisp
	Common Lisp
	Java
	JavaScript
	JavaScript
	Kotlin
	Lua
	Nemerle
	Nice
	Nim
	Node.js
	Objective-C
	Ocaml
	Octave
	Perl
	Pico Lisp
	Pike
	Prolog
	Prolog
	Python
	Python 3 nbc
	R
	Racket
	Rust
	Scala
	Scheme
	Scheme
	Scheme
	Smalltalk
	TCL
	Text
	Unlambda
	VB.NET
	Whitespace

IDEOne

- Pronto para programar!



IDEOne

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

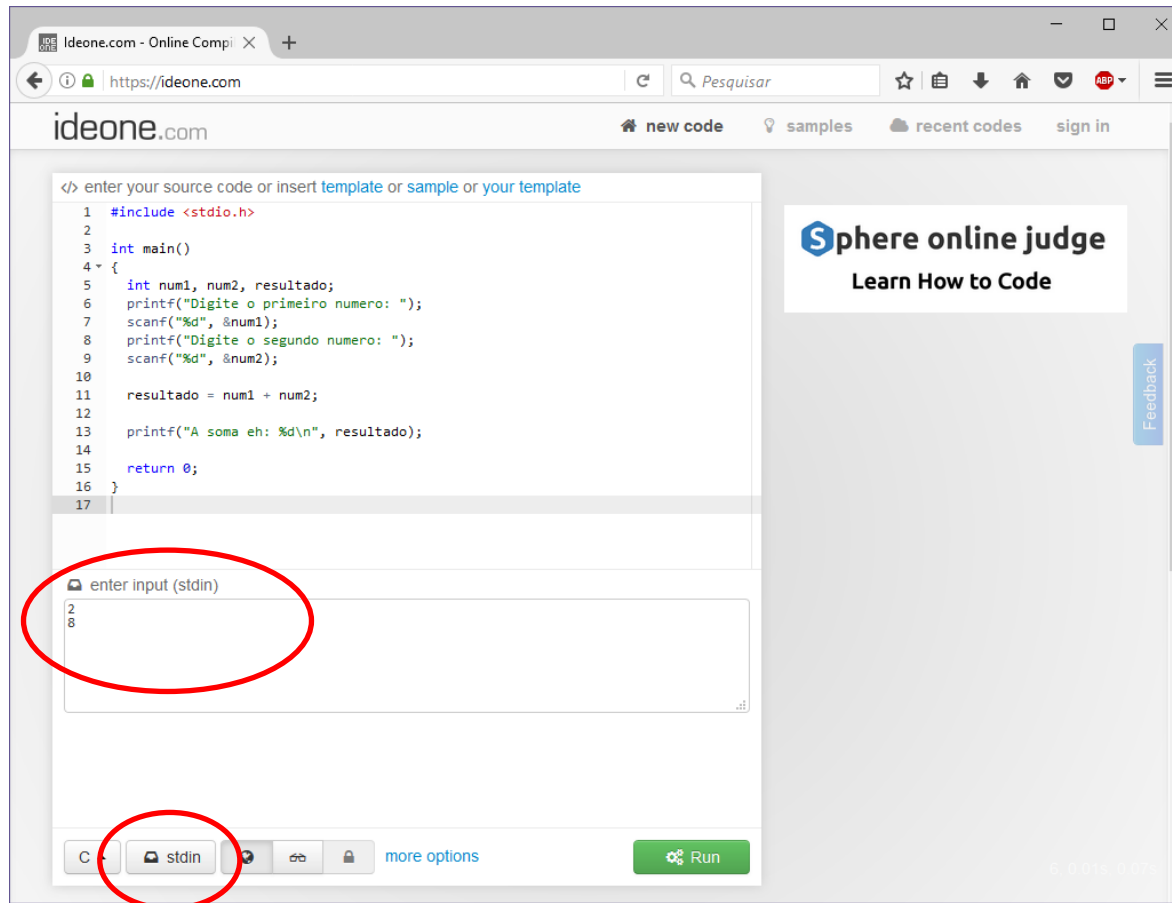
    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado);

