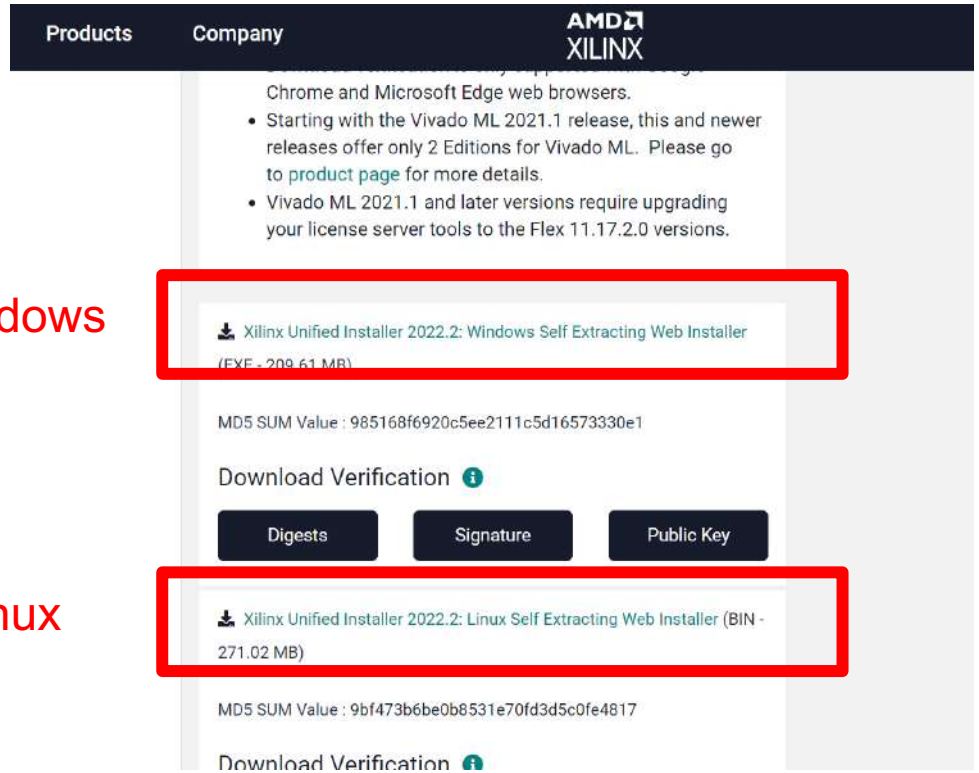
Xilinx Vivado Installation Tutorial

Note

- The tool which we used in this class was usually Modelsim, but it is currently unavailable due to US federal regulations. We don’t know when it will be available again. As a result, we choose to use Xilinx Vivado this semester.
- Xilinx Vivado is the same as Modelsim, which they only support Windows and Linux operating systems. For those who use MAC OS, we recommend you to install virtual machine with Windows or Linux OS and install Xilinx Vivado.
- The following installation tutorial is for Windows. You can install it on Linux OS, too.

Step 1

- Goto https://www.xilinx.com/support/download.html
- Download **Xilinx Unified Installer 2022.2: Windows Self Extracting Web Installer**

