

# INTRODUCTION TO PROGRAMMING C AND JULIA

## LECTURE 02: HELLO WORLD

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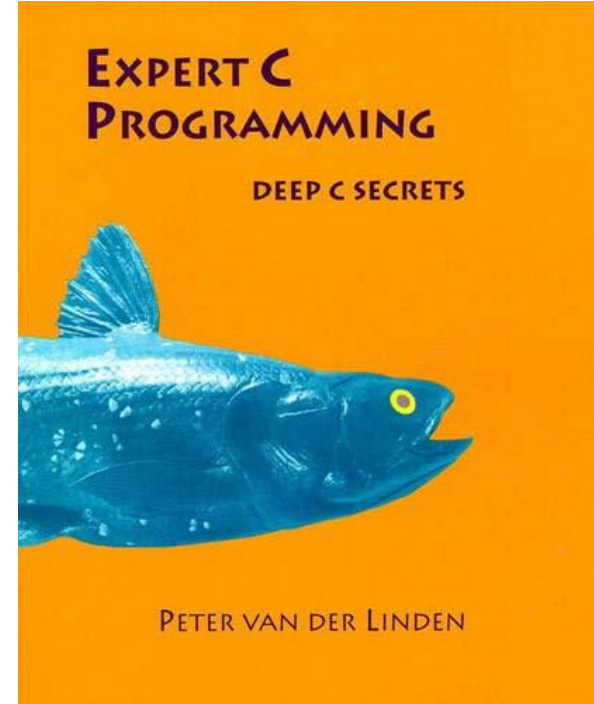
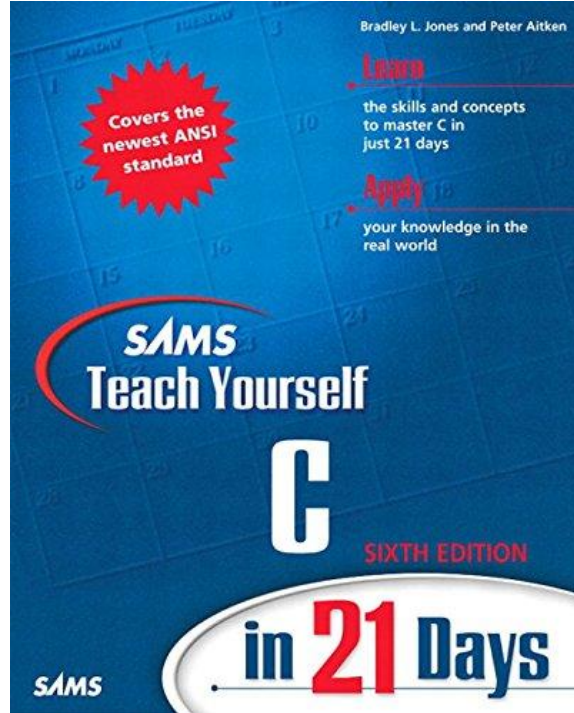
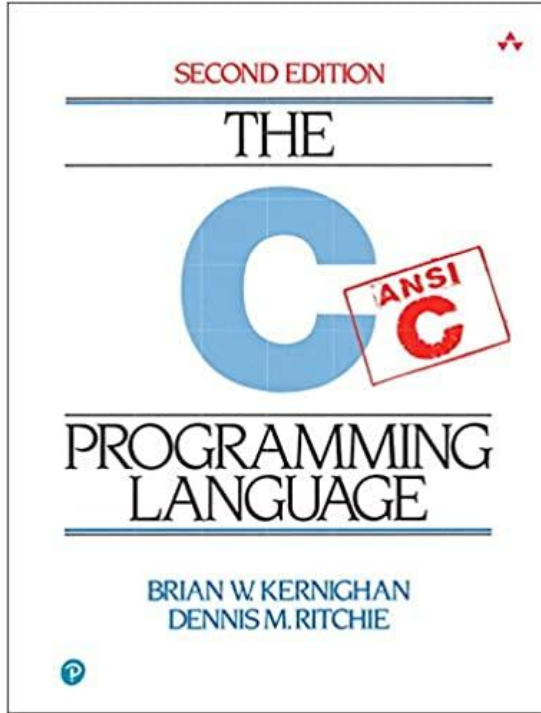
[ram.krish@saiuniversity.edu.in](mailto:ram.krish@saiuniversity.edu.in)



23-Sept-2022

# REFERENCES

## Recommended Reading



# CONVENTIONAL CORE OF C

## Conventional Core of C

1. Variables	6. Arrays
2. Arithmetic Expressions	7. Functions
3. <b>for</b> statement	8. Arguments - Call by value
4. Symbolic Constants	9. Character Arrays
5. Character input and output	10. External Variables & Scope

# FIRST PROGRAM

## PRINTING Hello World

# FIRST PROGRAM

**hello.c**

```
#include <stdio.h>

int main()
{
    printf("hello world\n");
    return 0;
}
```

## Compilation in terminal

```
$ gcc hello.c -o hello.bin
```

```
$ ./hello.bin
```

```
hello world
```

### Note:

If we do not specify explicitly the output binary file with **-o** tag, then the default binary executable is named as **a.out**

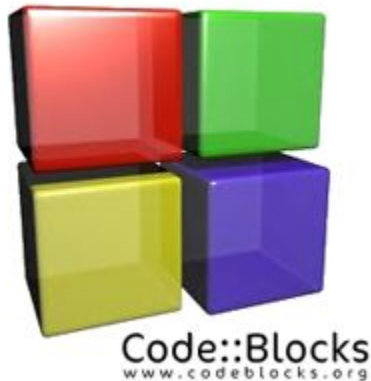
# RUN THE PROGRAM IN CODE BLOCKS

# TOOL FOR C PROGRAMMING

Recommended IDE (*Integrated Development Environment*)

<https://www.codeblocks.org/>

<https://www.codeblocks.org/downloads/>



[Code::Blocks](#) / [Downloads](#)

## Downloads

There are different ways to download and install Code::Blocks on your computer:

- [Download the binary release](#)

This is the easy way for installing Code::Blocks. Download the setup file, run it on your computer and Code::Blocks will be installed, ready for you to work with it. Can't get any easier than that!

- [Download a nightly build](#)

There are also more recent so-called nightly builds available in the [forums](#). Please note that we consider nightly builds to be stable, usually, unless stated otherwise.

- Other distributions usually follow provided by the community (big "Thank you!" for that!). If you want to provide some, make sure to announce in the forums such that we can put it on the official C::B homepage.

# TOOL FOR C PROGRAMMING

## Recommended IDE (Integrated Development Environment)

<http://www.codeblocks.org/downloads/binaries/>

### Binary releases

Please select a setup package depending on your platform:

- [Windows XP / Vista / 7 / 8.x / 10](#)
- [Linux 32 and 64-bit](#)
- [Mac OS X](#)



### Microsoft Windows

#### File

#### Download from

codeblocks-20.03-setup.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03-setup-nonadmin.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03-nosetup.zip	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03mingw-setup.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03mingw-nosetup.zip	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03-32bit-setup.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03-32bit-setup-nonadmin.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03-32bit-nosetup.zip	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03mingw-32bit-setup.exe	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
codeblocks-20.03mingw-32bit-nosetup.zip	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>



### Mac OS X

#### File

#### Download from

CodeBlocks-13.12-mac.zip [FossHUB](#) or [Sourceforge.net](#)

#### NOTES:

- Code::Blocks 20.03 for Mac is currently not available due to issues caused by Apple hardening their install packages and lack of Mac developers. We could use an extra Mac developer to work on these issues.
- The provided download contains an Application Bundle (for the i386 architecture) built for Mac OS X 10.6 (and later), bundling most Code::Blocks plugins.



