

Remote Debugging with Eclipse

MA35D1 | NUC9XX

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2024/01/25

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| Introduction

- The Eclipse Public License is designed to be a business-friendly free software license, and features weaker copyleft provisions than licenses such as the GNU General Public License (GPL).

| Installing Eclipse

- Download **Eclipse Installer 2013-12 R** from the site <https://www.eclipse.org/downloads/packages>
- Extract the package **eclipse-inst-jre-linux64.tar.gz**
`$ tar -xf eclipse-inst-jre-linux64.tar.gz 2> /dev/null`
- Execute the installer **eclipse-installer**
`$ cd eclipse-installer`
`$./eclipse-inst`

The Eclipse Installer 2023-12 R now includes a JRE for macOS, Windows and Linux.

Try the Eclipse **Installer** 2023-12 R

The easiest way to install and update your Eclipse Development Environment.

[Find out more](#)

📄 874,864 Installer Downloads

📄 772,712 Package Downloads and Updates

Download

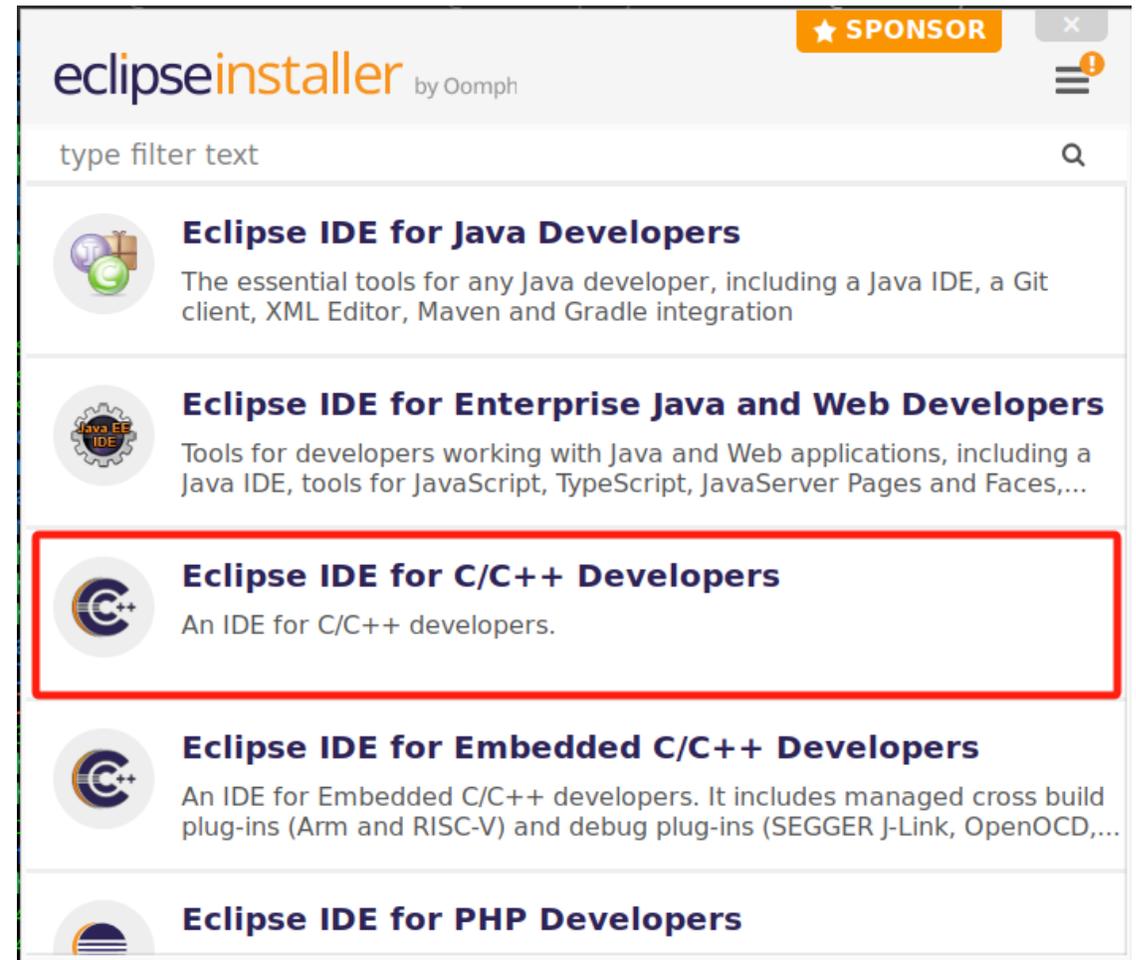
macOS [x86_64](#) | [AArch64](#)

Windows [x86_64](#)

Linux [x86_64](#) | [AArch64](#)