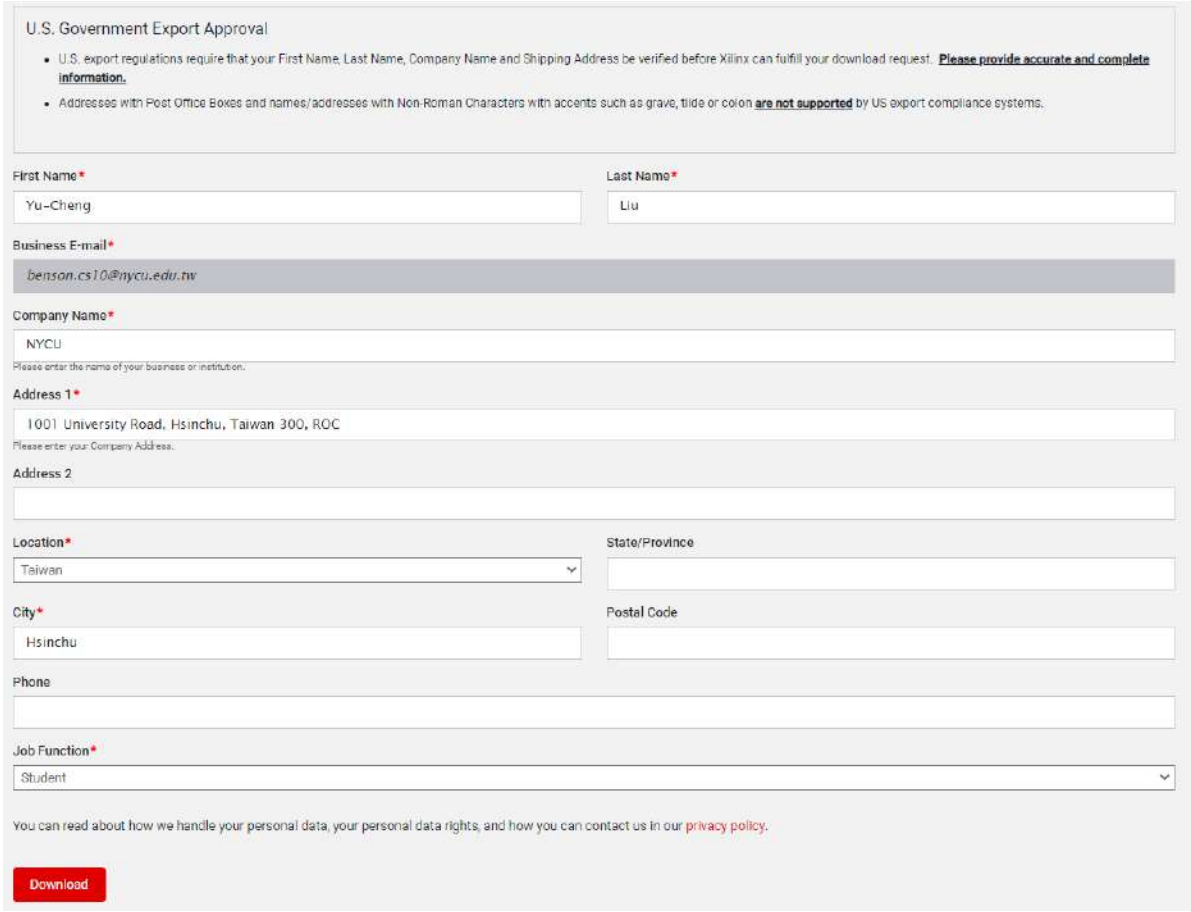


Step2

- Create and activate an account

Step 3

- Get US Government Export Approval



U.S. Government Export Approval

- U.S. export regulations require that your First Name, Last Name, Company Name and Shipping Address be verified before Xilinx can fulfill your download request. **Please provide accurate and complete information.**
- Addresses with Post Office Boxes and names/addresses with Non-Roman Characters with accents such as grave, tilde or colon **are not supported** by US export compliance systems.

First Name*: Yu-Cheng

Last Name*: Liu

Business E-mail*: benson.cs10@nycu.edu.tw

Company Name*: NYCU

Please enter the name of your business or institution.

Address 1*: 1001 University Road, Hsinchu, Taiwan 300, ROC

Please enter your Company Address.

Address 2:

Location*: Taiwan

State/Province:

City*: Hsinchu

Postal Code:

Phone:

Job Function*: Student

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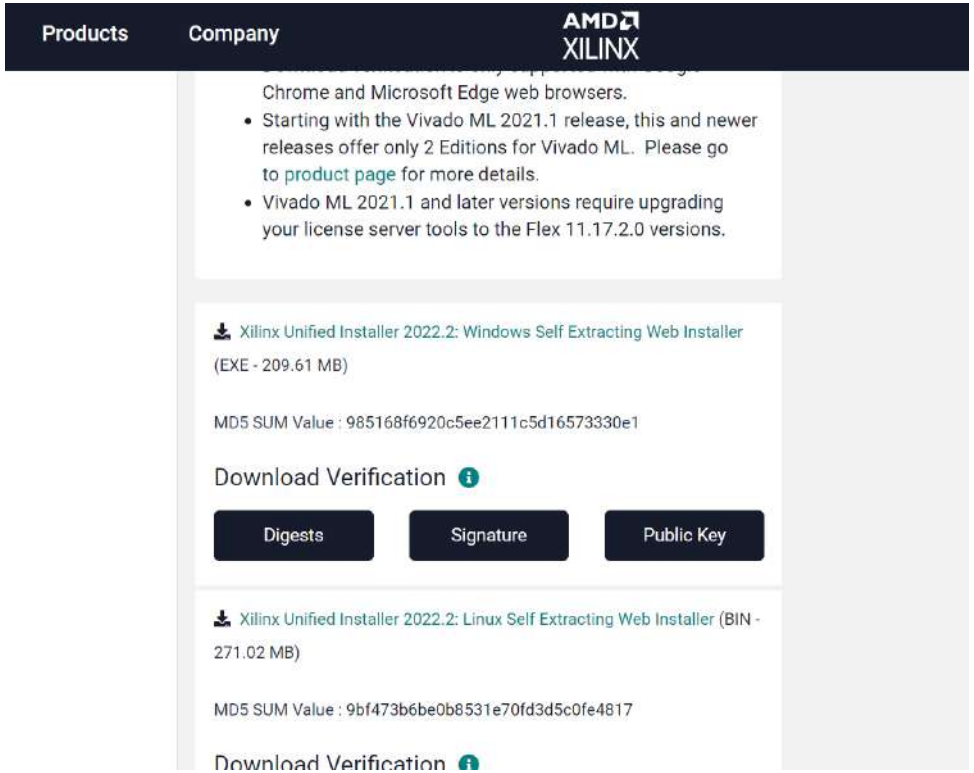
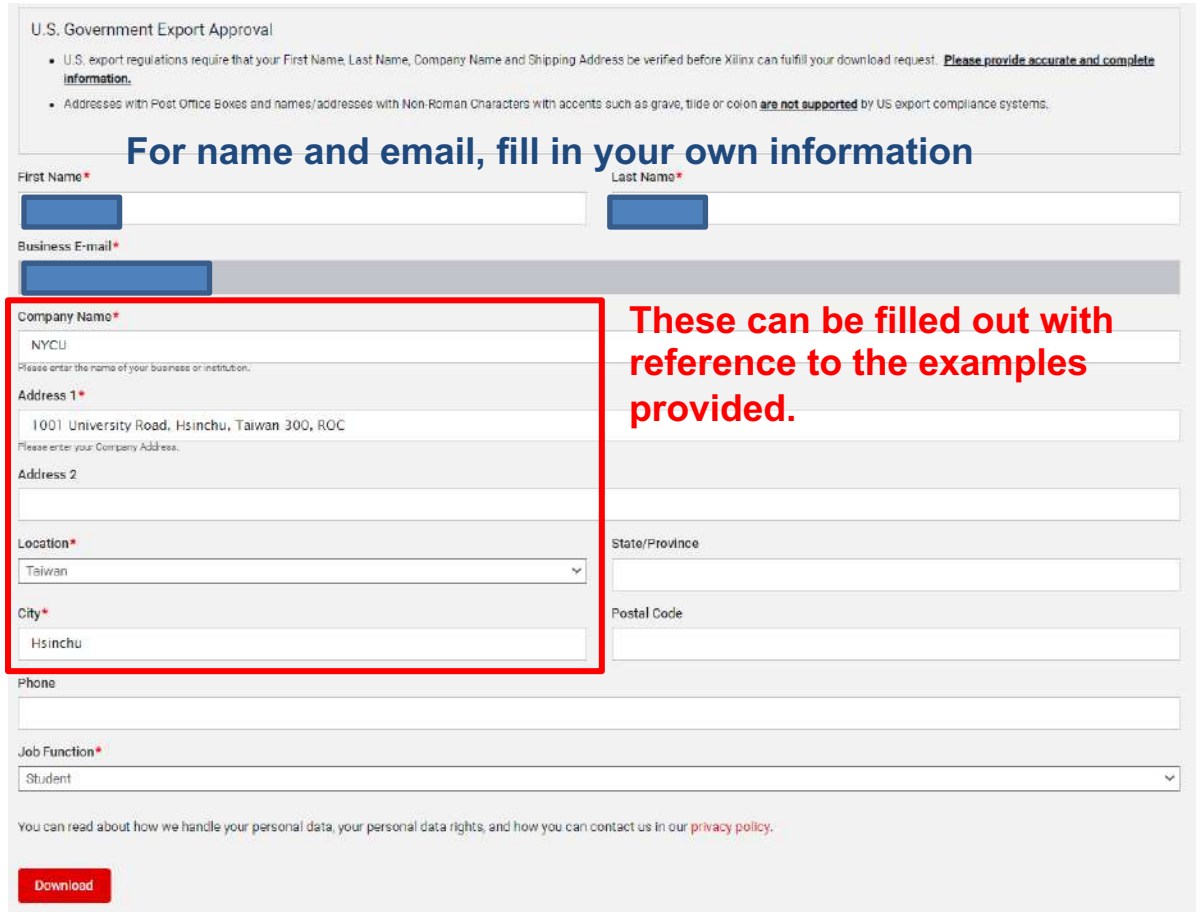
Download