### Linux 32 and 64-bit

#### Distro

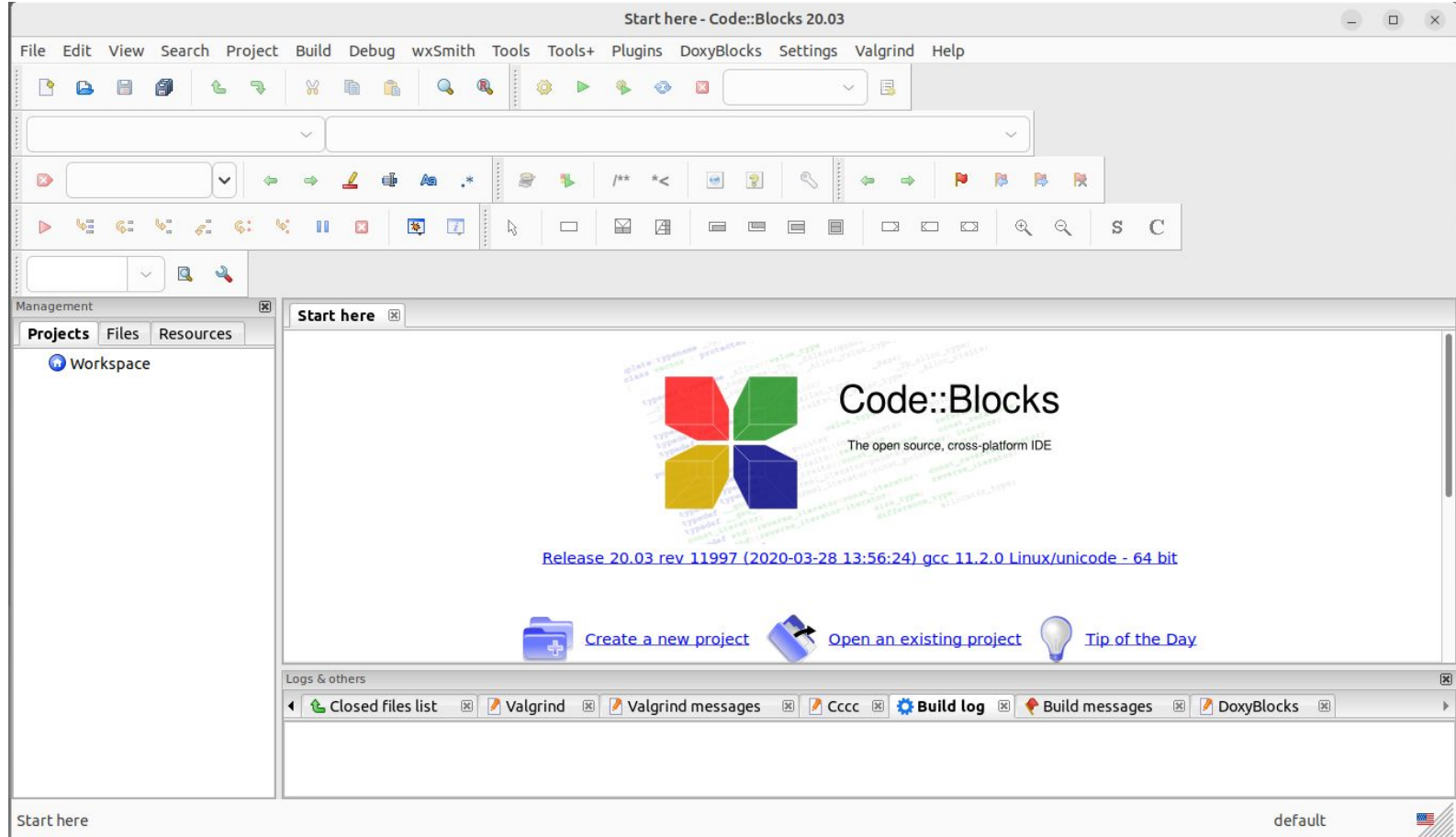
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#### Download from

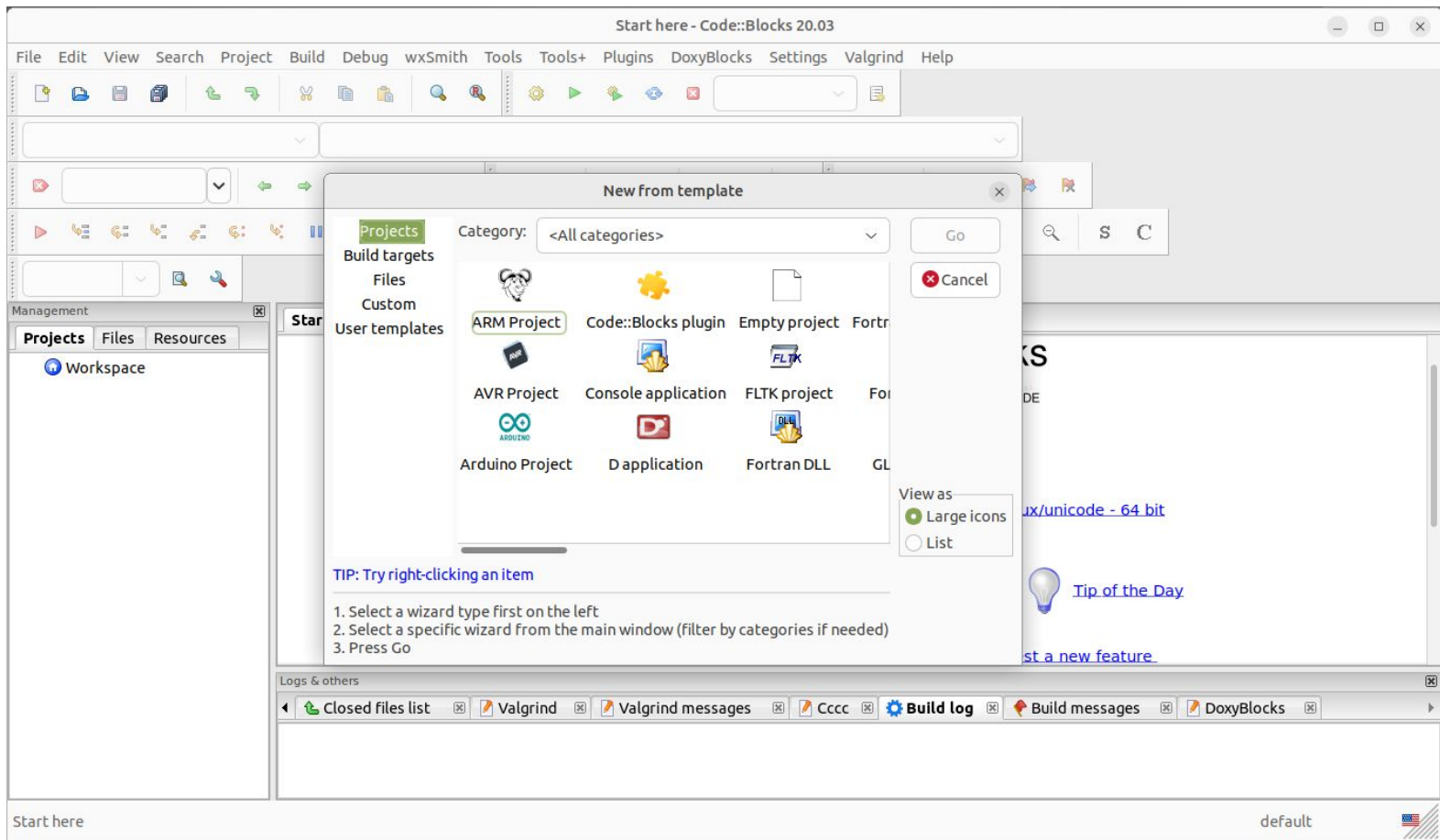
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	codeblocks-20.03-1.el6.rhmp.tar	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
	codeblocks-20.03-1.el7.rhmp.tar	<a href="#">FossHUB</a> or <a href="#">Sourceforge.net</a>
	For Ubuntu, use this <a href="#">PPA</a>	