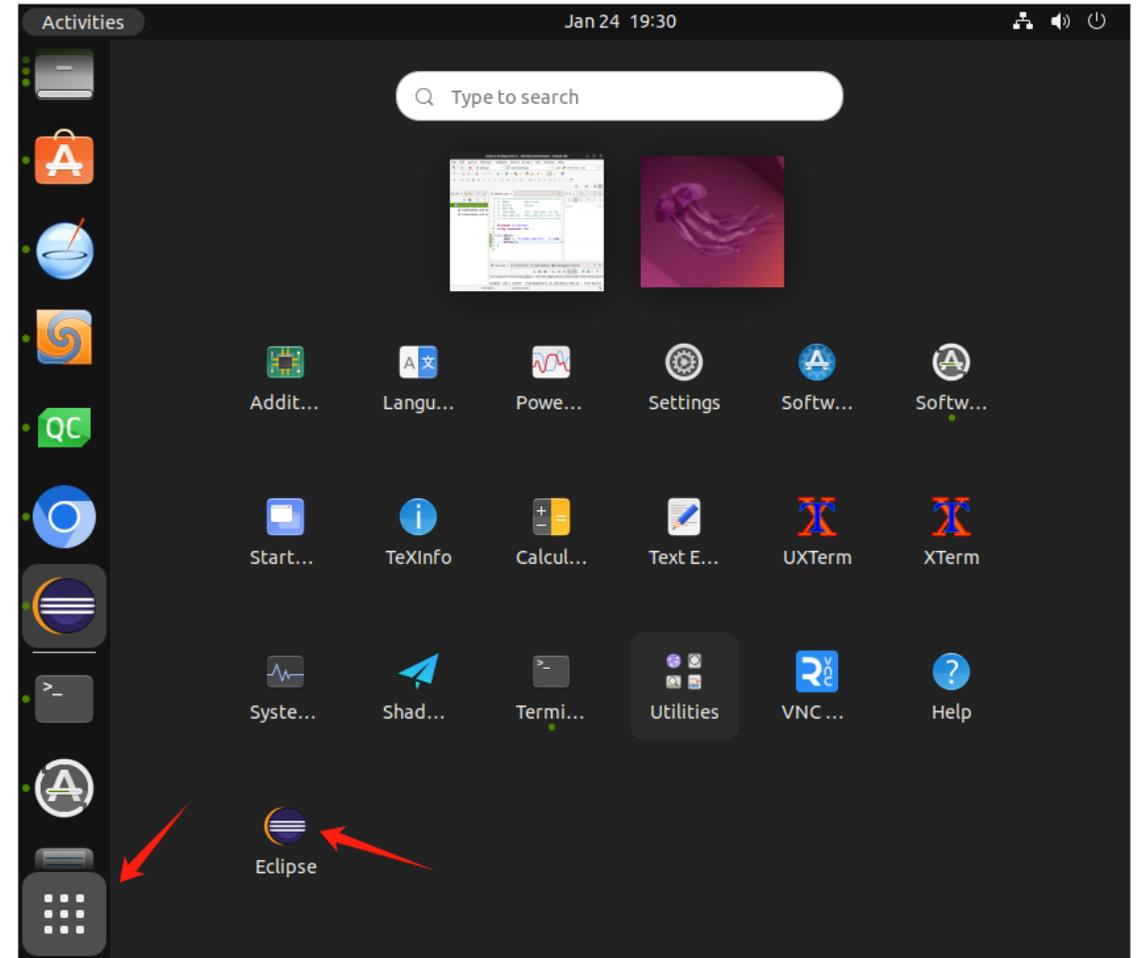
| Installing Eclipse

- Choose the *Eclipse IDE for C/C++ Developers*



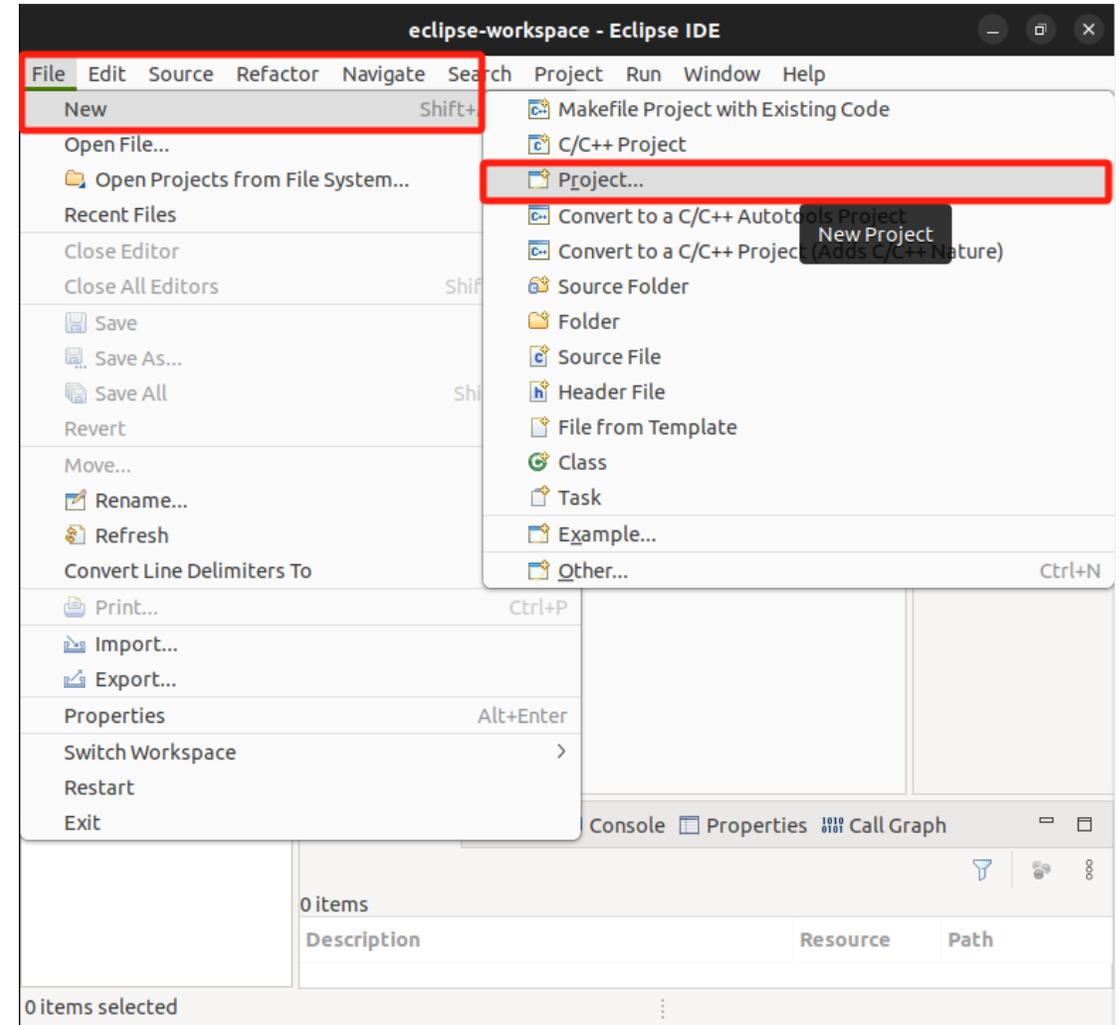
Launching Eclipse

- From Application Launcher, find the Eclipse and run it.