Step 4

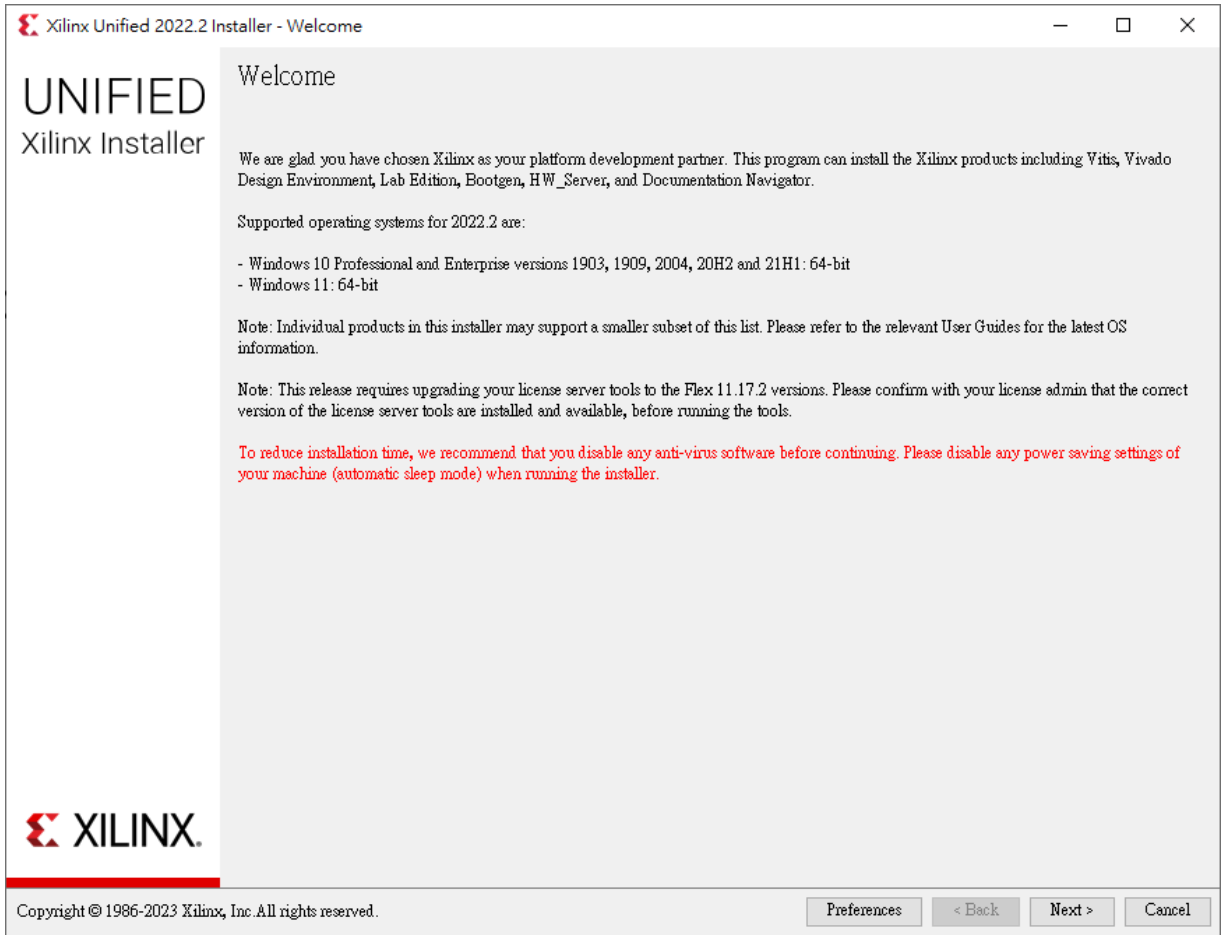
- If it doesn’t start downloading, close the page and press the link, fill the approval again.





