



SW HW Co-Design

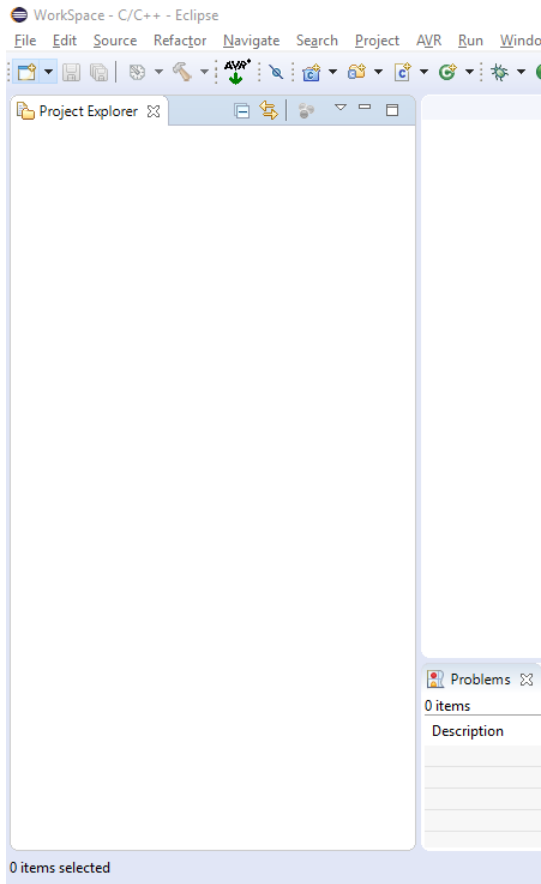
Lecture 0

Creating New Project

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Eclipse Prespective

Now let's walk through the eclipse environment:



The right hand side is the project browser where all your projects and files are shown.