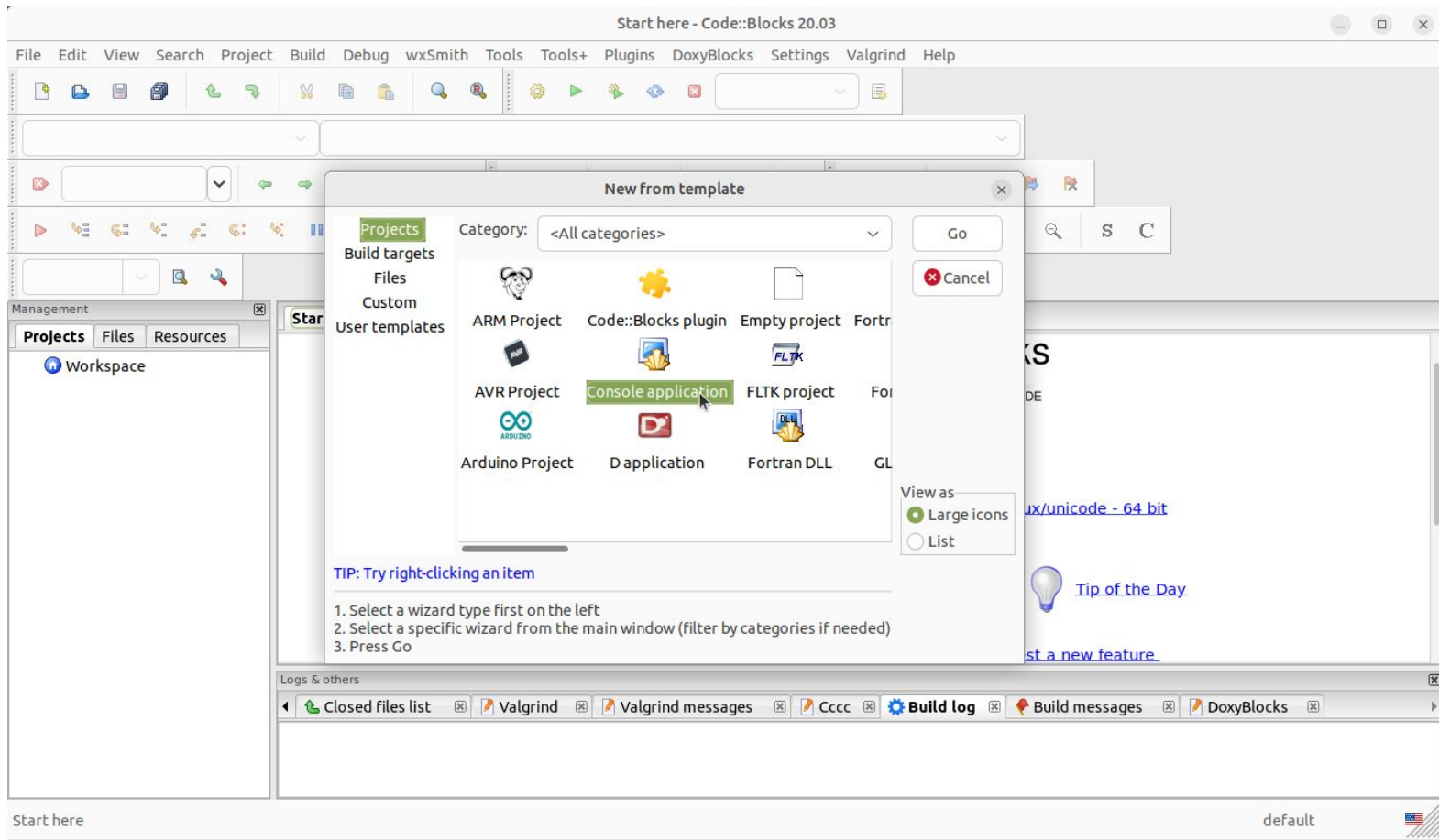
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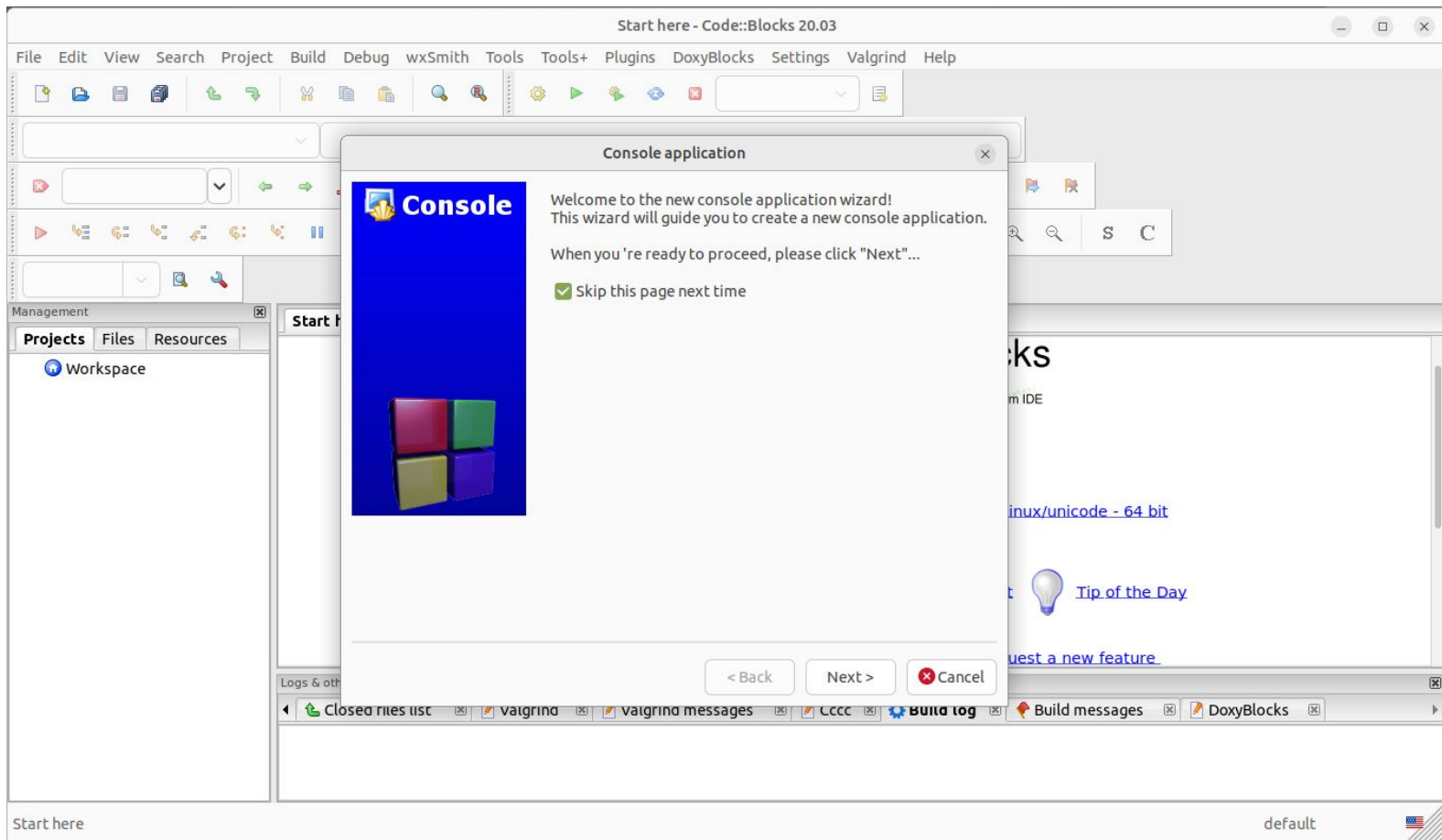
# FIRST PROGRAM