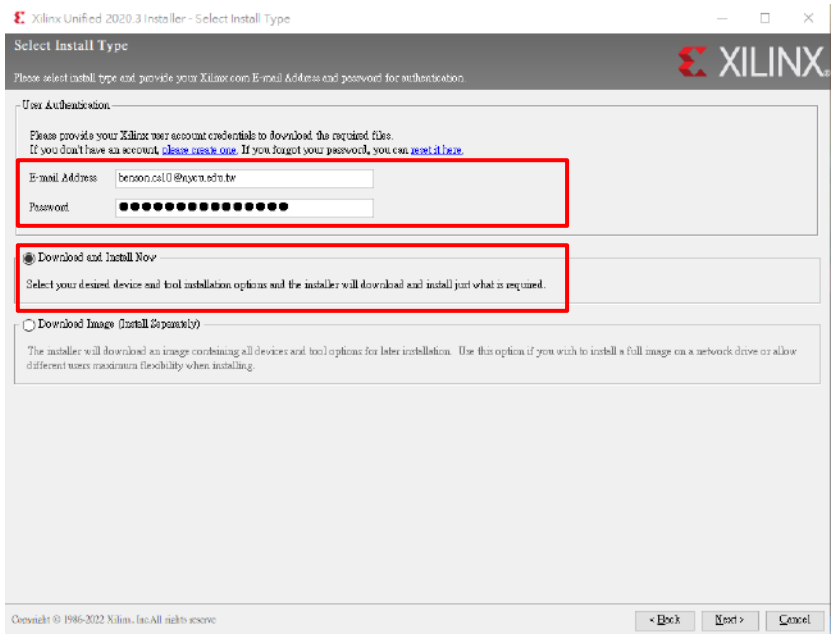
Step 5

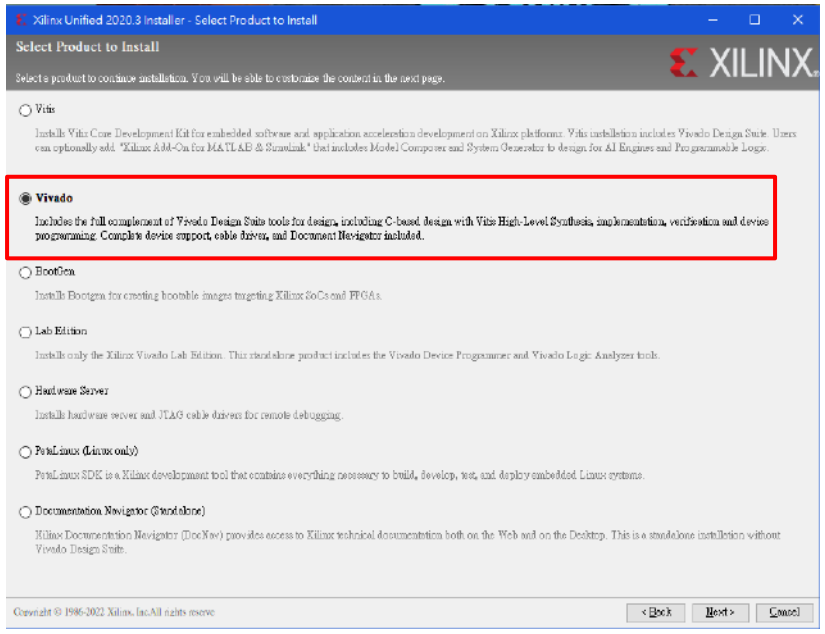
- After downloading, run the installer.