    return 0;
}
```

IDEOne

- Informar dados de entrada: stdin



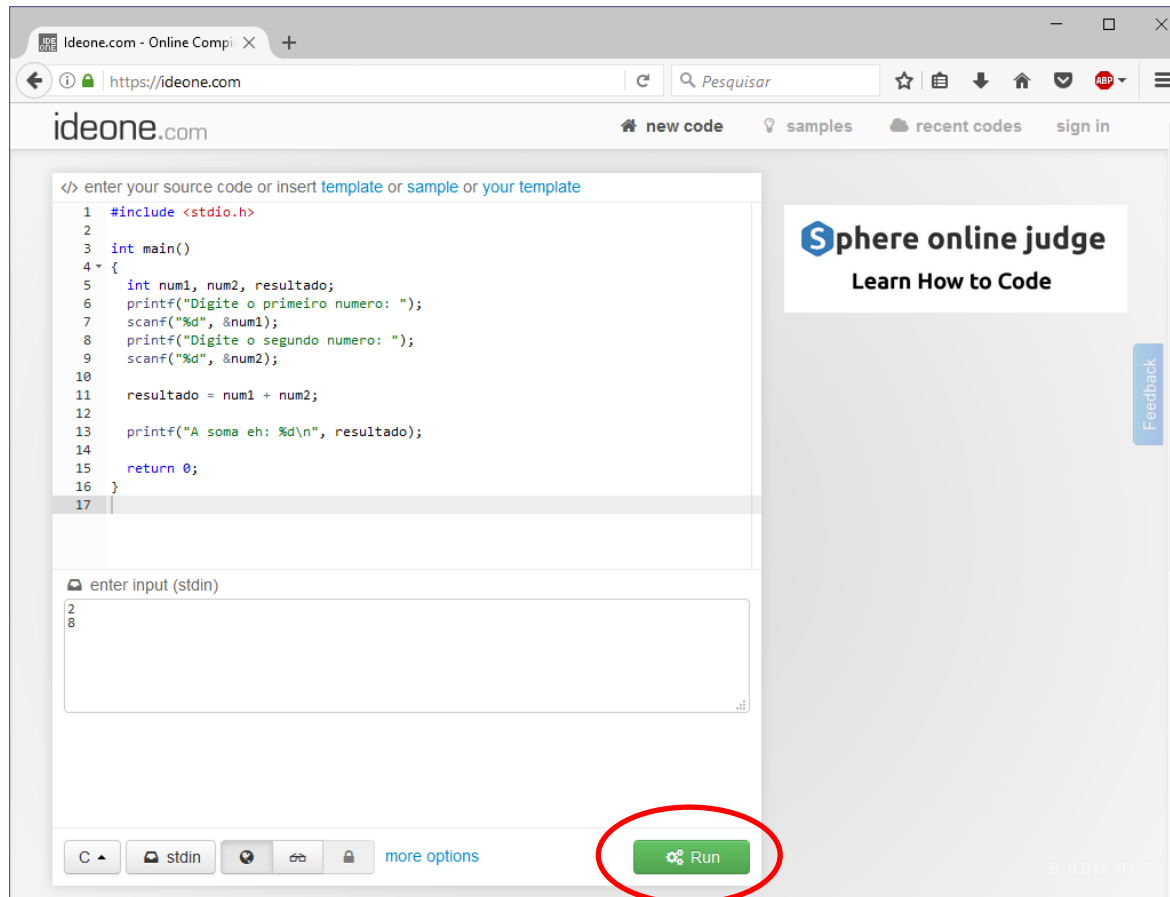
The screenshot displays the IDEOne online compiler interface. The main area contains a C program that reads two integers from standard input and prints their sum. The code is as follows:

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int num1, num2, resultado;
6     printf("Digite o primeiro numero: ");
7     scanf("%d", &num1);
8     printf("Digite o segundo numero: ");
9     scanf("%d", &num2);
10
11     resultado = num1 + num2;
12
13     printf("A soma eh: %d\n", resultado);
14
15     return 0;
16 }
17
```

Below the code editor, there is an input field labeled "enter input (stdin)" which contains the numbers "2" and "8". This field is circled in red. At the bottom of the interface, there is a "Run" button and a dropdown menu for input type, which is currently set to "stdin" and also circled in red. The "Run" button is green and has a gear icon. The "stdin" dropdown is a small button with a downward arrow.