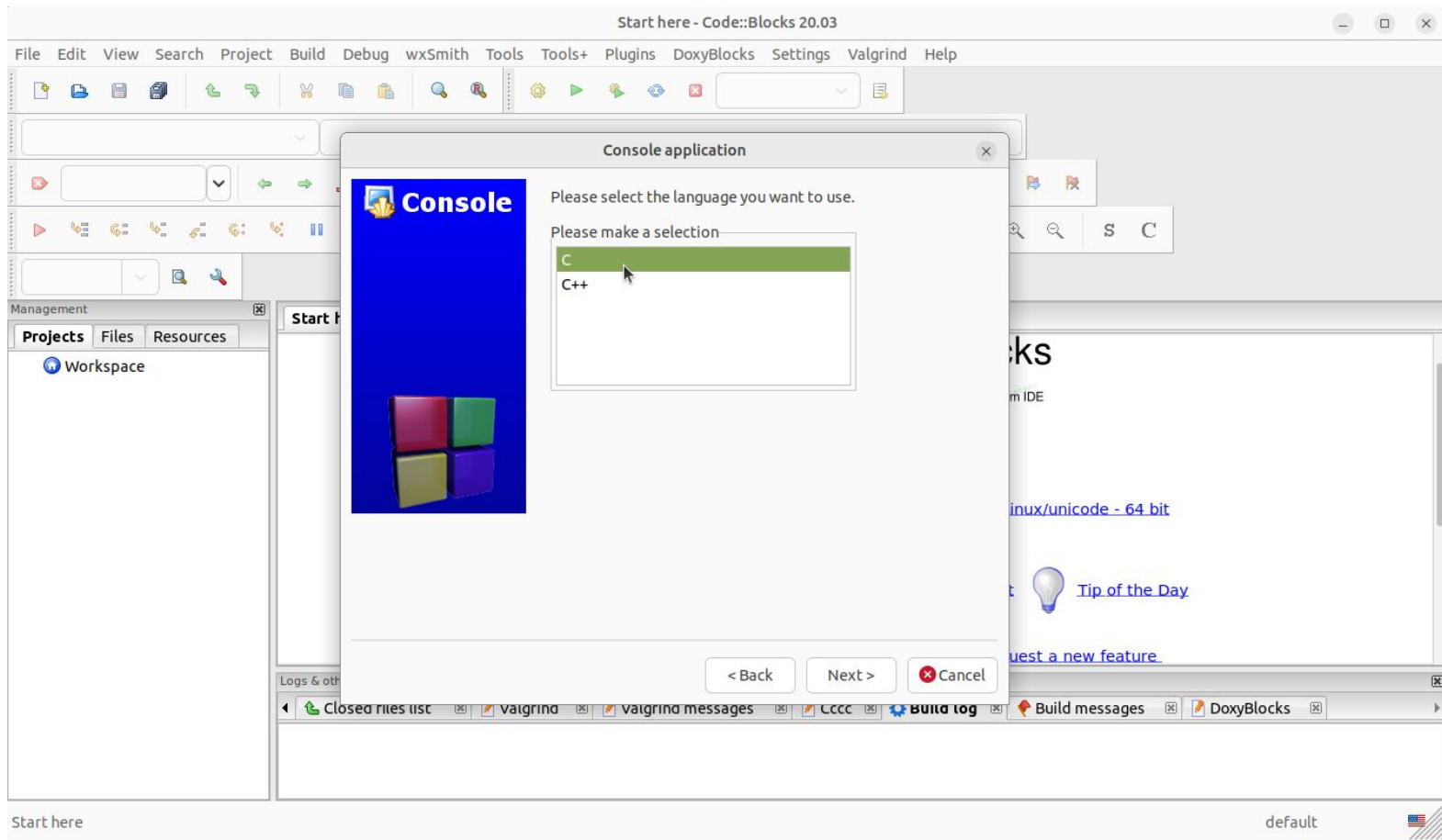
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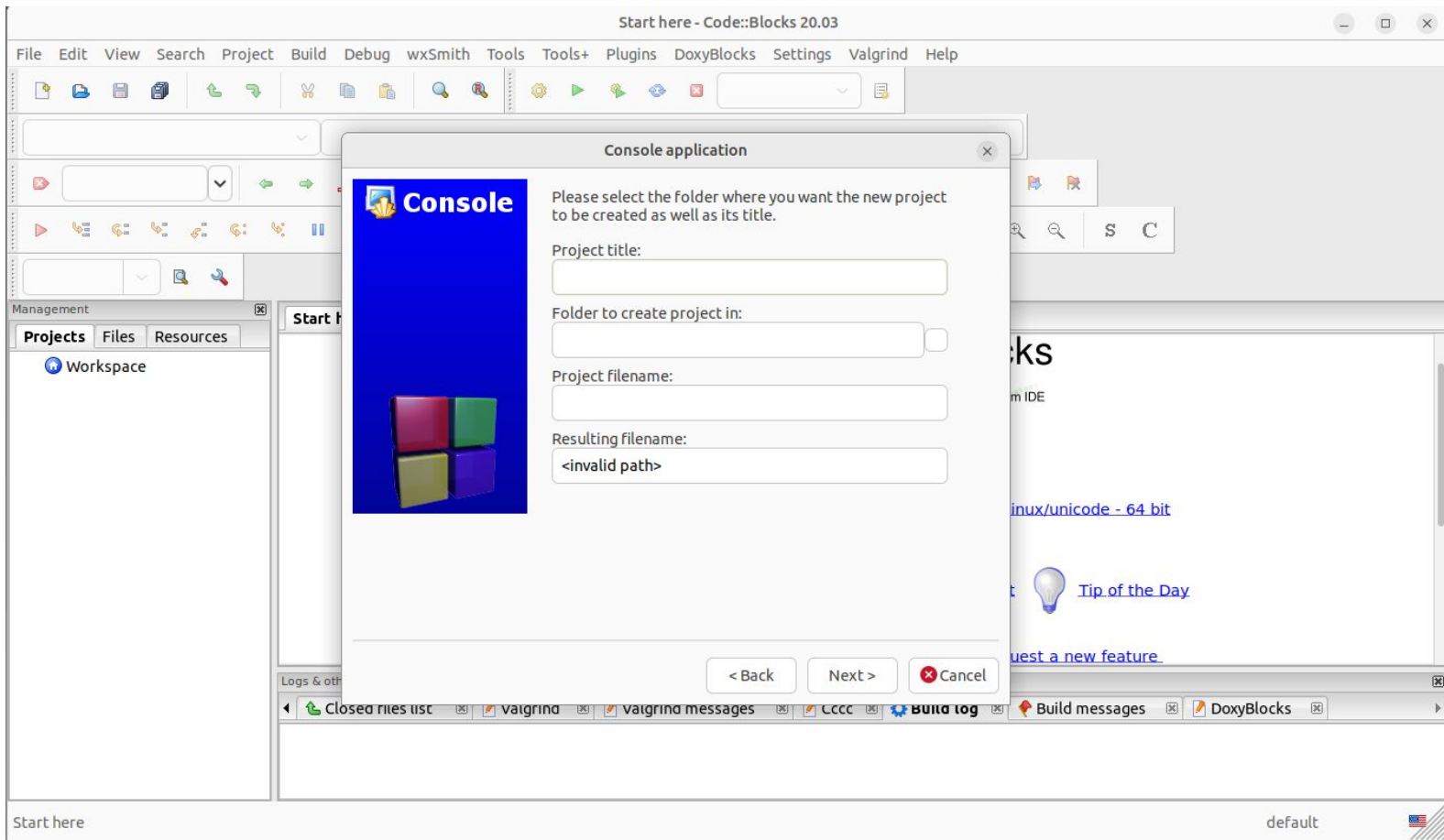
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