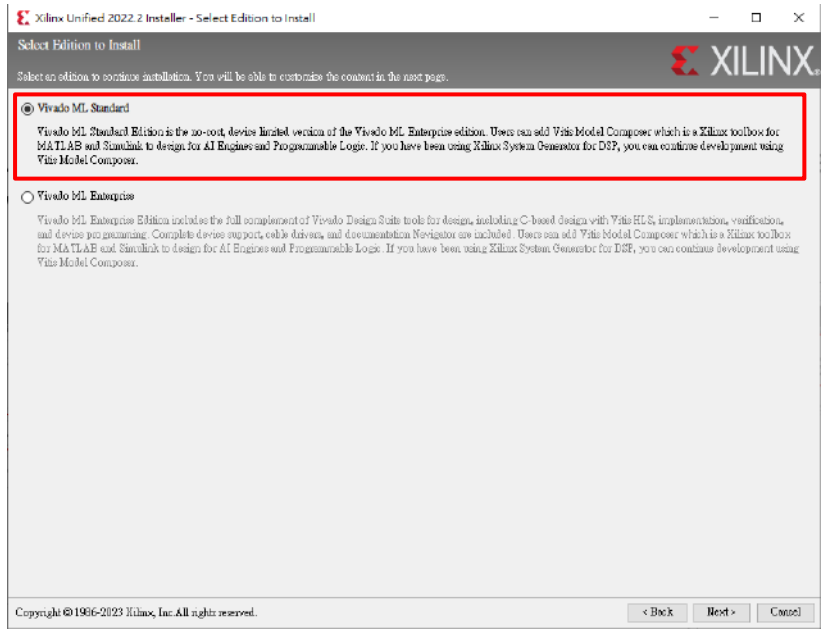


Step 6

- Execute the file you download and choose the options like the following pictures.