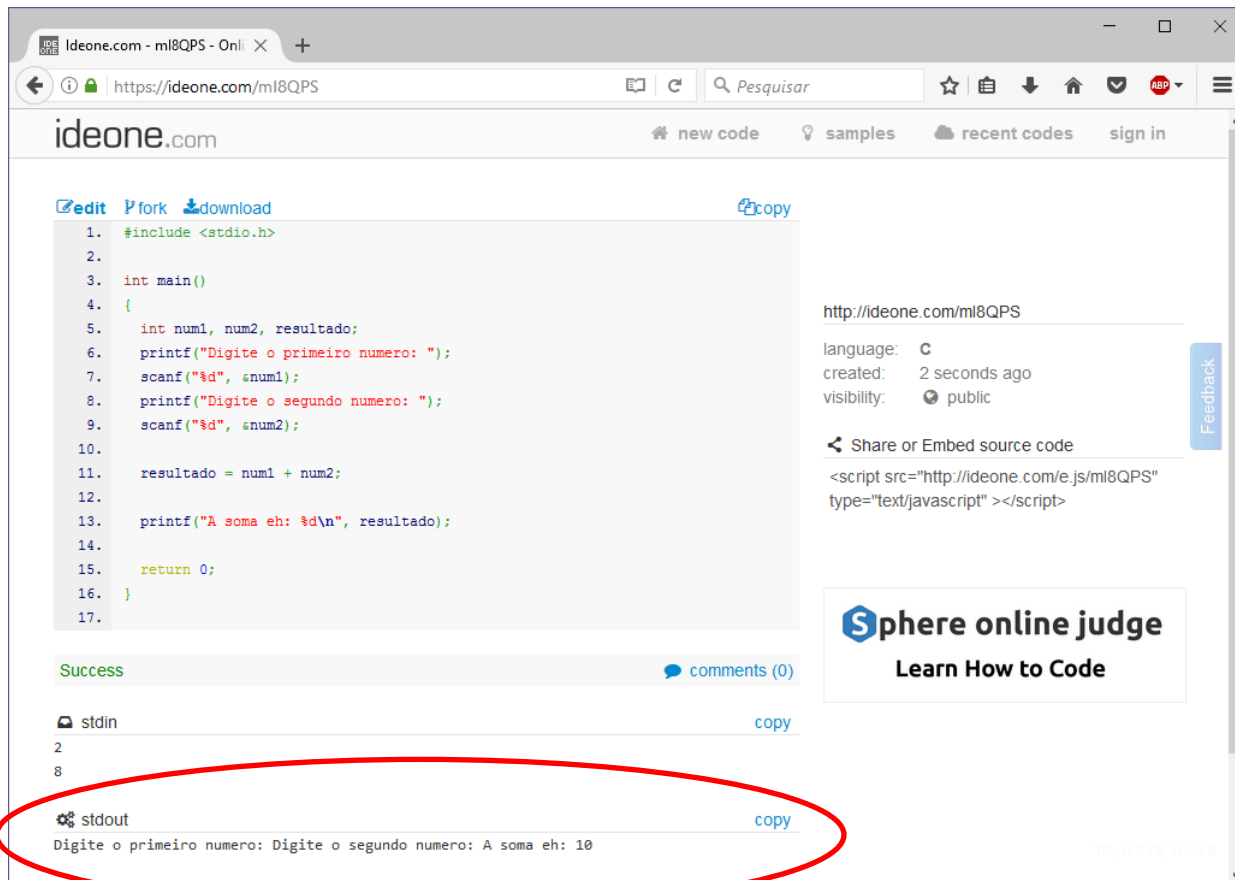
IDEOne

- **Compilar e executar programa: Run**



IDEOne

- Resultado da execução



The screenshot shows the IDEOne website interface. At the top, the browser address bar displays "https://ideone.com/ml8QPS". The website header includes the "ideone.com" logo and navigation links for "new code", "samples", "recent codes", and "sign in".

The main content area features a code editor with the following C code:

```
1. #include <stdio.h>
2.
3. int main()
4. {
5.     int num1, num2, resultado;
6.     printf("Digite o primeiro numero: ");
7.     scanf("%d", &num1);
8.     printf("Digite o segundo numero: ");
9.     scanf("%d", &num2);
10.
11.     resultado = num1 + num2;
12.
13.     printf("A soma eh: %d\n", resultado);
14.
15.     return 0;
16. }
17.
```

Below the code editor, a "Success" message is displayed, indicating the program executed without errors. To the right of the code editor, there are options to "edit", "fork", "download", and "copy".

On the right side of the page, there is a sidebar with the following information:

- URL: <http://ideone.com/ml8QPS>
- language: C
- created: 2 seconds ago
- visibility: public
- Share or Embed source code: `<script src="http://ideone.com/e.js/ml8QPS" type="text/javascript" ></script>`
- Feedback button

At the bottom of the page, there is a "Sphere online judge" advertisement with the text "Learn How to Code".

The execution output is shown in a terminal window at the bottom. The input is "2" and "8". The output is "Digite o primeiro numero: Digite o segundo numero: A soma eh: 10". This output section is circled in red.

IDEOne

```
#include <stdio.h>

int main()
{
    int num1, num2, resultado;
    printf("Digite o primeiro numero: ");
    scanf("%d", &num1);
    printf("Digite o segundo numero: ");
    scanf("%d", &num2);

    resultado = num1 + num2;

    printf("A soma eh: %d\n", resultado)

    retur 0;
}
```

IDEOne

- **Compilar e executar programa:**
 - Falha no processo de compilação e erros

The screenshot shows the IDEOne website interface. The browser address bar displays `https://ideone.com/ml8QPS`. The main content area is titled "source code" and contains the following C code:

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int num1, num2, resultado;
6     printf("Digite o primeiro numero: ");
7     scanf("%d", &num1);
8     printf("Digite o segundo numero: ");
9     scanf("%d", &num2);
10
11     resultado = num1 + num2;
12     printf("A soma eh: %d\n", resultado)
13
14     retur 0;
15 }
16 }
```

Below the code editor, the "Output" tab is active, displaying the following compilation errors:

```
Compilation error time: 0 memory: 9432 signal:0
prog.c: In function 'main':
prog.c:9:16: error: 'num' undeclared (first use in this function)
   scanf("%d", &num);
                   ^~~~
prog.c:9:16: note: each undeclared identifier is reported only once for each function it appears in
prog.c:15:3: error: expected ';' before 'return'
```

A red arrow points from the error message "error: 'num' undeclared" back to the `scanf("%d", &num);` line in the source code. Another red arrow points from the "Output" tab to the "input" tab. The right sidebar shows the URL `http://ideone.com/ml8QPS`, language `C`, creation time `2 seconds ago`, and visibility `public`. At the bottom, there is a "Save" button and a green "ideone it!" button.