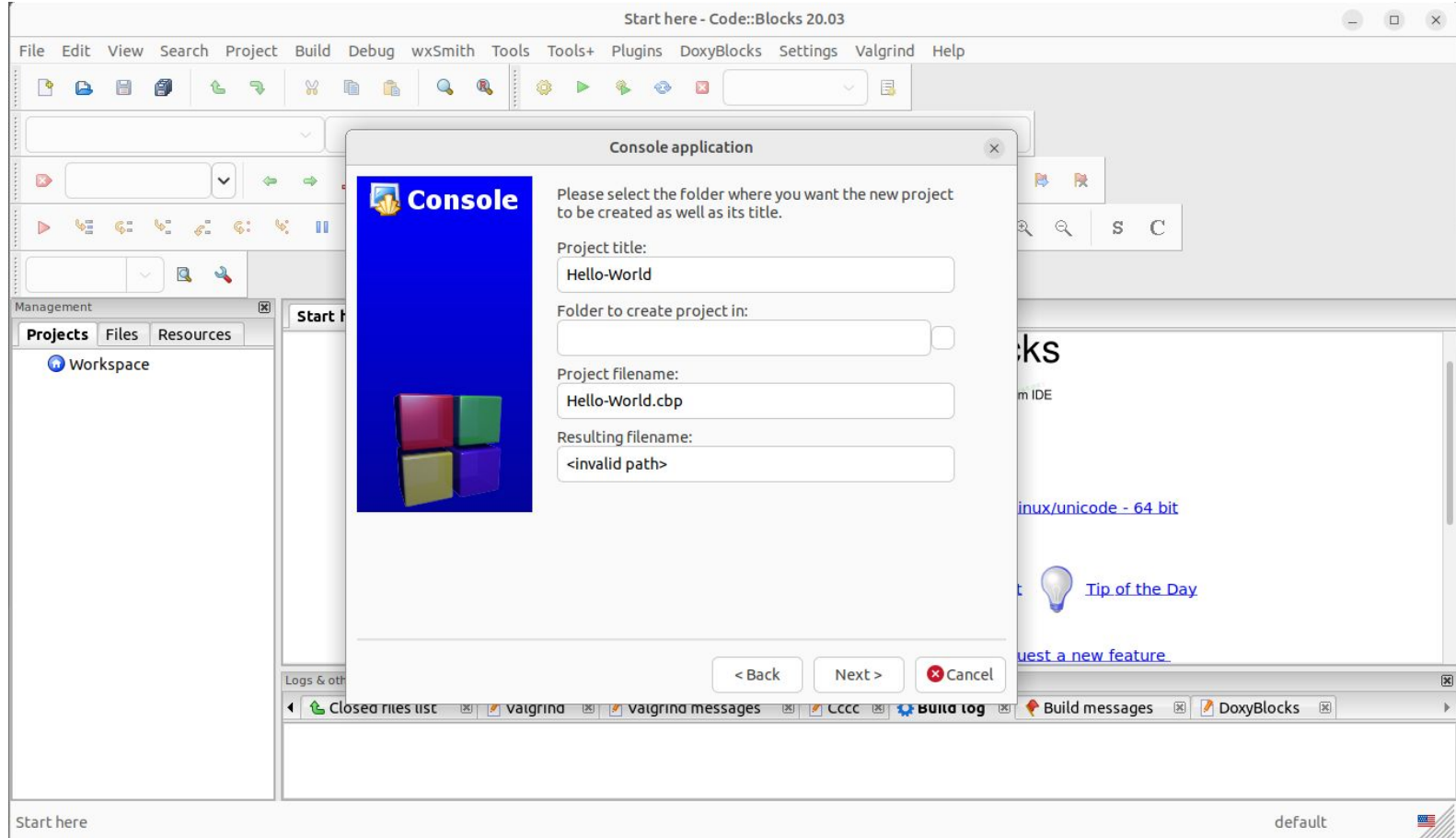
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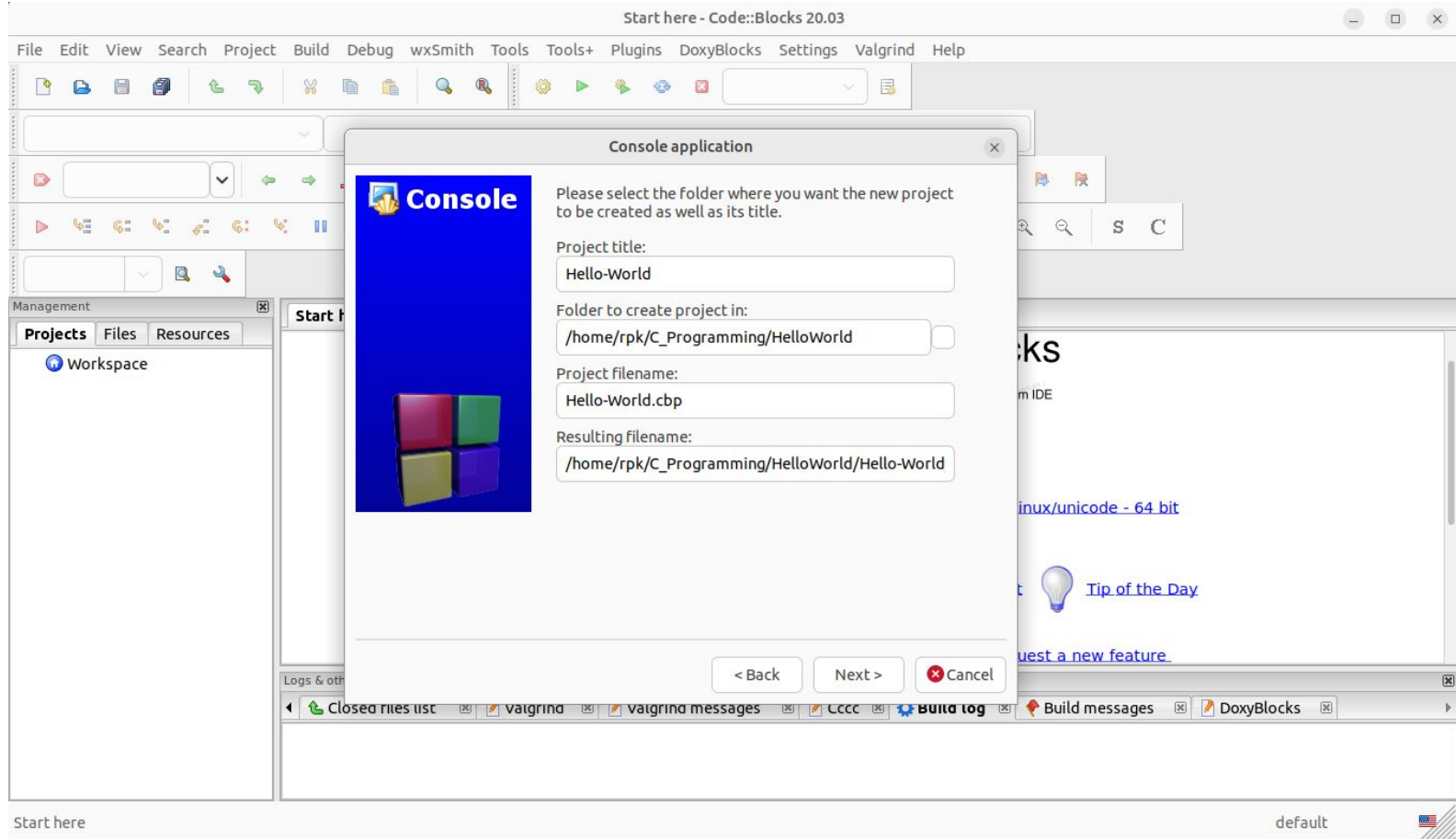
# FIRST PROGRAM