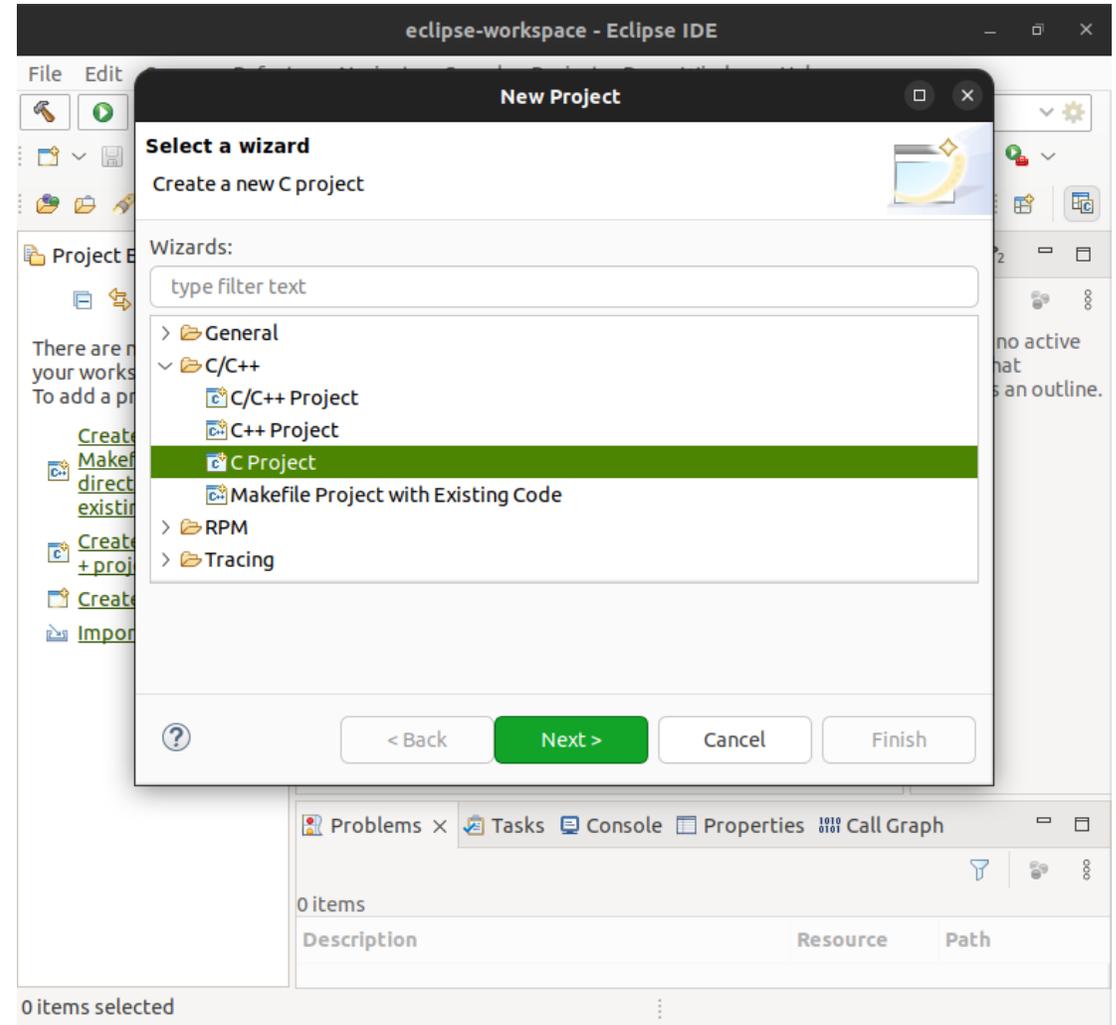
| Creating Project

- Create a *New Project* from *File* menu
→File →New →Project



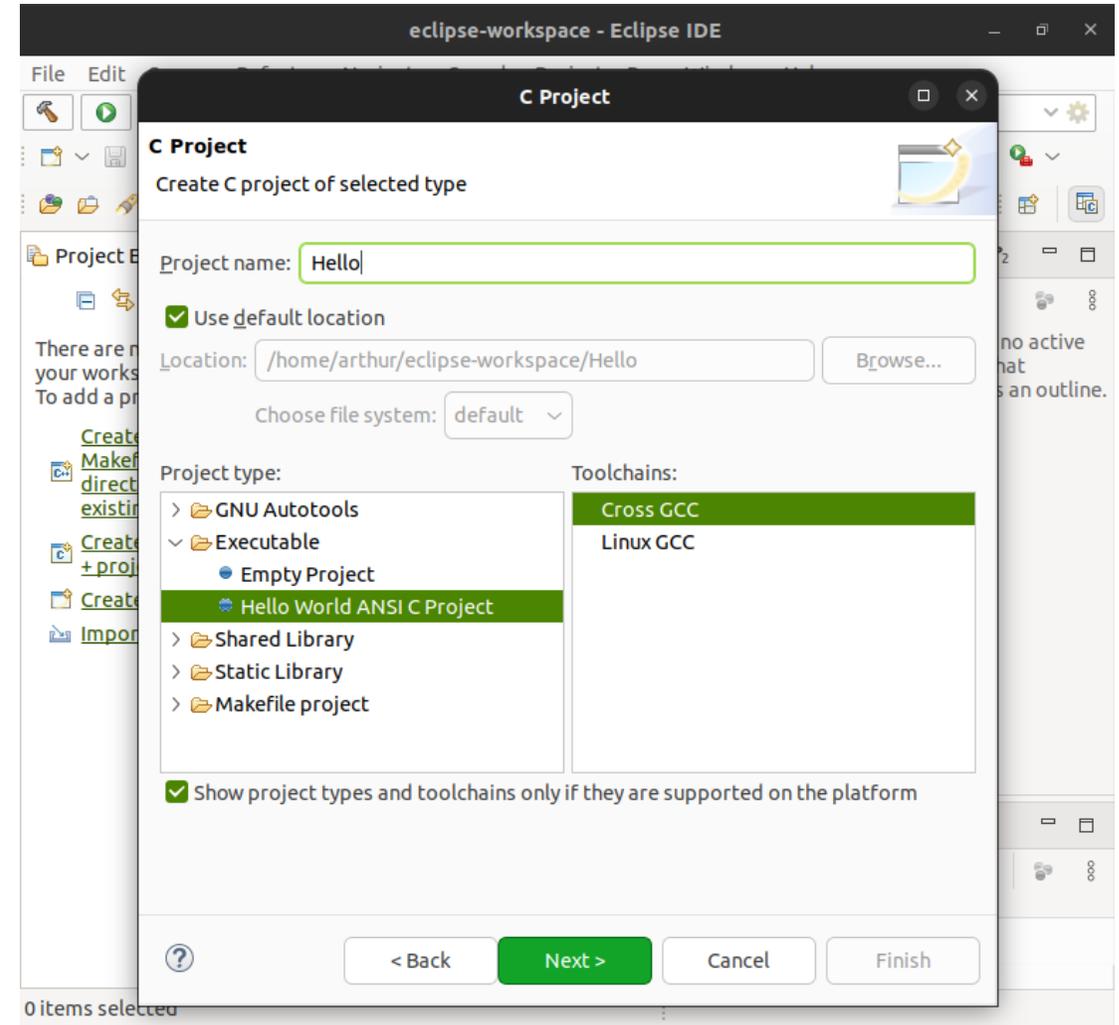
| Creating Project

- Choose the *C Project*
- Then click the *Next* to forward



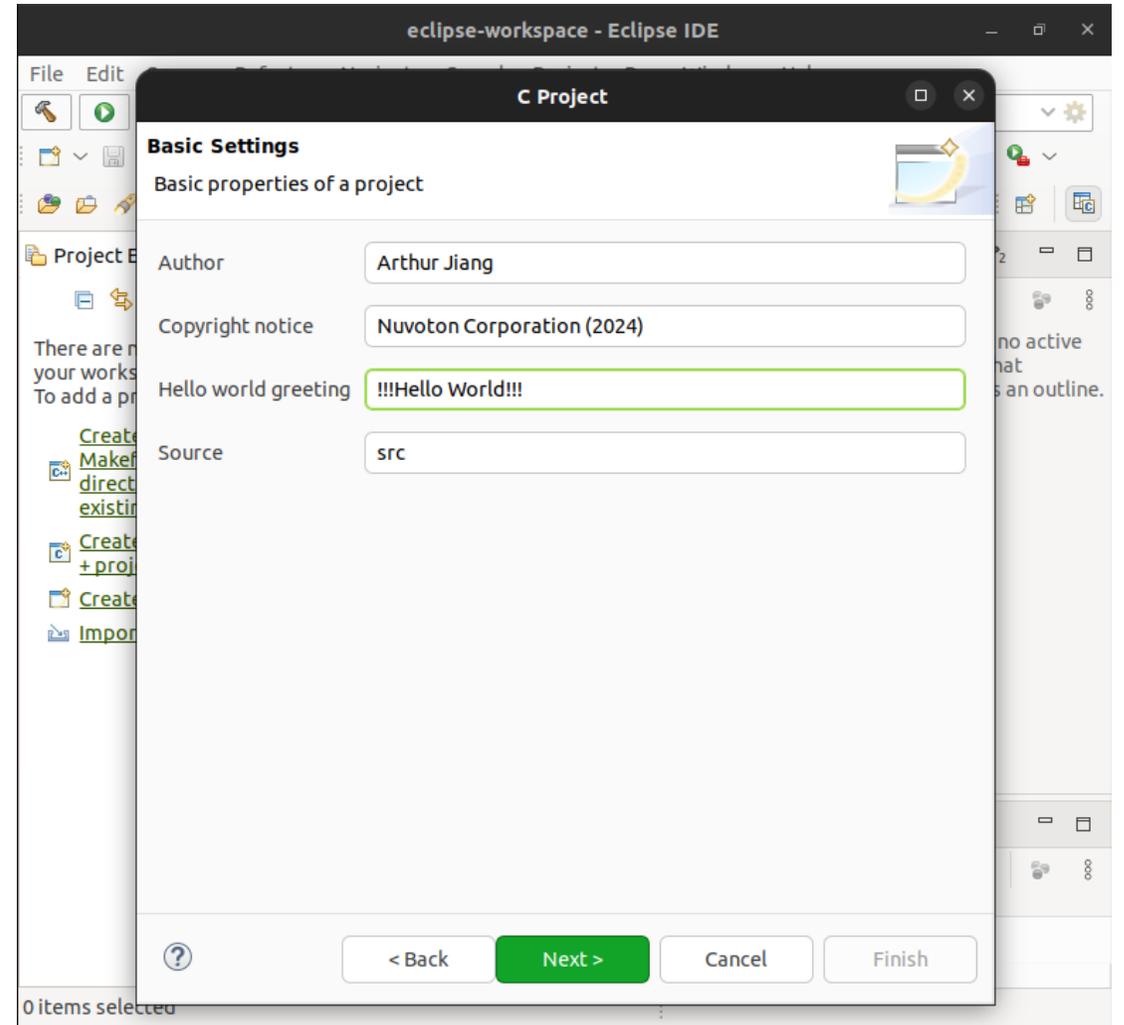
| Creating Project

- Give a name *Hello* to the new project
- Choose the *Project type* to *Executable*
- Select *Toolchains* as *Cross GCC*
- Click the *Next* to proceed



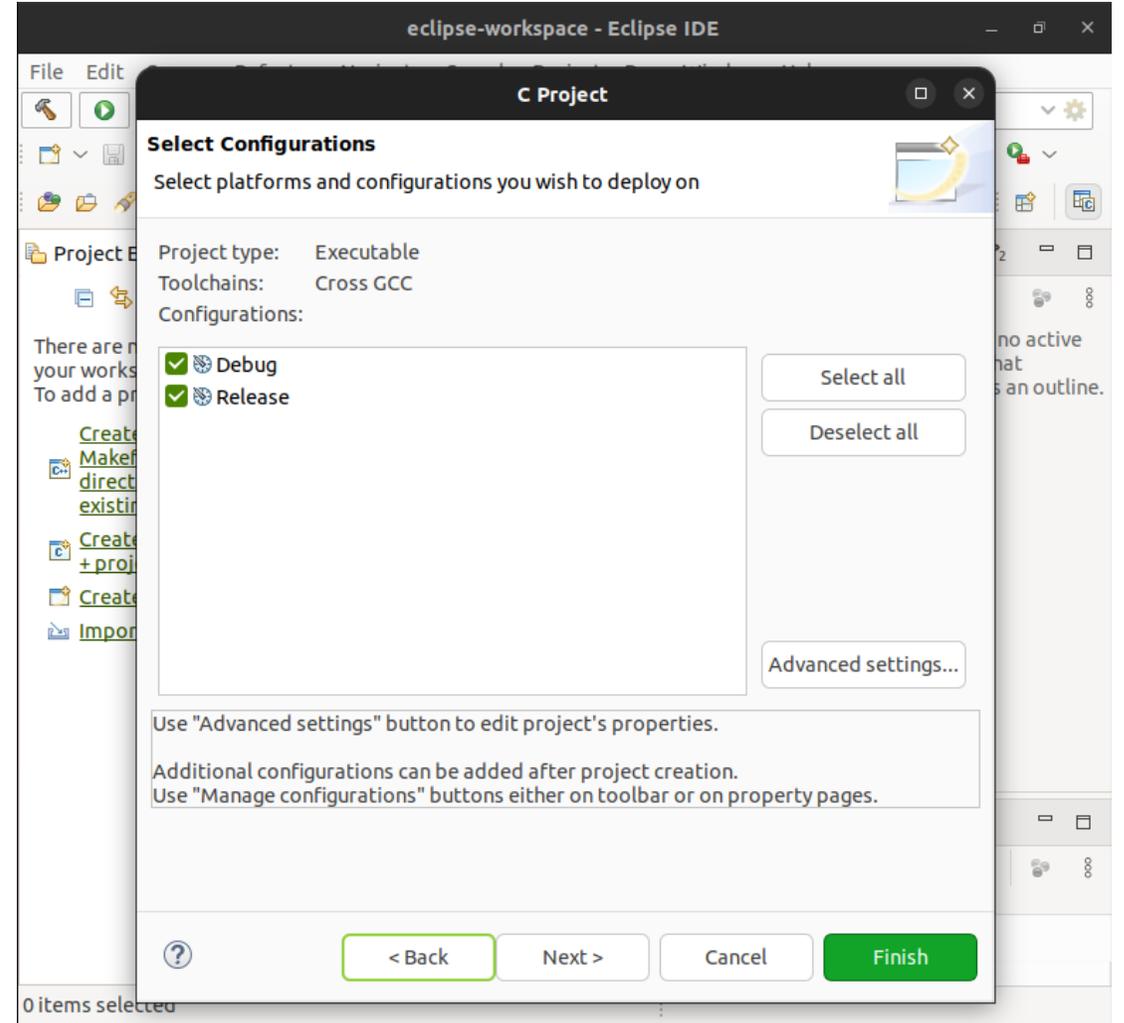
| Creating Project

- Fill the *Basic Settings* with author, copyright notice and greeting.



