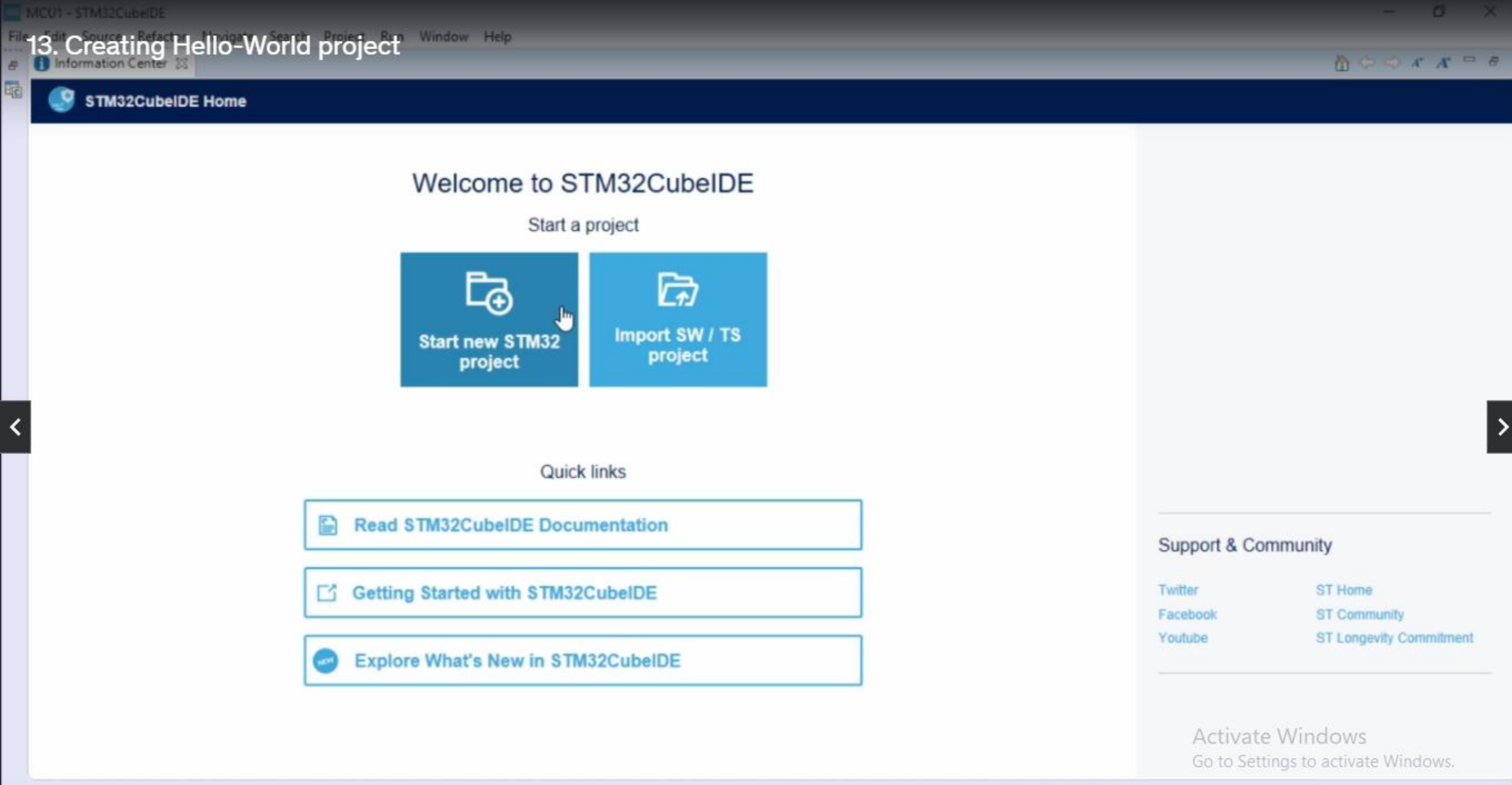


## 13. Creating Hello-World project



## 13. Creating Hello-World project

Select STM32 target

IDE

MCU/MPU Selector Board Selector Cross Selector

Board Filters



Part Number Search

STM32F4DISCOVERY

Vendor

Type

MCU/MPU Series

Other

Price = 19.89

Oscillator Freq. = 8 (MHz)

Features

Large Picture

Docs &amp; Resources

Datasheet

Buy

★ STM32F4DISCOVERY



Boards List: 1 item

Export

*	Overview	Part No	Type	Marketing Status	Unit Price (US\$)	Mounted Device
★		STM32F4DISCOVERY	Discovery kit	Active	19.89	STM32F407VGTx

Activate Windows

Go to Settings to activate Windows.