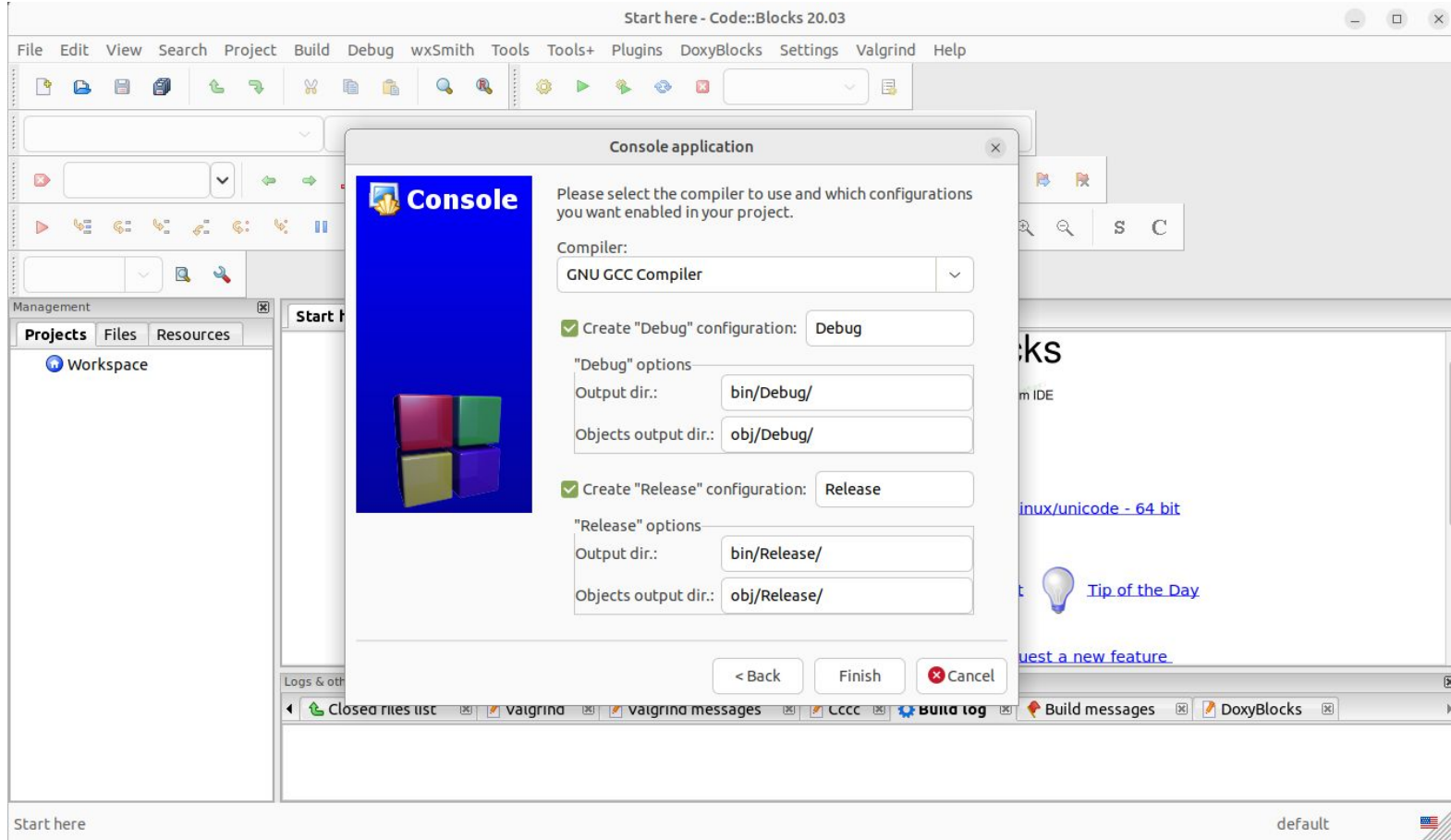
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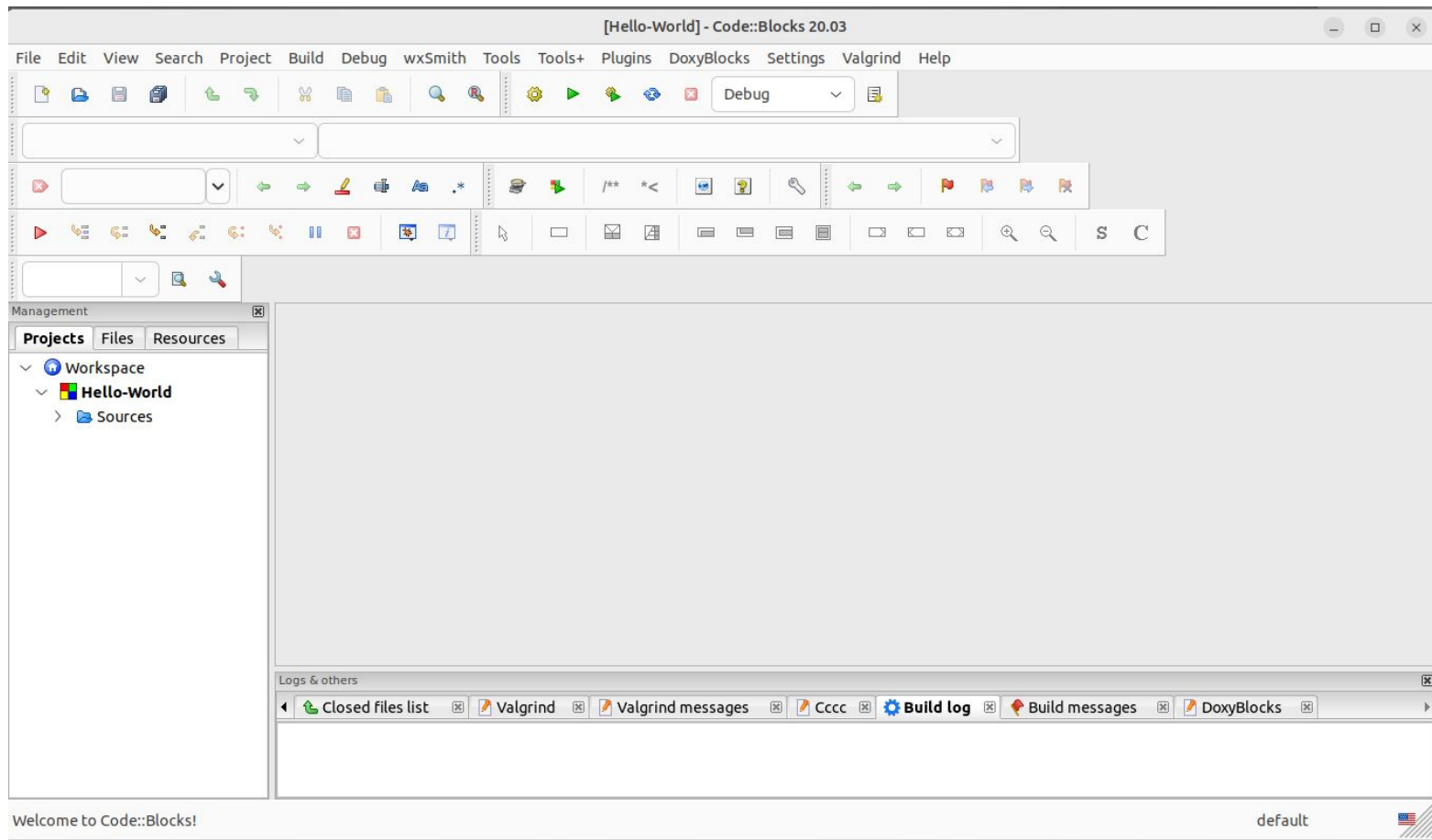
# FIRST PROGRAM