| Creating Project

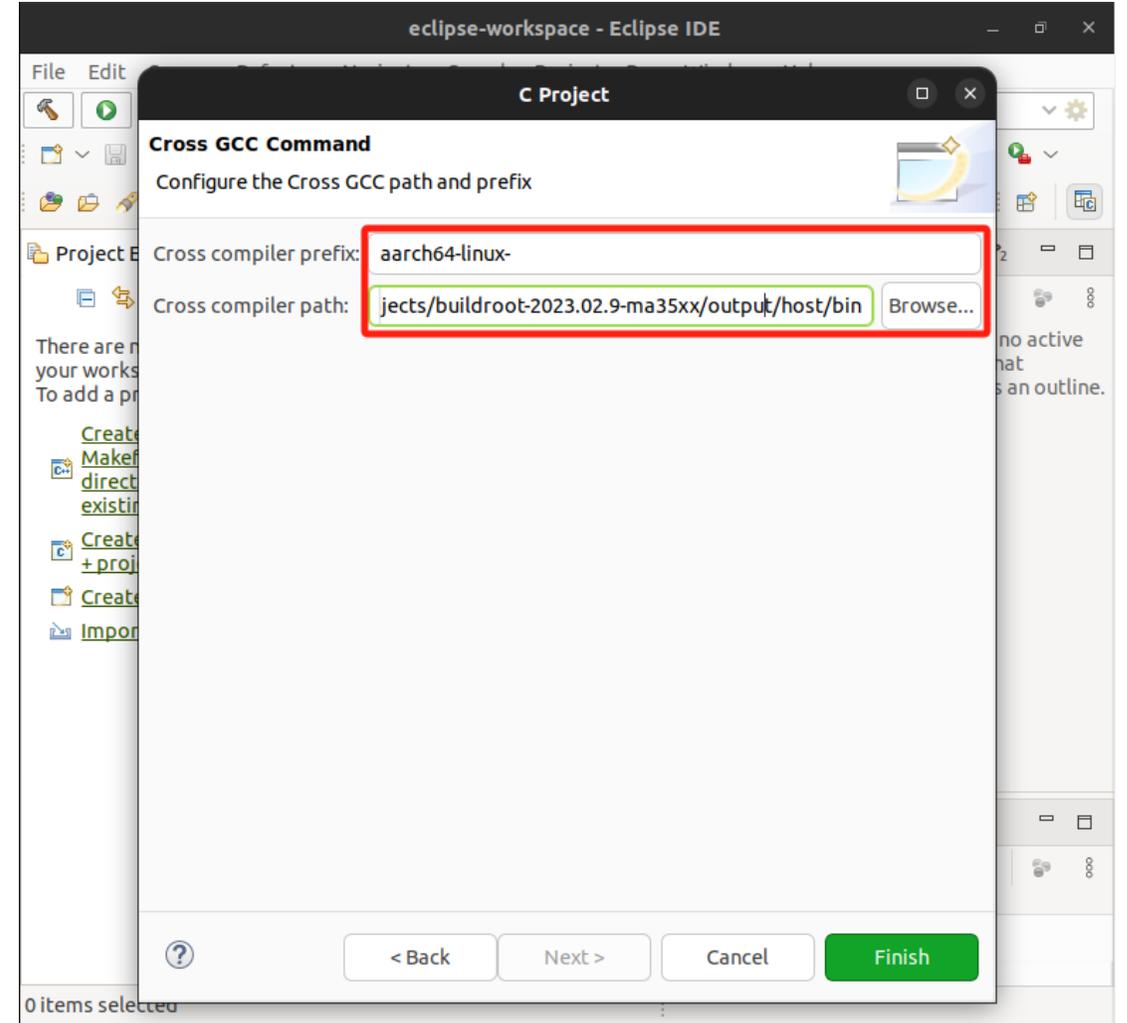
- Select both configurations *Debug* and *Release*



| Creating Project

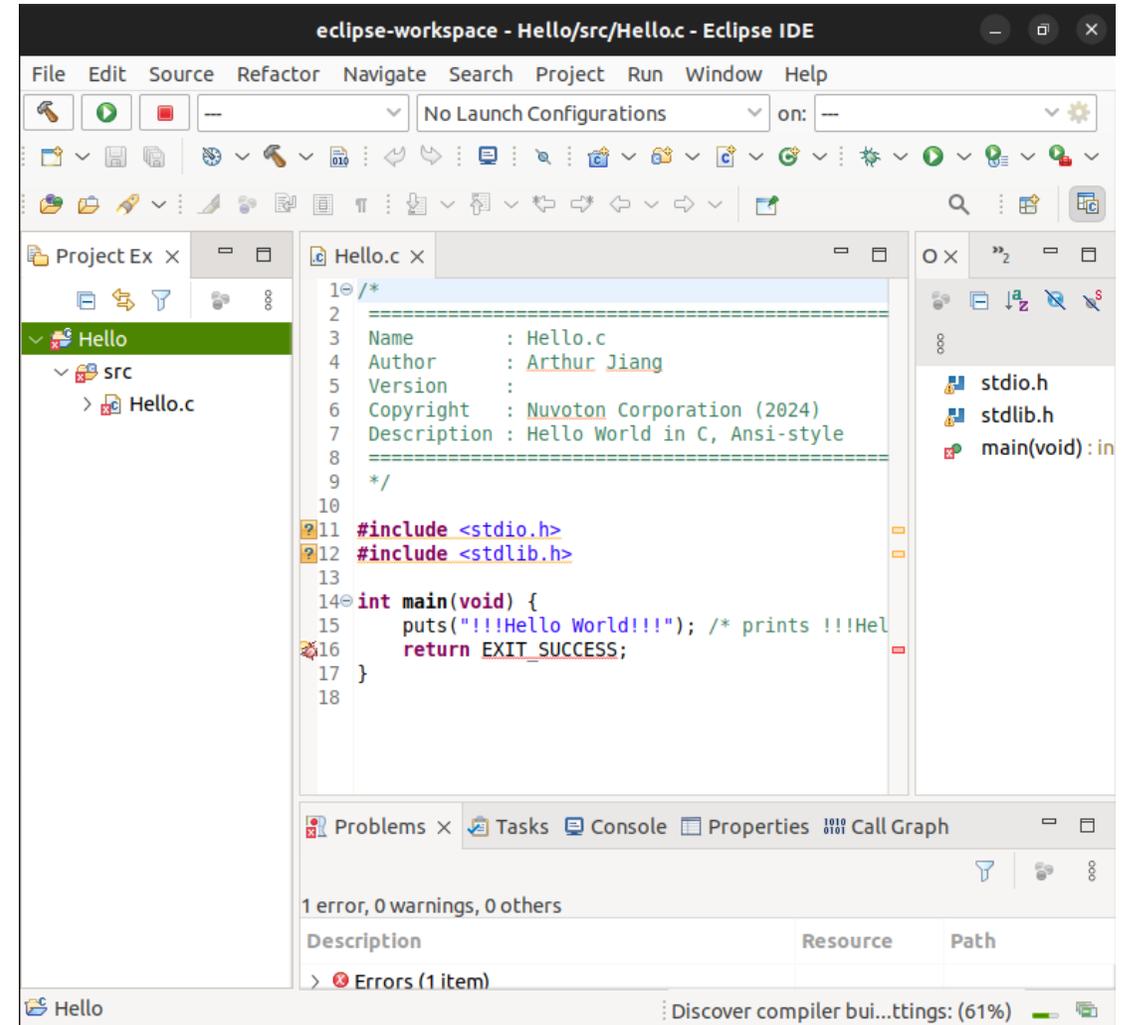
- Fill Cross Compiler Prefix with *aarch64-linux-*
- Fill Cross Compiler Path with *\${BR2_DIR}/output/host/bin*

NOTE: **`\${BR2_DIR}`** is the root directory of Buildroot. Do not use environment variable **`\${BR2_DIR}`** here, use the actual path of Buildroot instead.