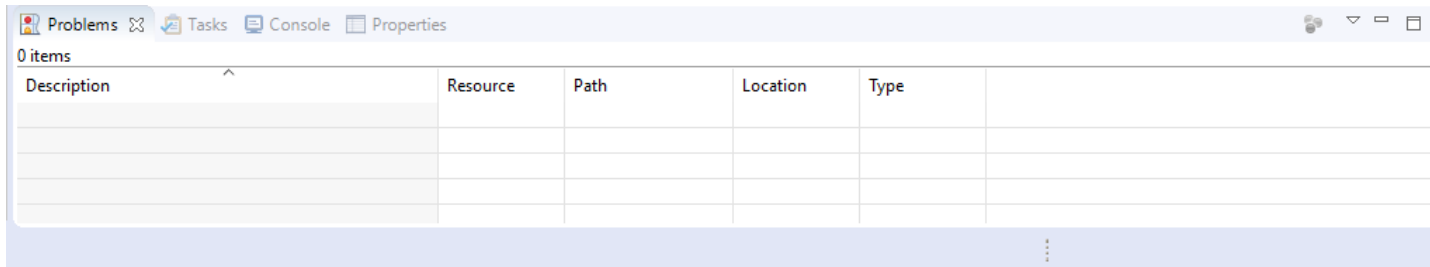
Tool Introduction



The most important tools in this area are

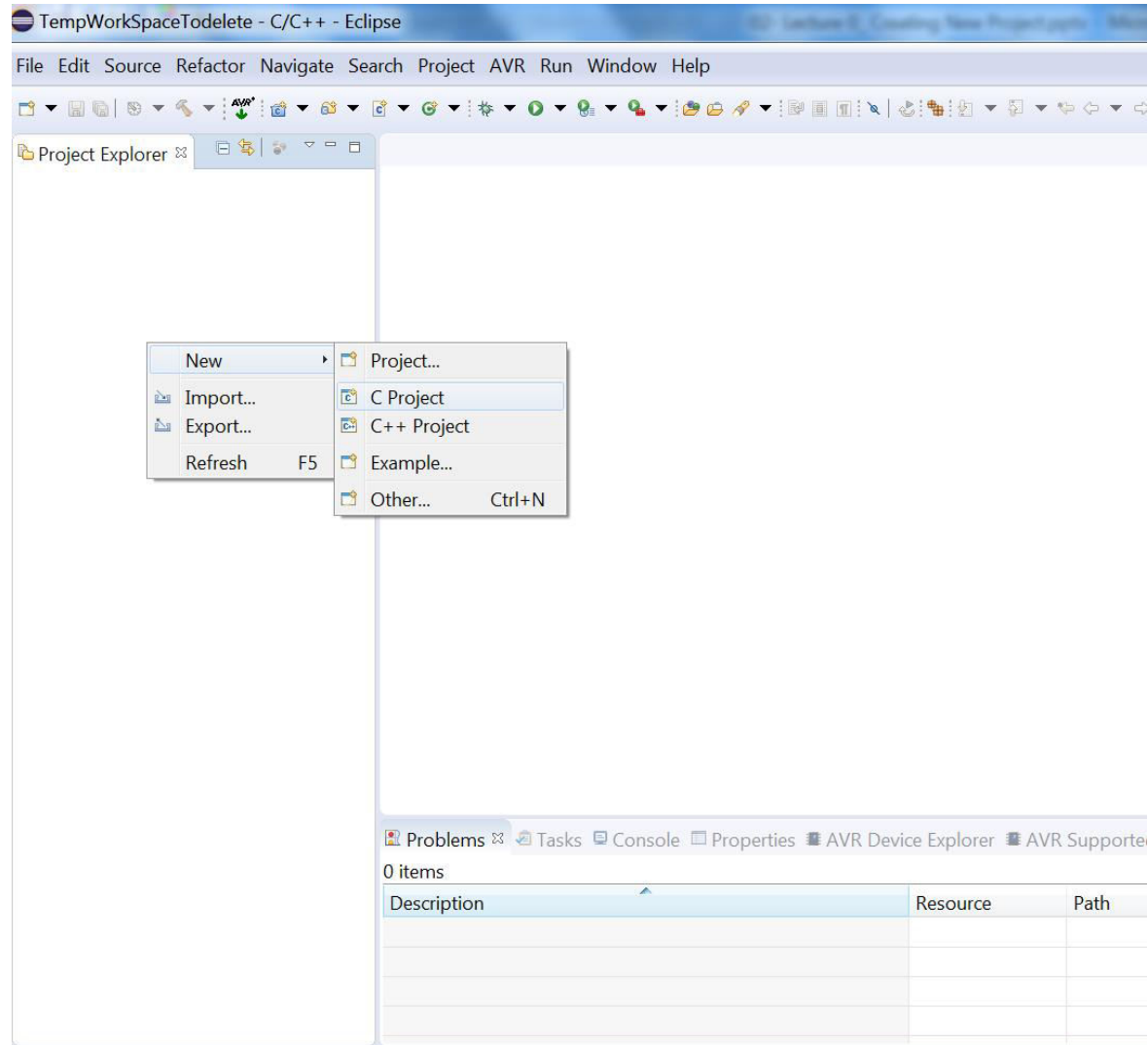
- *Builder (hammer shaped): used to build the selected project.*
- *Uploader: used to upload the generated equatable to the target hardware.*

Tool Introduction



- *The Info section where the state and progress of the build is Shown.*
- *Also the compilation error or run time errors are reported.*

Programmer Driver Installation



Tool Introduction

C Project

C Project

Create C project of selected type

Project name:

☒ Use default location

Location:

Choose file system:

Project type:

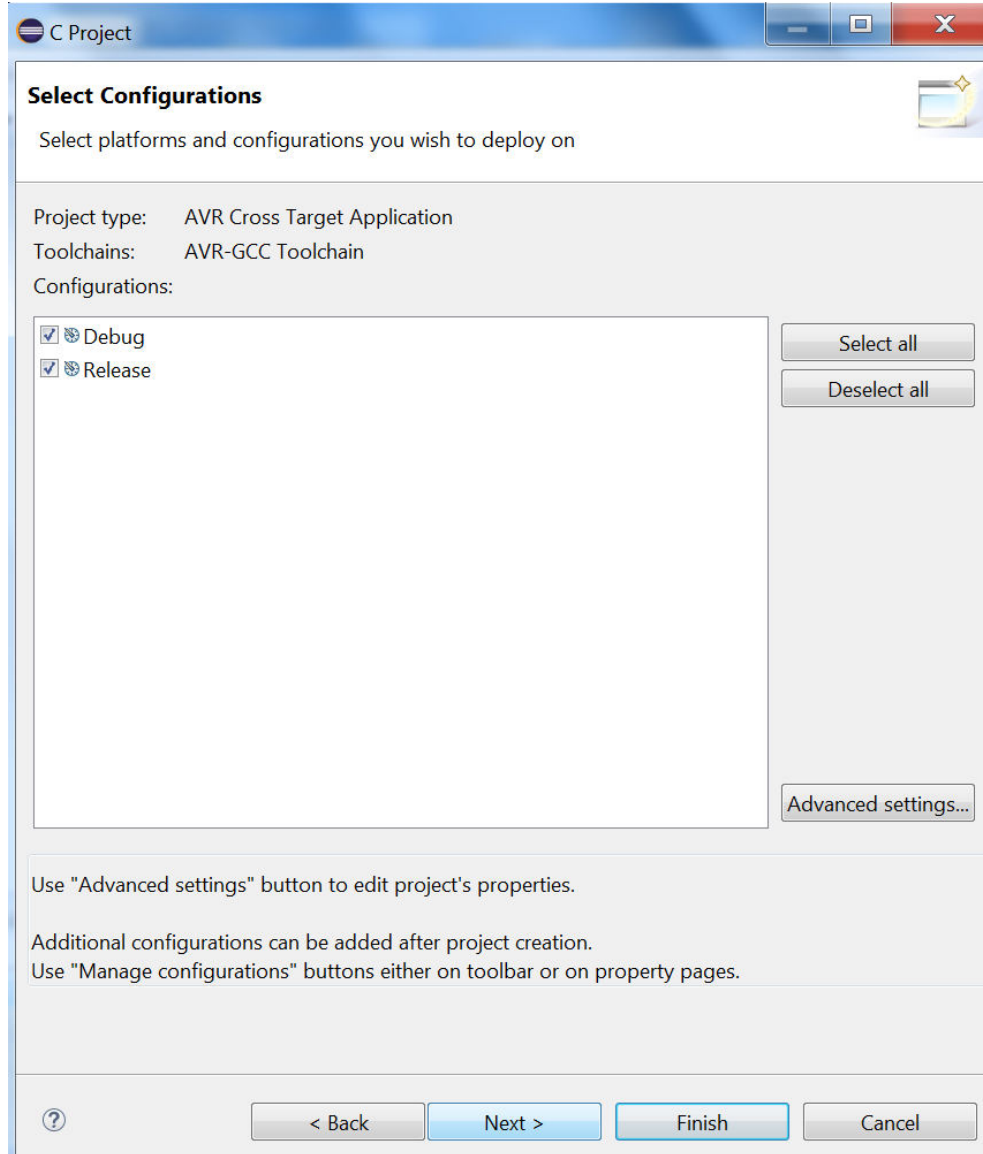
- GNU Autotools
- AVR Cross Target Application
 - Empty Project
- AVR Cross Target Static Library
- Executable
- Shared Library
- Static Library
- Makefile project

Toolchains:

- AVR-GCC Toolchain

☒ Show project types and toolchains only if they are supported on the platform

Tool Introduction



C Project

Select Configurations

Select platforms and configurations you wish to deploy on

Project type: AVR Cross Target Application
Toolchains: AVR-GCC Toolchain
Configurations:

☒ Debug
☒ Release

Select all
Deselect all

Advanced settings...

Use "Advanced settings" button to edit project's properties.
Additional configurations can be added after project creation.
Use "Manage configurations" buttons either on toolbar or on property pages.