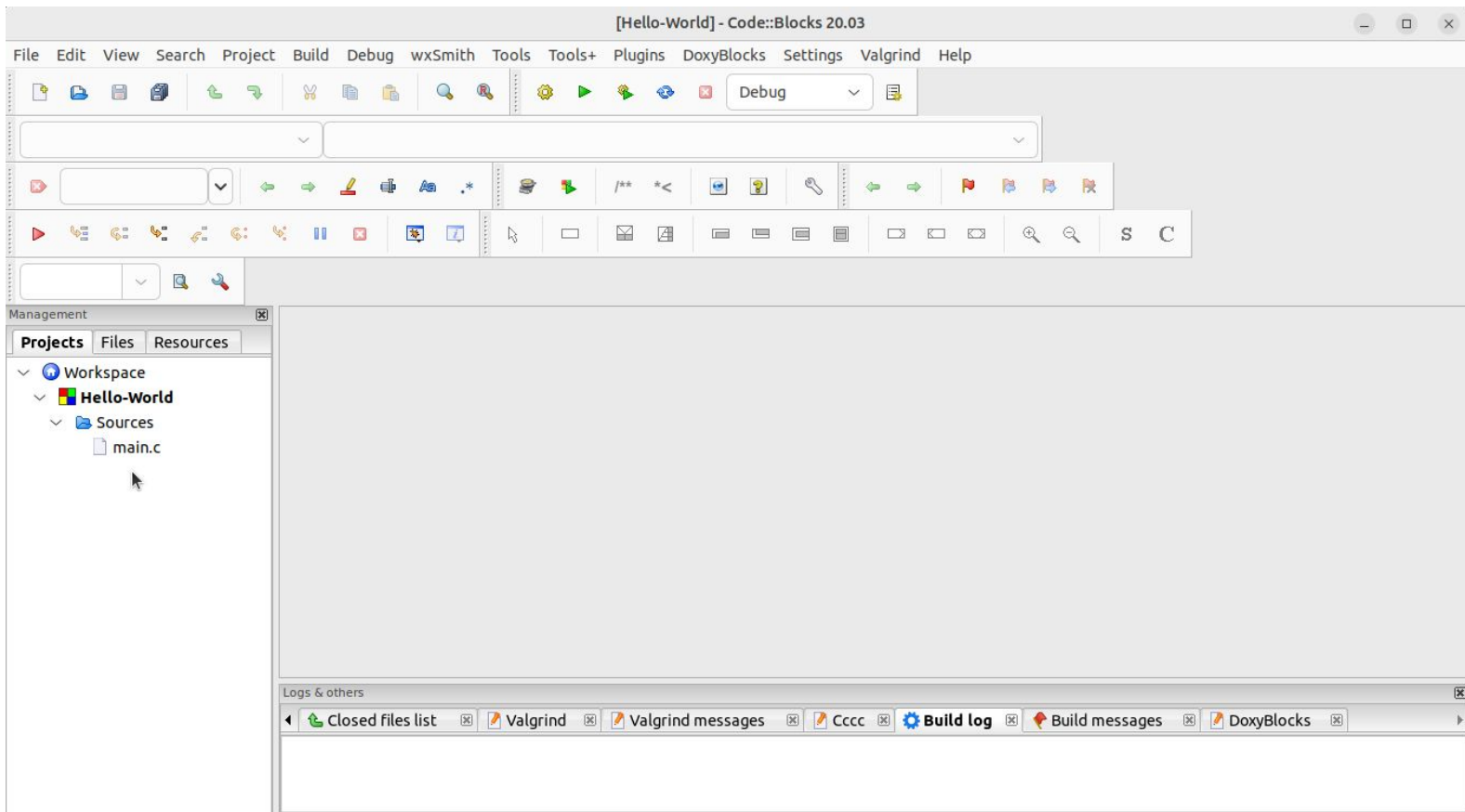
# FIRST PROGRAM



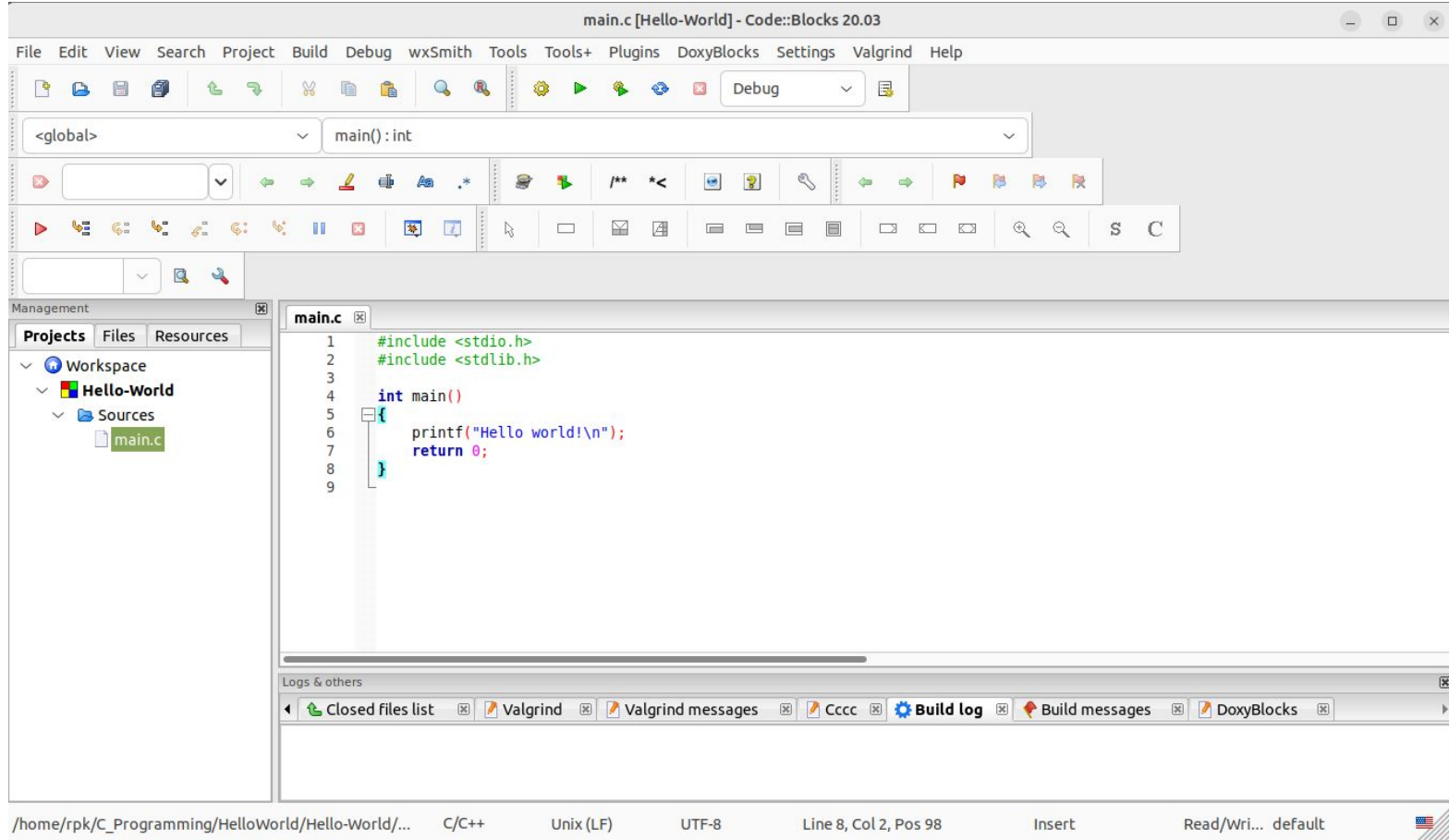
# FIRST PROGRAM



# FIRST PROGRAM



# FIRST PROGRAM

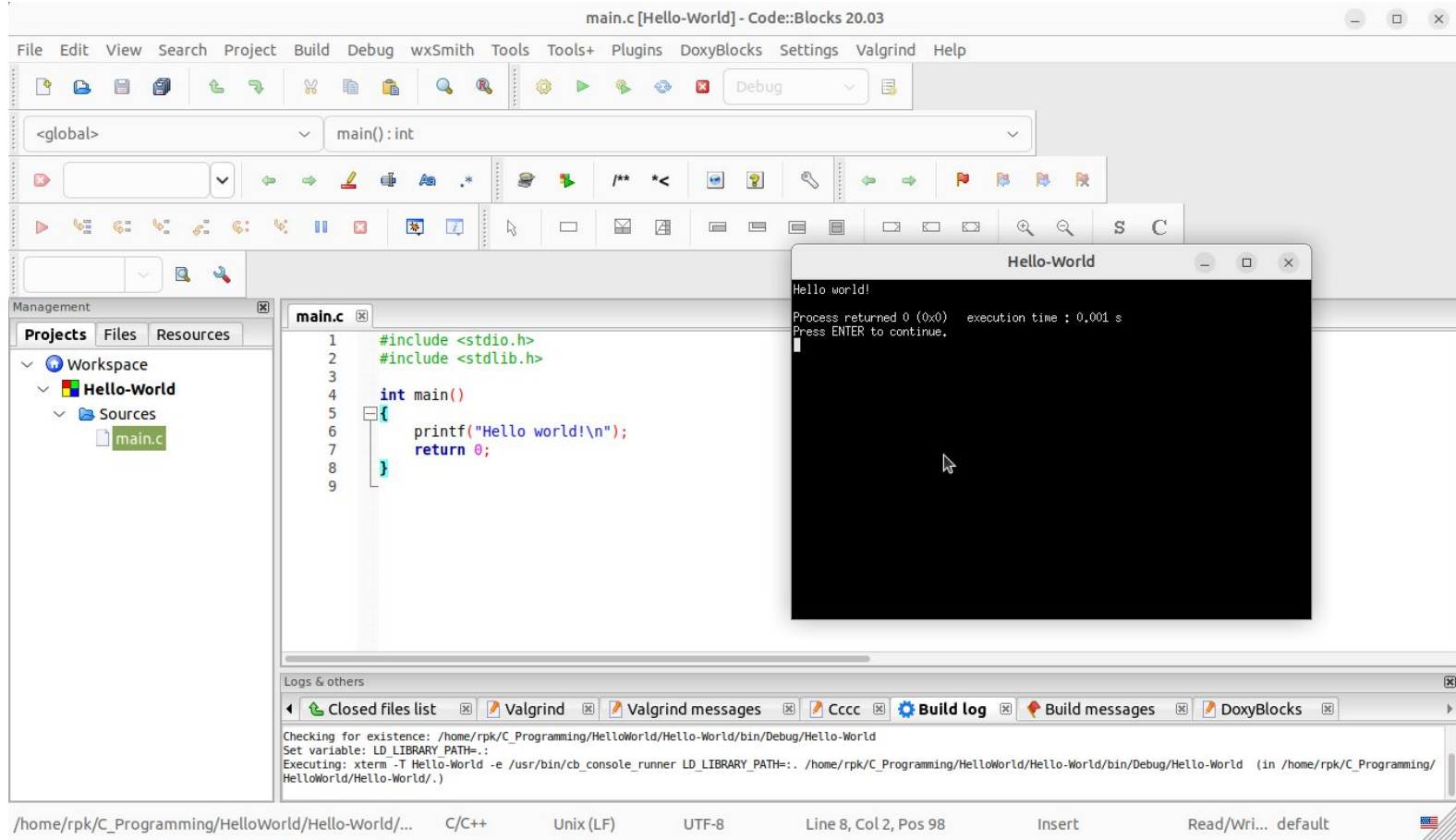


The screenshot displays the Code::Blocks IDE interface. The title bar reads "main.c [Hello-World] - Code::Blocks 20.03". The menu bar includes File, Edit, View, Search, Project, Build, Debug, wxSmith, Tools, Tools+, Plugins, DoxyBlocks, Settings, Valgrind, and Help. The toolbar contains icons for file operations, editing, and debugging. The left sidebar shows the "Management" pane with tabs for Projects, Files, and Resources. Under "Workspace", there is a "Hello-World" project containing a "Sources" folder with the file "main.c". The main editor window shows the code for "main.c":

```
1 #include <stdio.h>
2 #include <stdlib.h>
3
4 int main()
5 {
6     printf("Hello world!\n");
7     return 0;
8 }
9
```