&lt; Back

Next &gt;

Finish

Cancel

### 13. Creating Hello-World project

STM32 Project

Project Setup

Setup STM32 project

Project Name: 001HelloWorld

☒ Use default location

Location: C:/Users/Bharti Soft/Documents/MCU1-Course/MCU1 [Browse...](#)

Options

Targeted Language

☒ C ☐ C++

Targeted Binary Type

☒ Executable ☐ Static Library

Targeted Project Type

☐ STM32Cube ☒ Empty

[?](#) [< Back](#) [Next >](#) [Finish](#) [Cancel](#)

Write from scratch

Configure peripheral using STM32Cube GUI and generate code

#### Support & Community

[Twitter](#)

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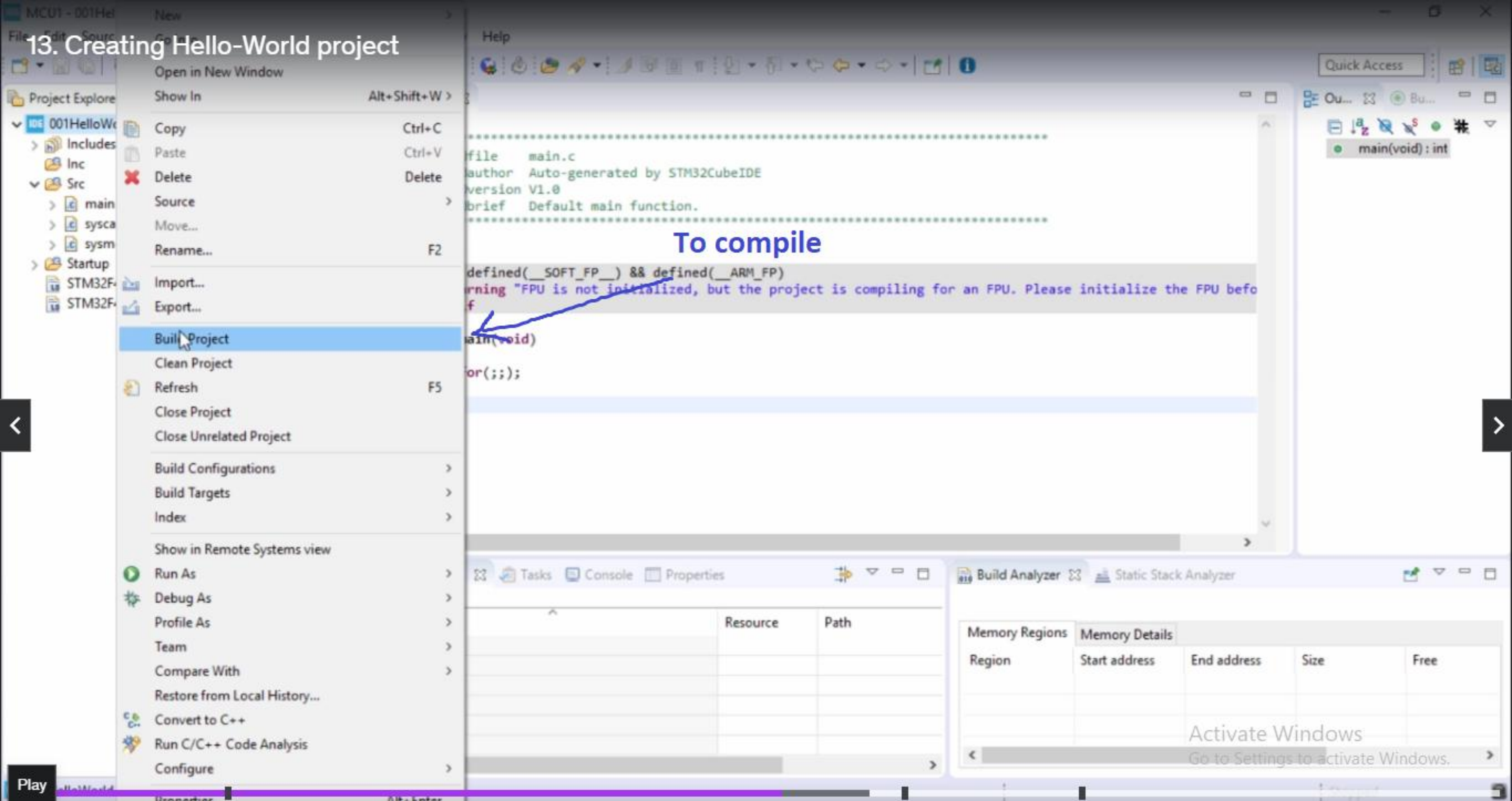
[ST Community](#)