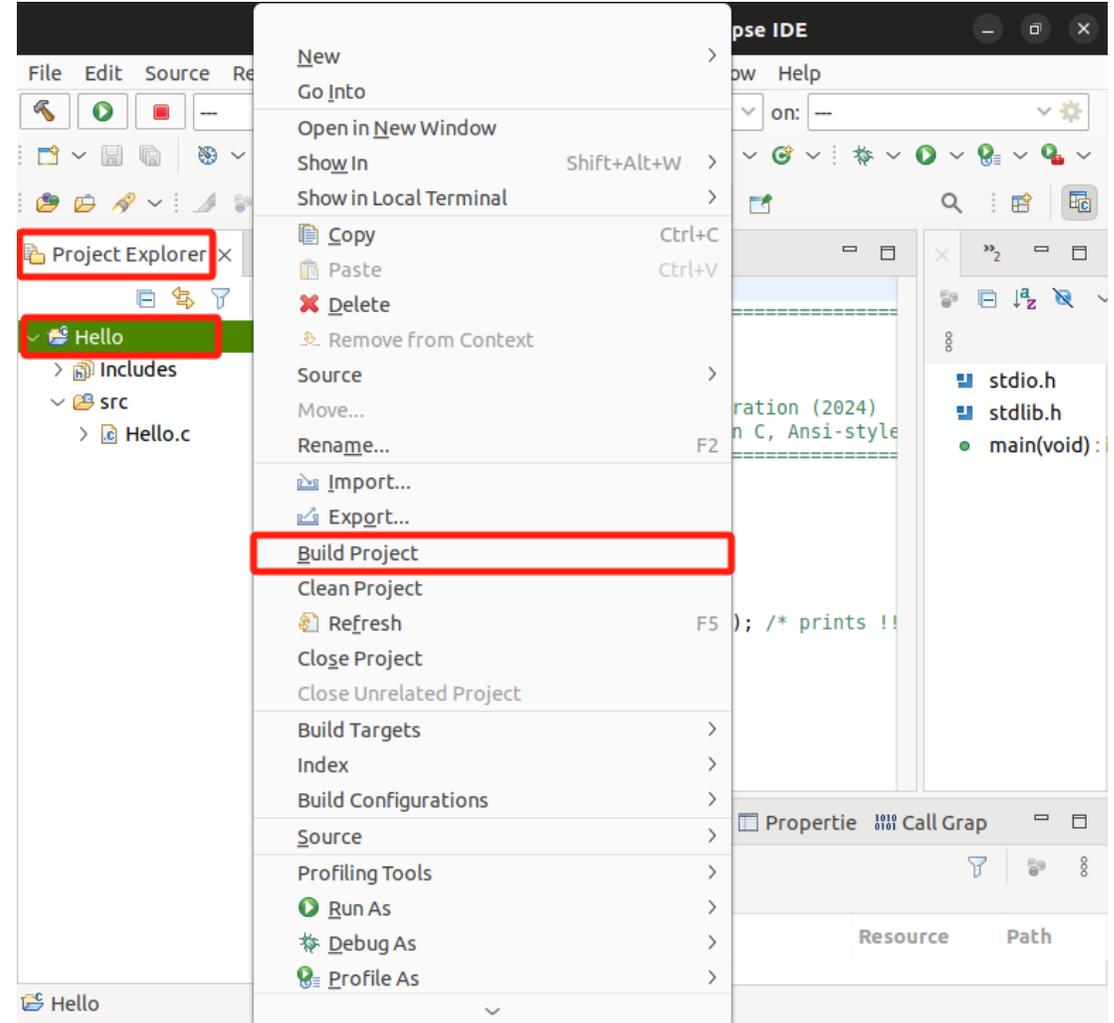
Building Project

- Before debugging the remote target, project must be built in *Debug* mode.



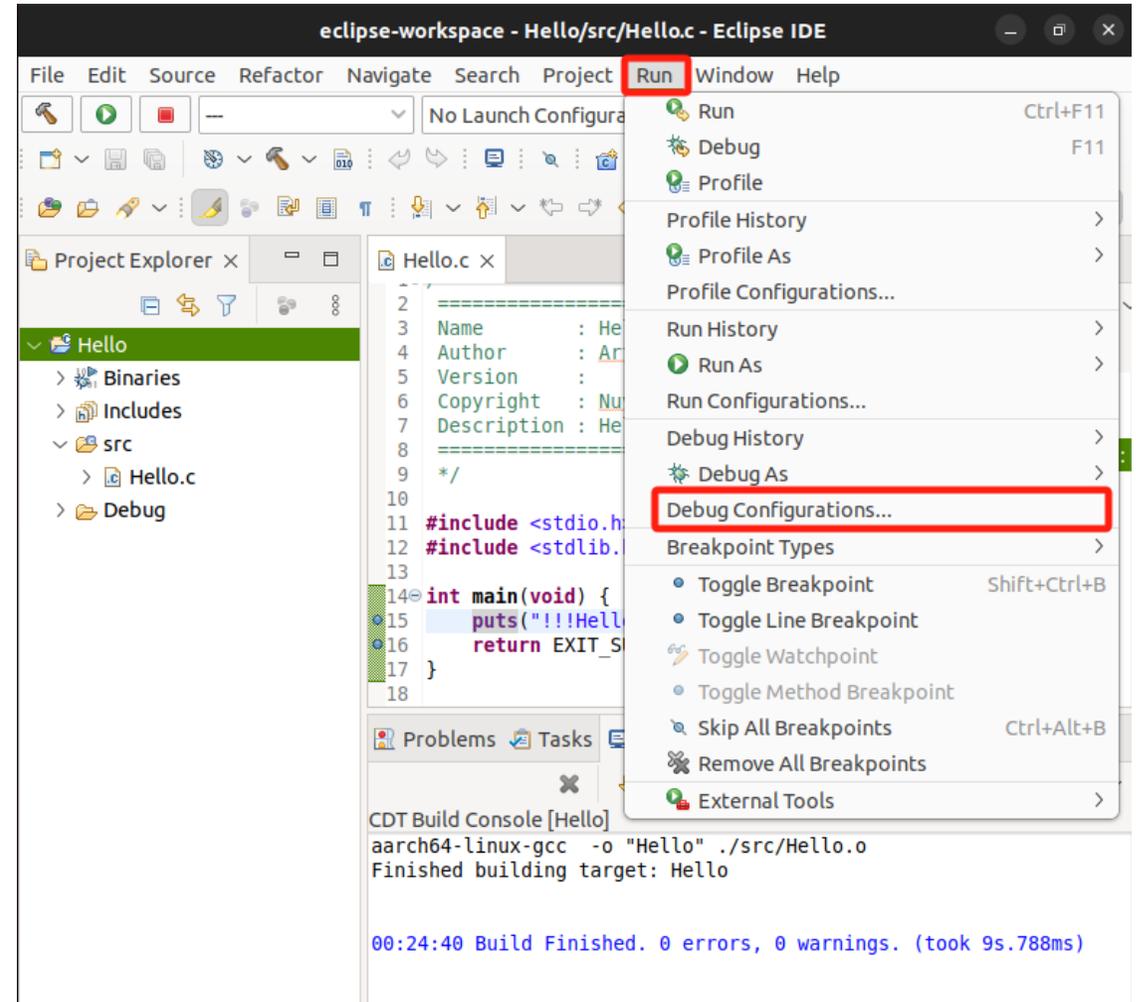
Building Project

- Browse the **Project Explorer**, select the project, right click to pop up the context menu, choose **Build Project** to build *Debug* executable target.