At the bottom, the "Logs & others" pane shows tabs for Closed files list, Valgrind, Valgrind messages, Cccc, Build log, Build messages, and DoxyBlocks. The status bar at the bottom indicates the file path "/home/rpk/C\_Programming/HelloWorld/Hello-World/...", the language "C/C++", the line ending "Unix (LF)", the encoding "UTF-8", the cursor position "Line 8, Col 2, Pos 98", the mode "Insert", and the read/write permissions "Read/Wri... default".

# FIRST PROGRAM



The screenshot displays a code editor window titled "main.c [Hello-World] - Code::Blocks 20.03". The editor shows the following C code:

```
1  #include <stdio.h>
2  #include <stdlib.h>
3
4  int main()
5  {
6      printf("Hello world!\n");
7      return 0;
8  }
9
```

Below the code editor, a "Hello-World" window shows the output of the program:

```
Hello world!
Process returned 0 (0x0)   execution time : 0.001 s
Press ENTER to continue.
```

The bottom status bar indicates the file path: `/home/rpk/C_Programming/HelloWorld/Hello-World/...`, the language: `C/C++`, the encoding: `Unix (LF)`, the file encoding: `UTF-8`, the cursor position: `Line 8, Col 2, Pos 98`, the mode: `Insert`, and the read/write permissions: `Read/Wri... default`.

THANK YOU