? < Back Next > Finish Cancel

Tool Introduction

C Project

AVR Target Hardware Properties

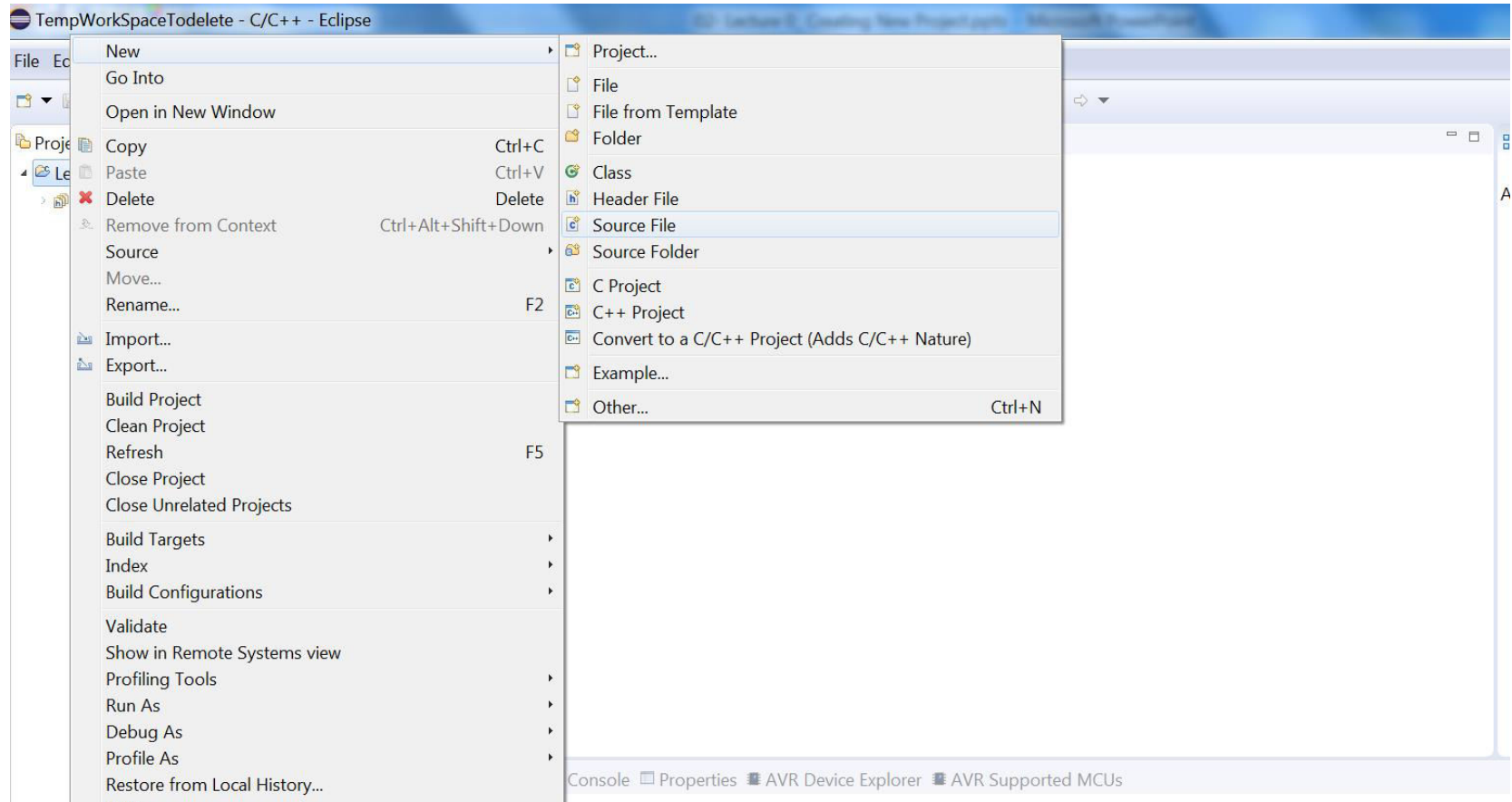
Define the AVR target properties

MCU Type: ATmega32

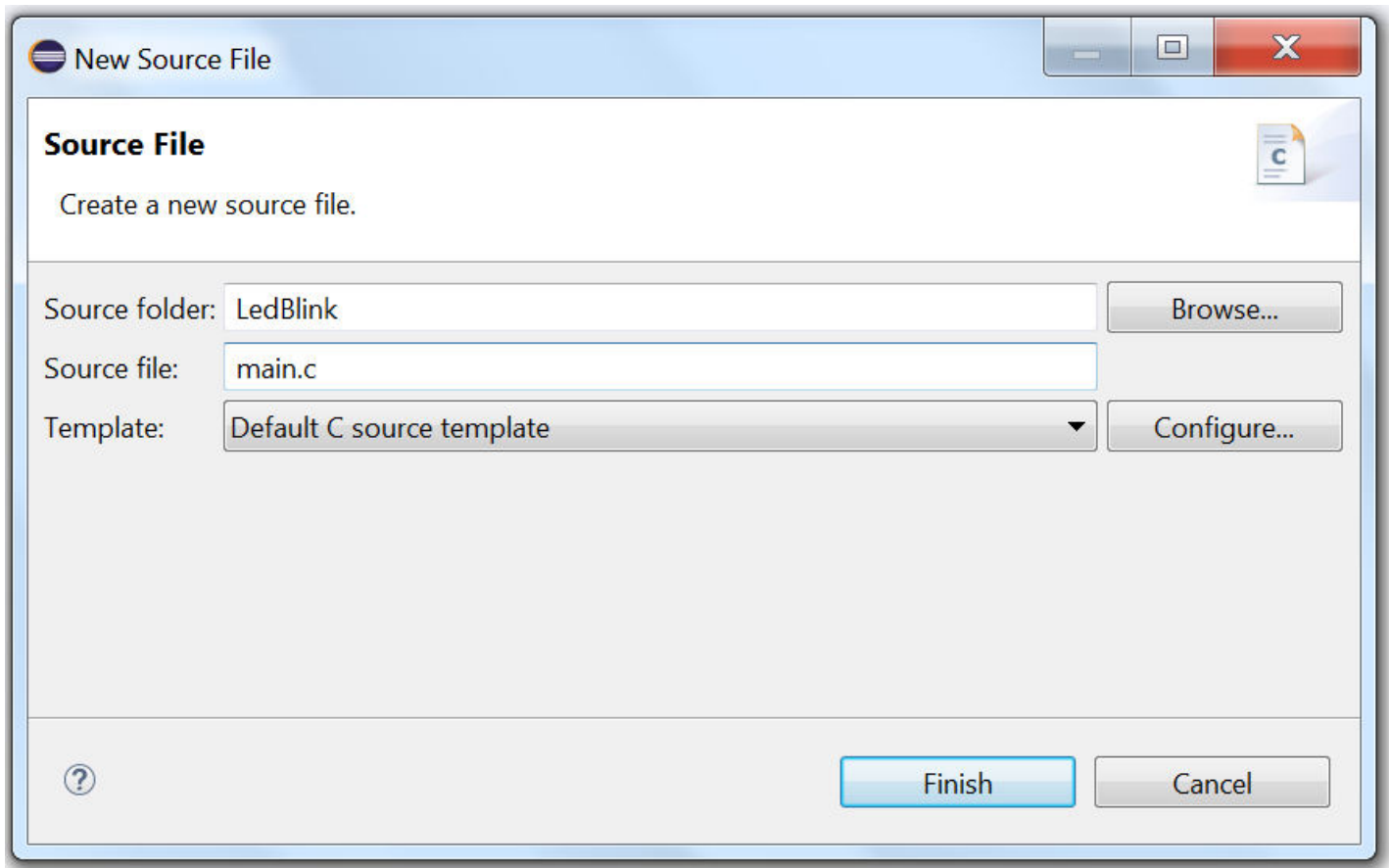
MCU Frequency (Hz): 12000000

? < Back Next > Finish Cancel

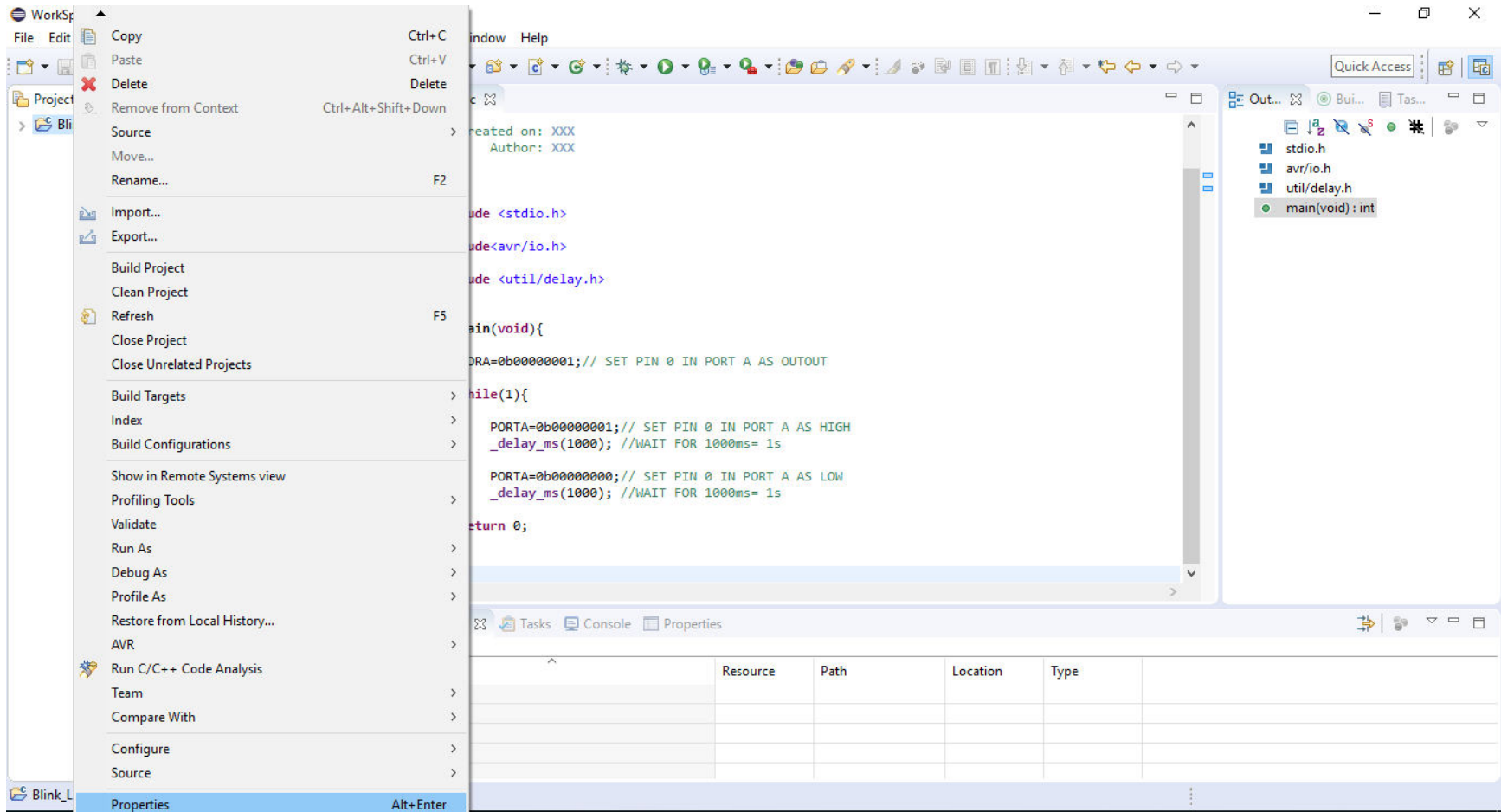
Tool Introduction



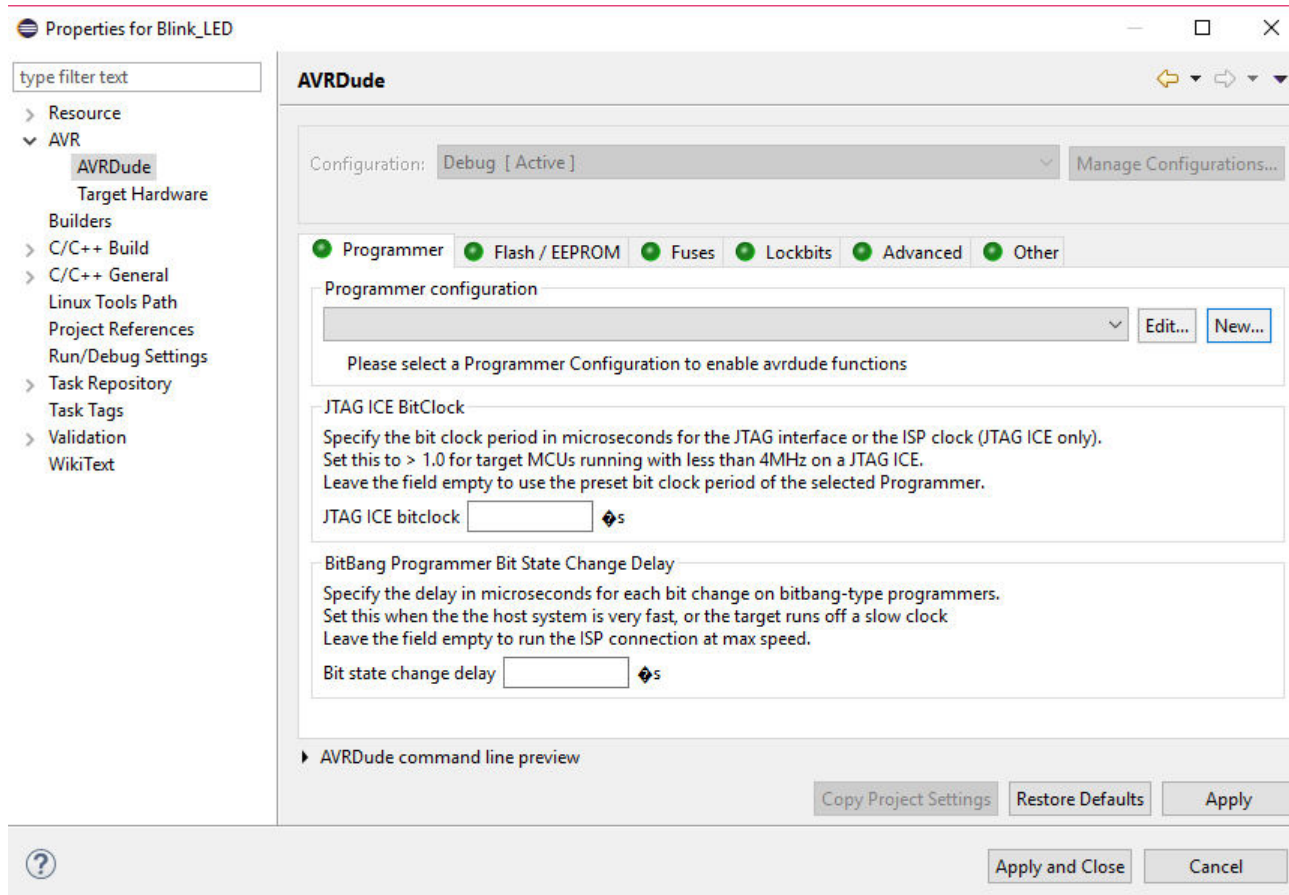
Tool Introduction




Tool Introduction



Tool Introduction



Tool Introduction