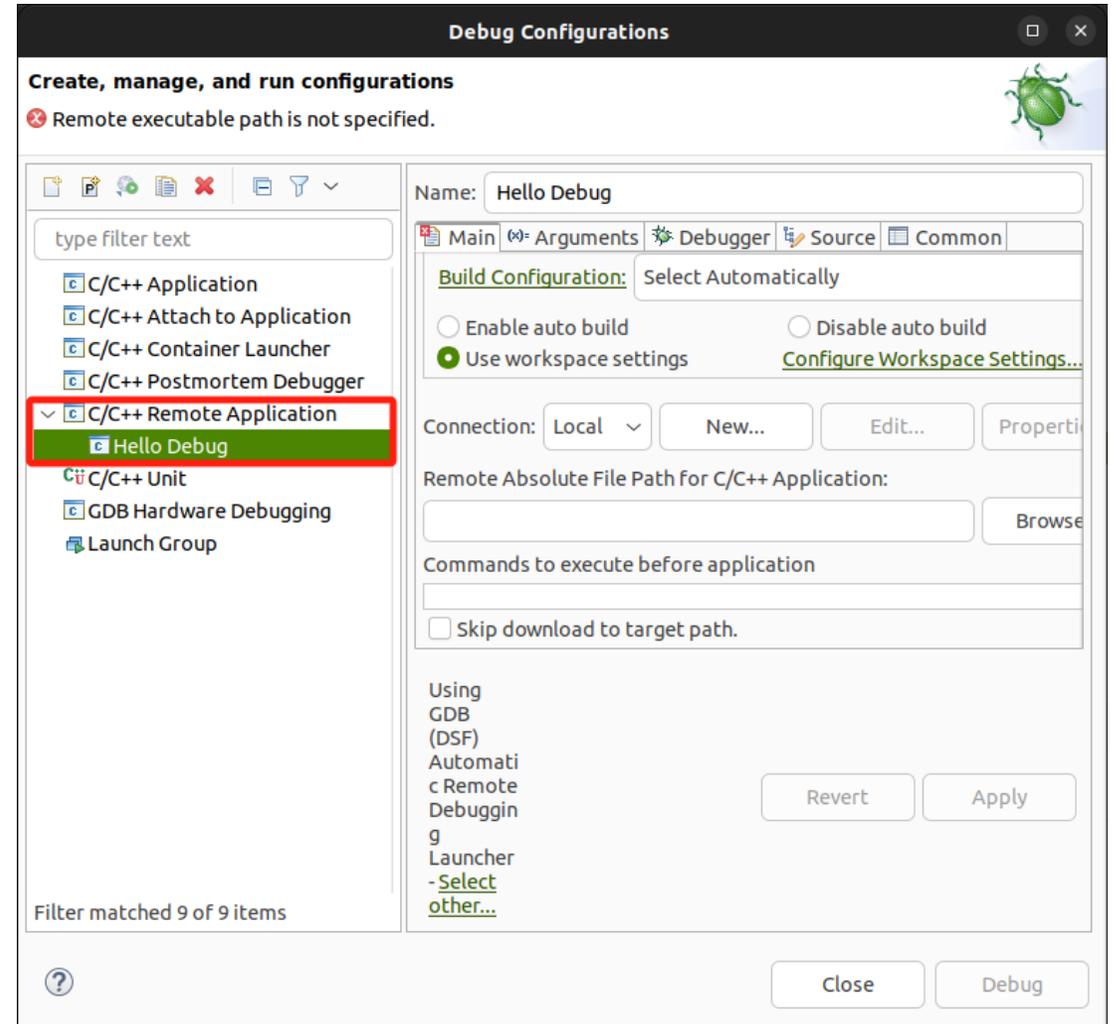
Configuring Debug

- Click the **Run** item in menu bar
- Select the **Debug Configurations**



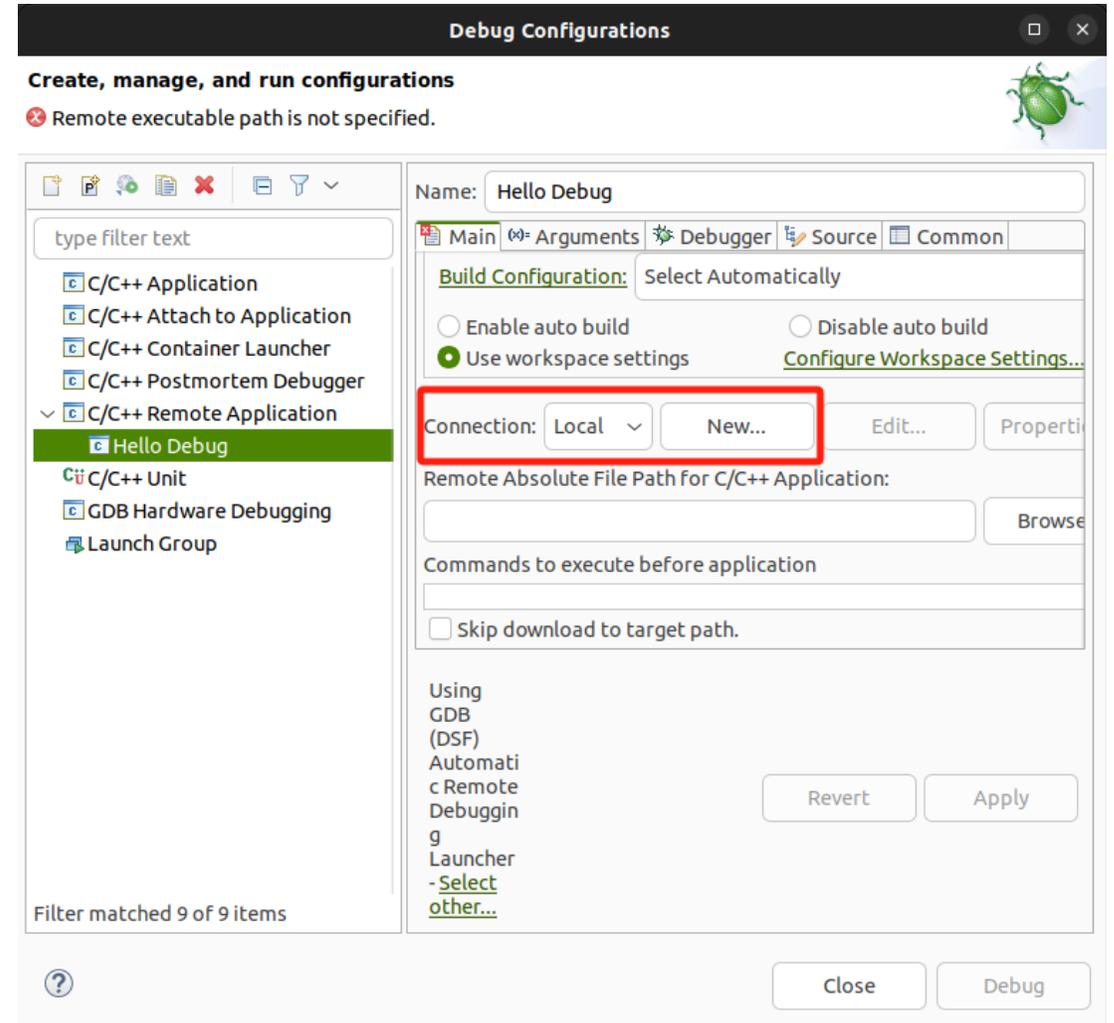
Configuring Debug

- Double click the **C/C++ Remote Application** to create a remote debugging configuration