[ST Longevity Commitment](#)

Activate Windows  
Go to Settings to activate Windows.



### 13. Creating Hello-World project



### 13. Creating Hello-World project

The screenshot displays the STM32CubeIDE interface with the '001HelloWorld' project selected. The 'Settings' window is open, showing the 'MCU GCC Compiler' settings. The 'Floating-point unit' is set to 'None', and the 'Floating-point ABI' is set to 'Software implementation (-mfloat-abi=soft)'. A blue box highlights these two settings, with a blue arrow pointing to them and the text 'Disable FPU'.

**Project Explorer:**

- 001HelloWorld
  - Binaries
  - Includes
  - Inc
  - Src
    - main.c
    - syscalls.c
    - sysmem.c
  - Startup
  - Debug
    - STM32F407VGTX\_FLASH.Id
    - STM32F407VGTX\_RAM.Id

**Settings:**

- Resource
  - C/C++ Build
    - Build Variables
    - Environment
    - Logging
    - Settings
  - C/C++ General
  - CMSIS-SVD Settings
  - Project References
  - Run/Debug Settings
- MCU Settings
  - MCU Post build outputs
  - MCU GCC Assembler
    - General
    - Debugging
    - Preprocessor
    - Include paths
    - Miscellaneous
  - MCU GCC Compiler
    - General
    - Debugging
    - Preprocessor
    - Include paths
    - Optimization
    - Warnings
    - Miscellaneous
  - MCU GCC Linker
    - General
    - Libraries
    - Miscellaneous

**MCU GCC Compiler Settings:**

- Mcu: STM32F407VGTX
- Board: STM32F407G-DISC1
- Floating-point unit: None
- Floating-point ABI: Software implementation (-mfloat-abi=soft)
- Instruction set: Thumb
- Runtime library: Reduced C (--specs=nano.specs)
- ☐ Use float with printf from newlib-nano (-u \_printf\_float)
- ☐ Use float with scanf from newlib-nano (-u \_scanf\_float)

**Code Editor:**

```
use.  
d -mthumb -o "Startup/startup_stm32f  
Tx -DDEBUG -c -I../Inc -O0 -ffunctio  
07VGTX -DDEBUG -c -I../Inc -O0 -ffun  
VGTX -DDEBUG -c -I../Inc -O0 -ffunct  
ialize the FPU before use." [-Wcpp]  
"  
ourse\MCU1\001HelloWorld\STM32F407VG
```

**Buttons:**

- Apply and Close
- Cancel

**Footer:**

Activate Windows  
Go to Settings to activate Windows.



### 13. Creating Hello-World project

The screenshot shows an IDE interface with a 'Debug As' menu open. A blue octagonal overlay with yellow text reads: "Connect your board to PC and download the code". A blue arrow points from this overlay to the '2 STM32 Cortex-M C/C++ Application' option in the menu. The background shows the Project Explorer, a code editor with C code, and a console window displaying compilation output.

Connect your board to PC and download the code

Download to MCU + Put device in DEBUG mode

Activate Windows  
Go to Settings to activate Windows.



### 13. Creating Hello-World project

**DEBUG CONFIGURATION = 1, 2, 3**

**2** → Project Explorer: 001HelloWorld

- Binaries
- Includes
- Inc
- Src
  - main.c
  - syscalls.c
  - sysmem.c
- Startup
- Debug
  - STM32F407VGTX\_FLASH.Id
  - STM32F407VGTX\_RAM.Id

**1** → Debug probe: ST-LINK (ST-LINK GDB server)

**3** → Serial Wire Viewer (SWV) Enable

20:15:11 Build Finished. 0 errors. 0 warnings. (took 1s.983ms)

Activate Windows  
Go to Settings to activate Windows.