Edit AVRDUDE Programmer Configuration New Configuration

Configuration name
USBasp

Description
Default AVRDUDE Programmer Configuration. Modify as required for your setup.

Programmer Hardware (-c)

Futurlec.com programming cable.
Jason Kyle's pAVR Serial Programmer
Lancos SI-Prog <<http://www.lancos.com/siprog.html>>
Nightshade ALF-PgmAVR, <http://nightshade.homeip.net/>
Picoweb Programming Cable, <http://www.picoweb.net/>
Pony Prog STK200
serial port banging, reset=ldtr sck=rts mosi=txd miso=cts
serial port banging, reset=dtr sck=lrts mosi=txd miso=lcts
serial port banging, reset=rts sck=dtr mosi=txd miso=cts
Steve Bolt's Programmer
STK200
The Bus Pirate
USBasp, <http://www.fischl.de/usbasp/>
USBtiny simple USB programmer, <http://www.ladyada.net/make/usbtinyisp/>
Xilinx JTAG cable

Programmer details from [C:\WinAVR-20100110\bin\avrdude.conf:417]
id = "usbasp";
desc = "USBasp, <http://www.fischl.de/usbasp/>";
type = usbasp;

Override default port (-P)

Override default baudrate (-b)

Other options
Use this field to add any avrdude option not covered by the plugin.

State of Parallel Port lines after AVRDUDE exit

/Reset Line
☒ restore to previous state
☐ activated (-E reset)
☐ deactivated (-E noreset)

Vcc Lines
☒ restore to previous state
☐ activated (-E vcc)
☐ deactivated (-E novcc)

Delay between avrdude invocations milliseconds

Command line preview
avrdude -cusbsp [...part specific options...]

?