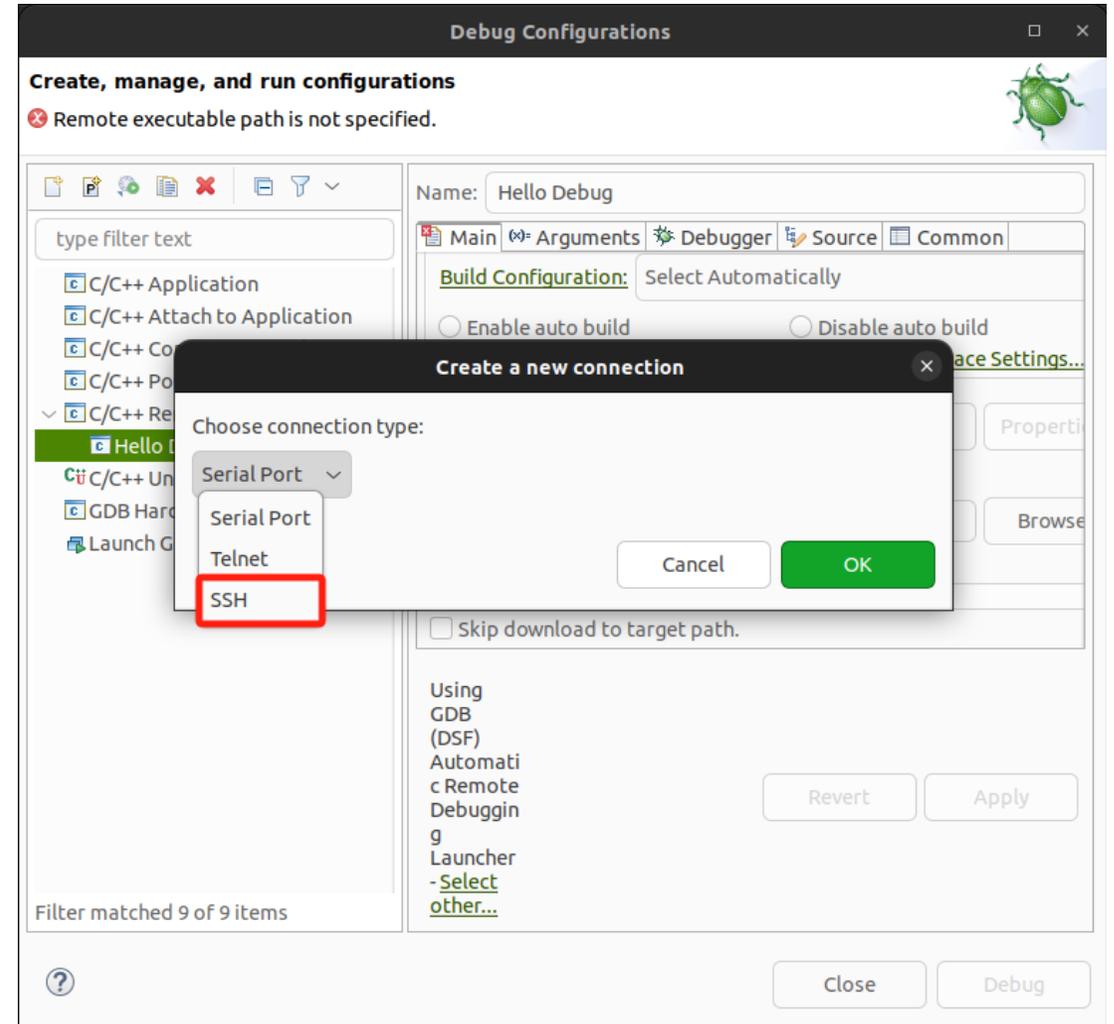
Configuring Debug

- Click the **New** button to create a SSH connection



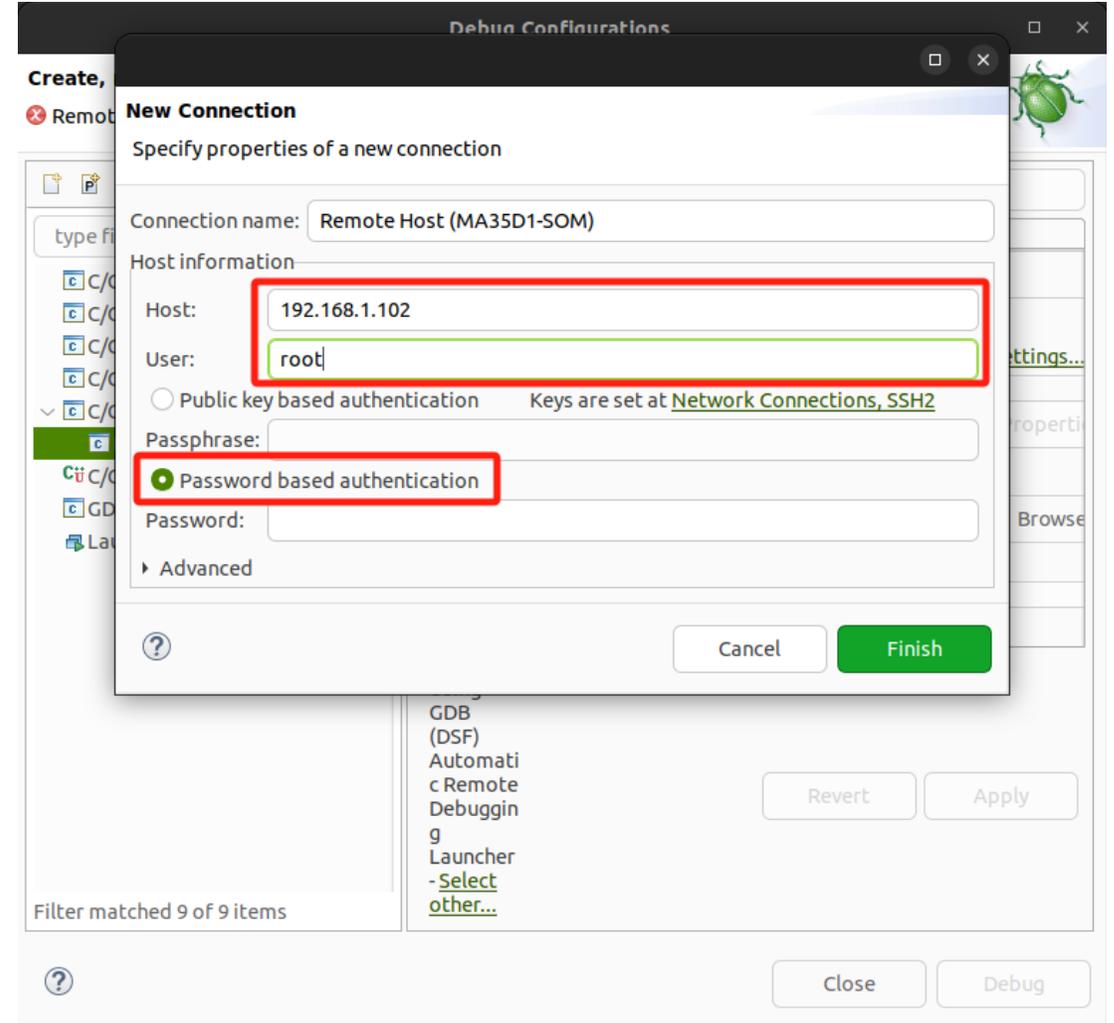
Configuring Debug

- Choose the connection type: **SSH**



Configuring Debug

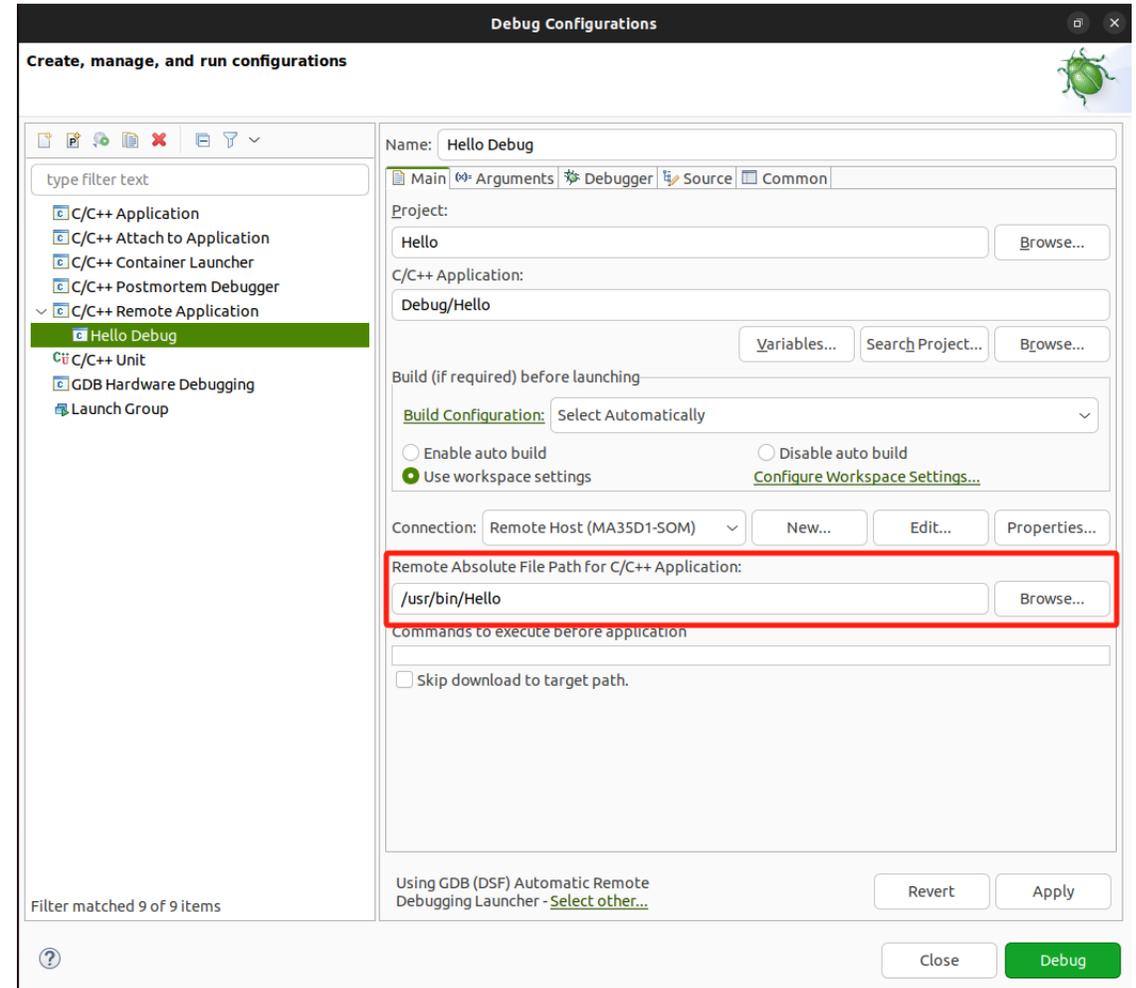
- Fill **Host** with actual IP address (*192.168.1.102*) of remote target board
- Fill the **User** with *root*
- Choose the **Password based authentication**
- Name the Connection to *Remote Host (MA35D1-SOM)*



Configuring Debug

- Click Browse to set Remote Absolute File Path for C/C++ Application.

NOTE: This can test whether the *SSH connection* is lost.

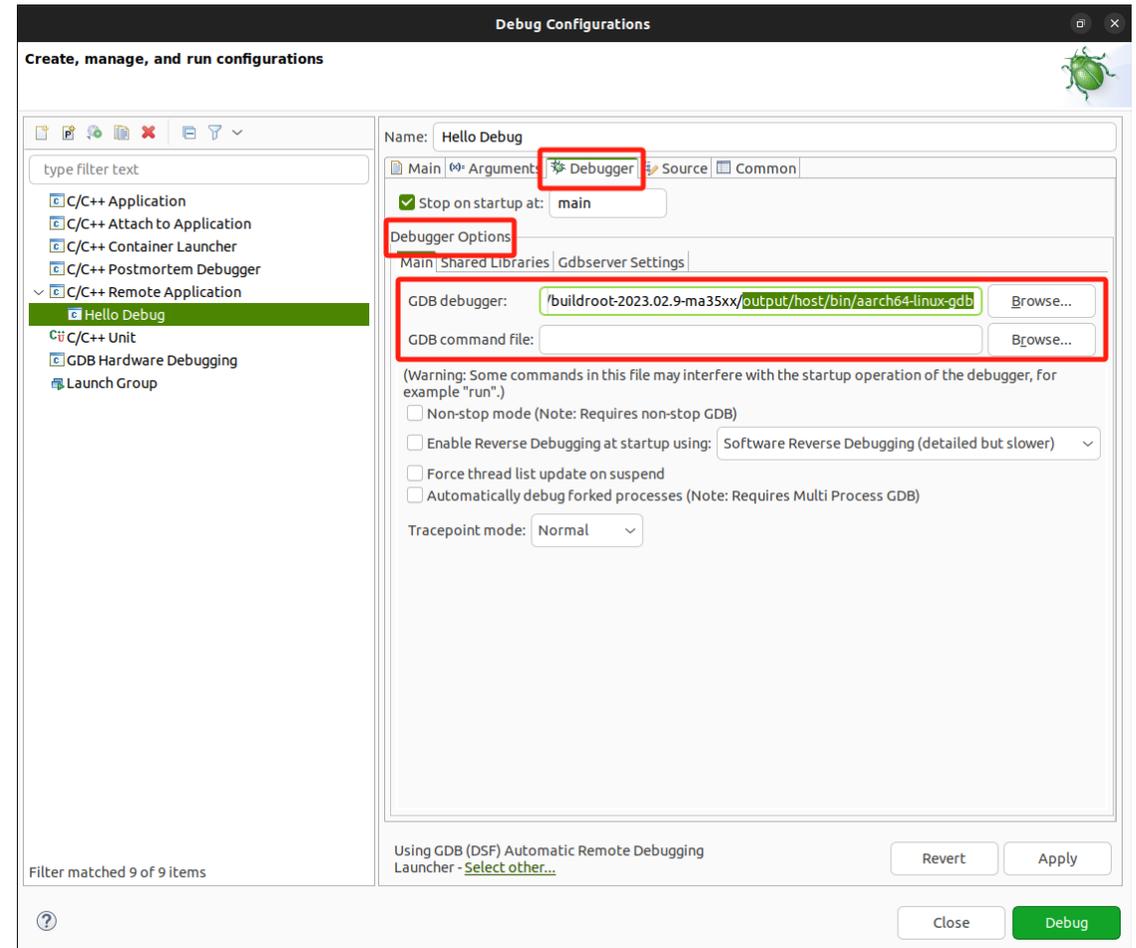


Configuring Debug

- In Tab page **Debugger**, under **Debugger Options**, set **GDB debugger** to `${BR2_DIR}/output/host/bin/aarch64-linux-gdb`

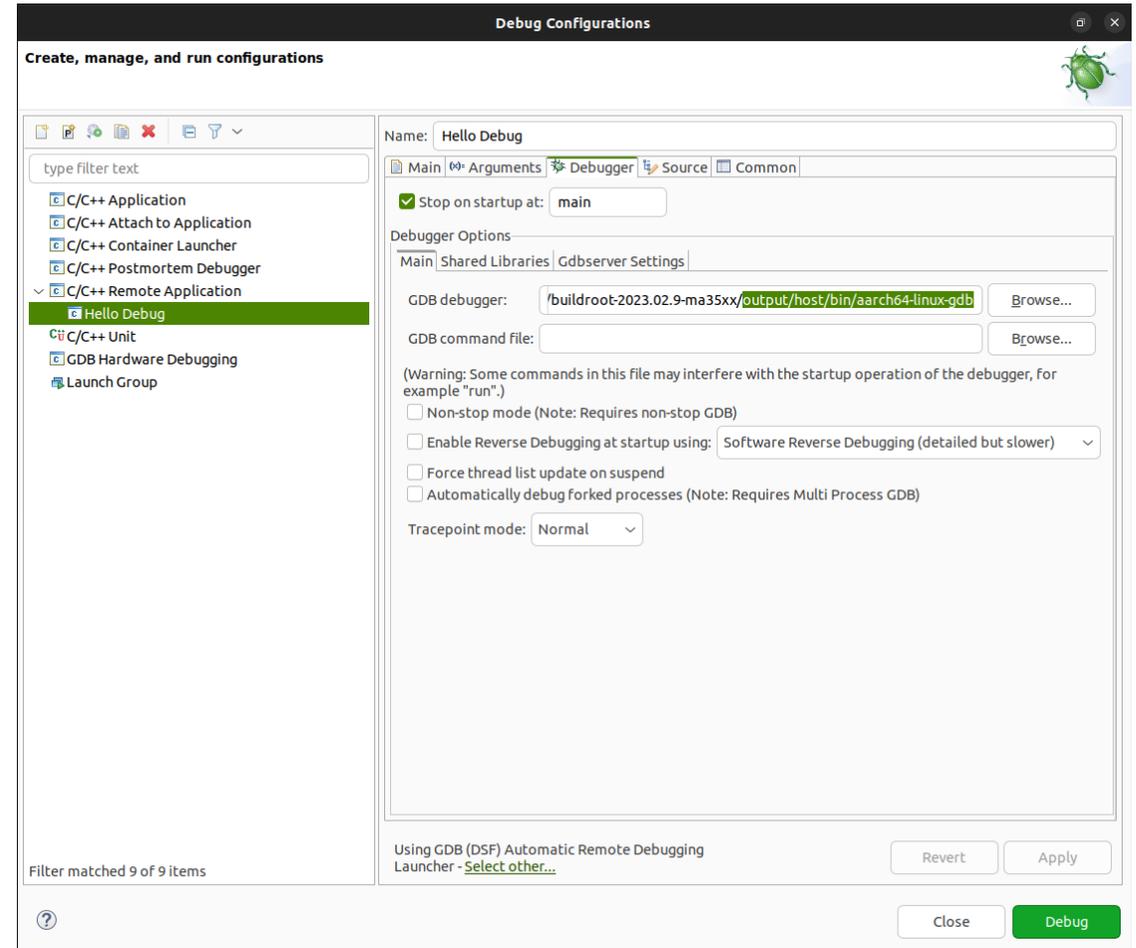
NOTE: `${BR2_DIR}` is the root directory of Buildroot. Do not use `${BR2_DIR}` here, use the actual path of Buildroot instead.

- Leave the **GDB command file** *blank*



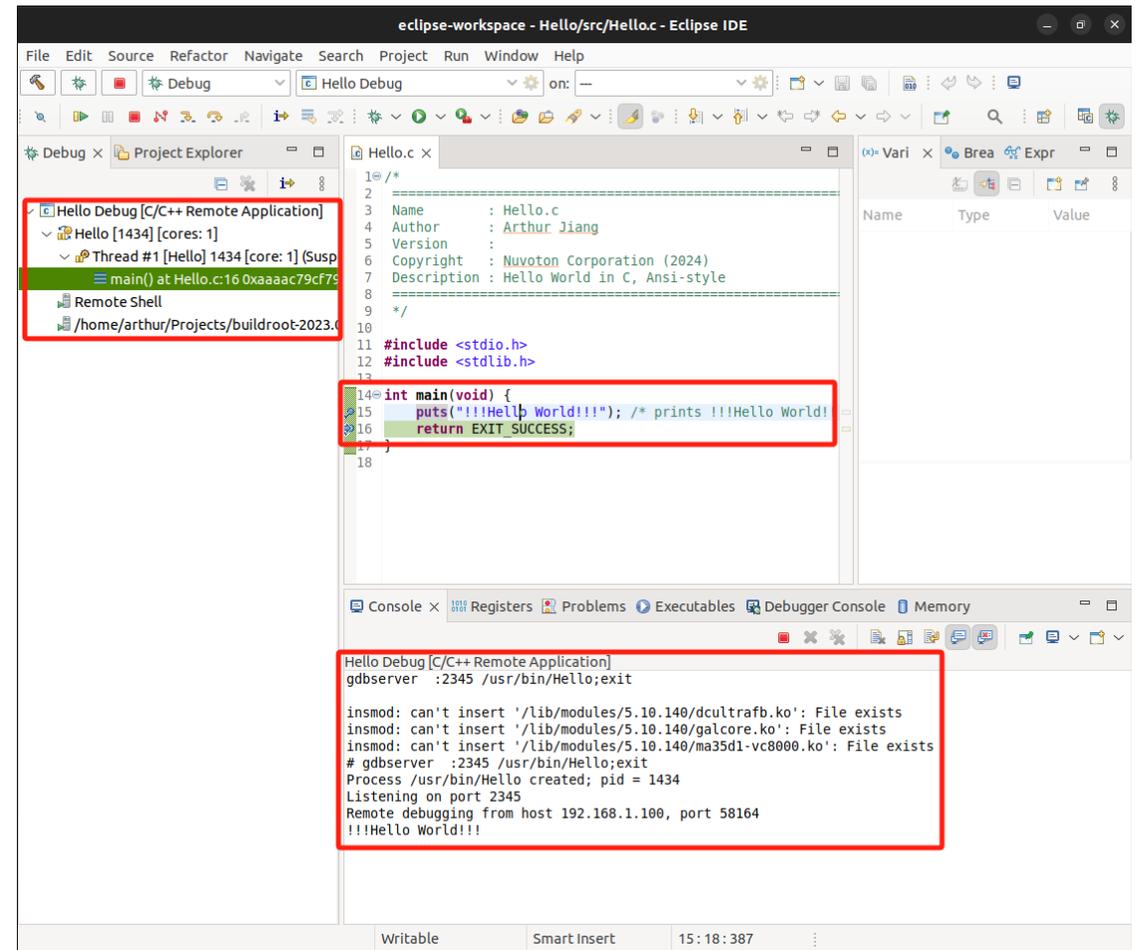
Beginning Debugging

- Click **Debug** to begin debugging



Debugging Target

- Double click a line of source code to toggle breakpoint



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谢谢

謝謝

Děkuji

Bedankt

Thank you

Kiitos

Merci

Danke

Grazie

ありがとう

감사합니다

Dziękujemy

Obrigado

Спасибо

Gracias

Teşekkür ederim

Cảm ơn