OK

Cancel

Properties for Blink_LED

type filter text

- > Resource
- ▼ AVR
 - AVRDude
 - Target Hardware**
 - Builders
 - > C/C++ Build
 - > C/C++ General
 - Linux Tools Path
 - Project References
 - Run/Debug Settings
 - > Task Repository
 - Task Tags
 - > Validation
 - WikiText

Target Hardware

Configuration: Debug [Active] [Manage Configurations...](#)

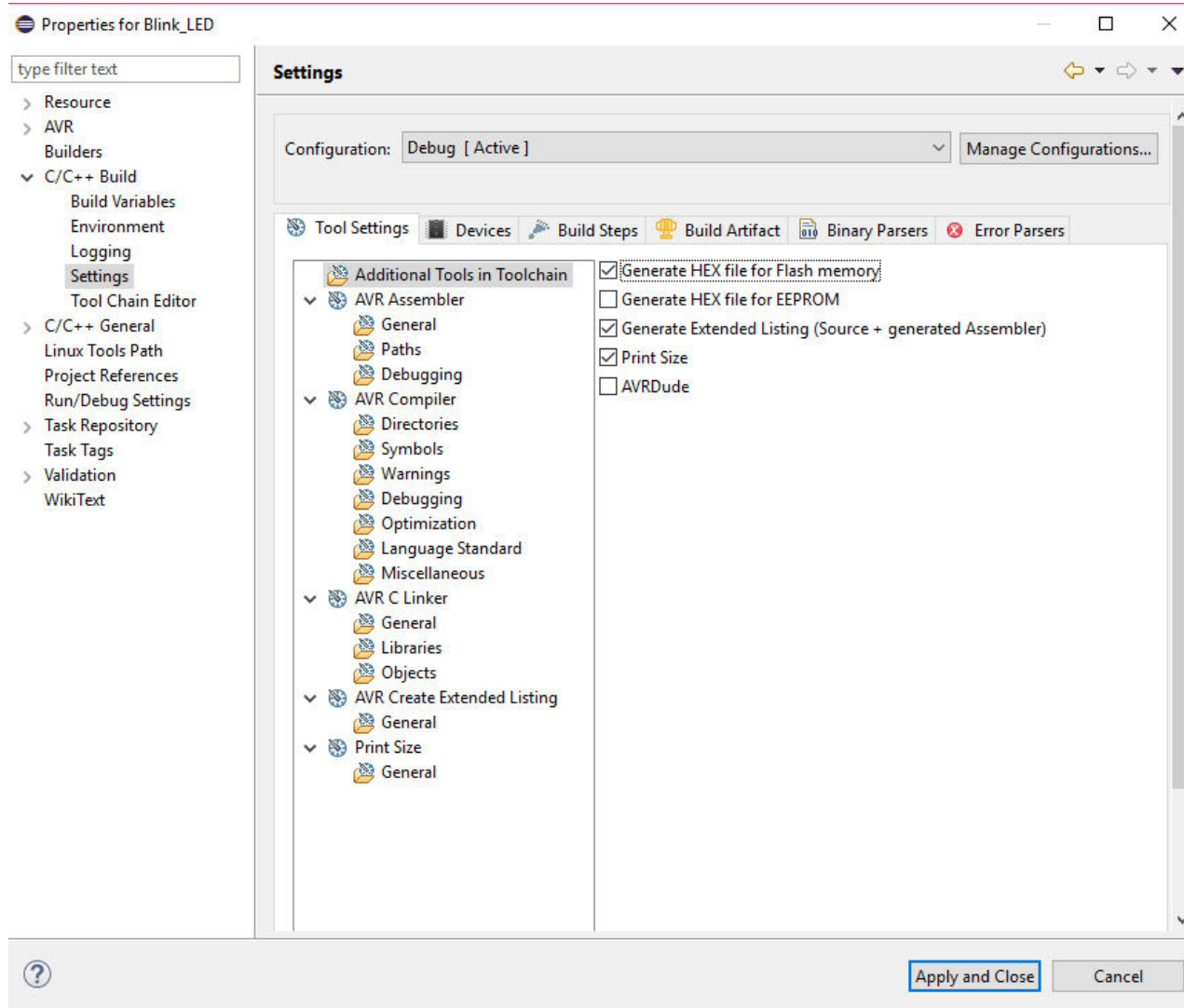
MCU Type: ATmega32 [Load from MCU](#)

MCU Clock Frequency: 1000000

[Copy Project Settings](#) [Restore Defaults](#) [Apply](#)

[?](#) [Apply and Close](#) [Cancel](#)

Tool Introduction





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