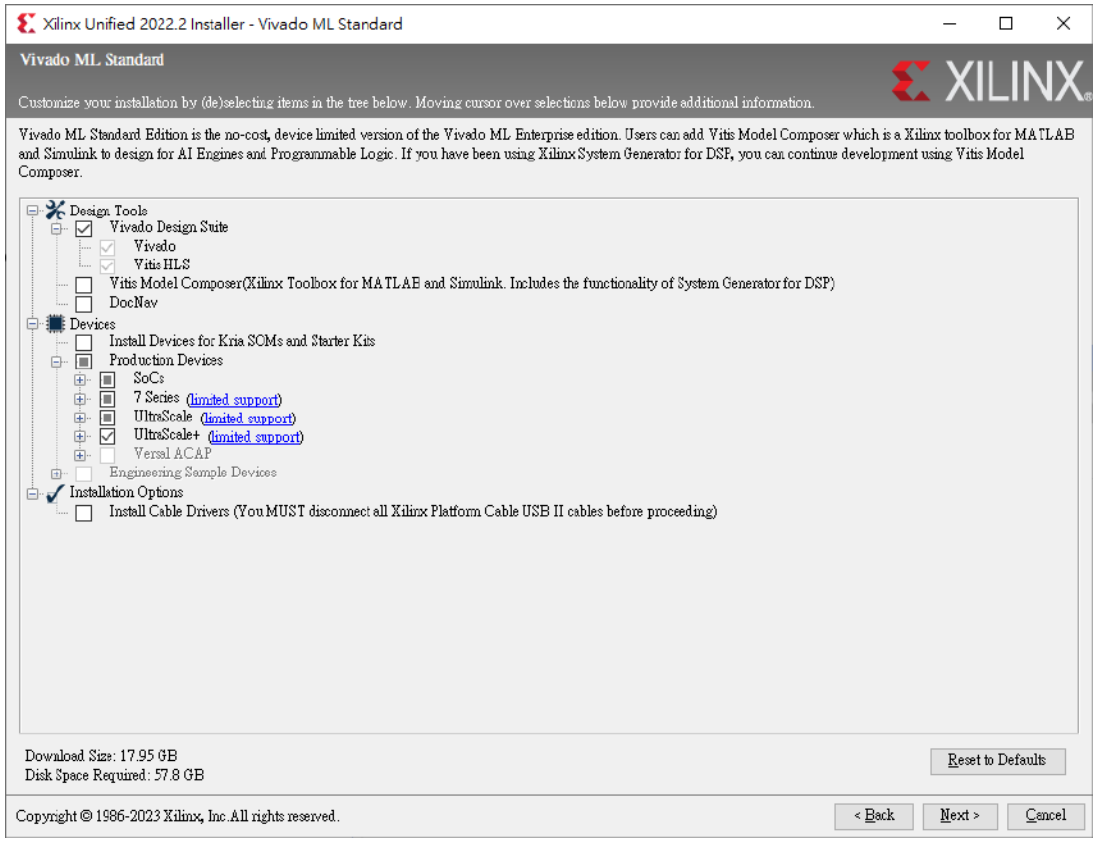






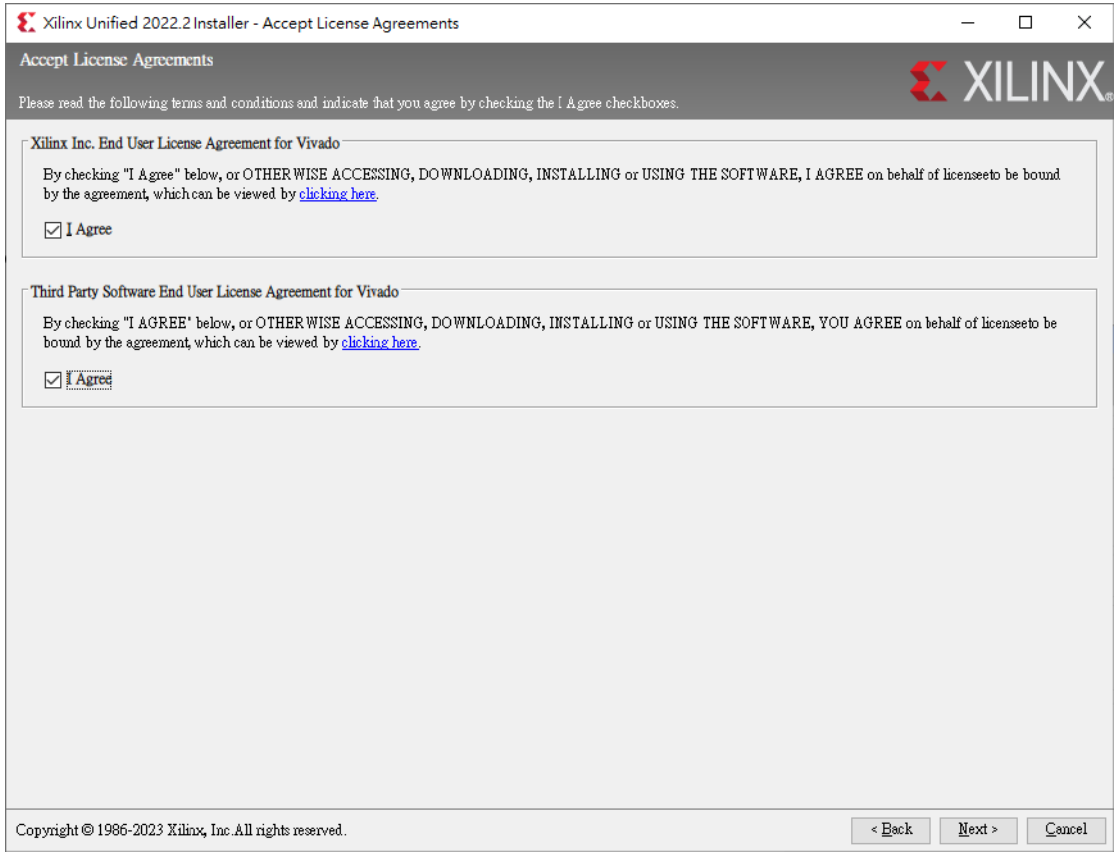
Step 7

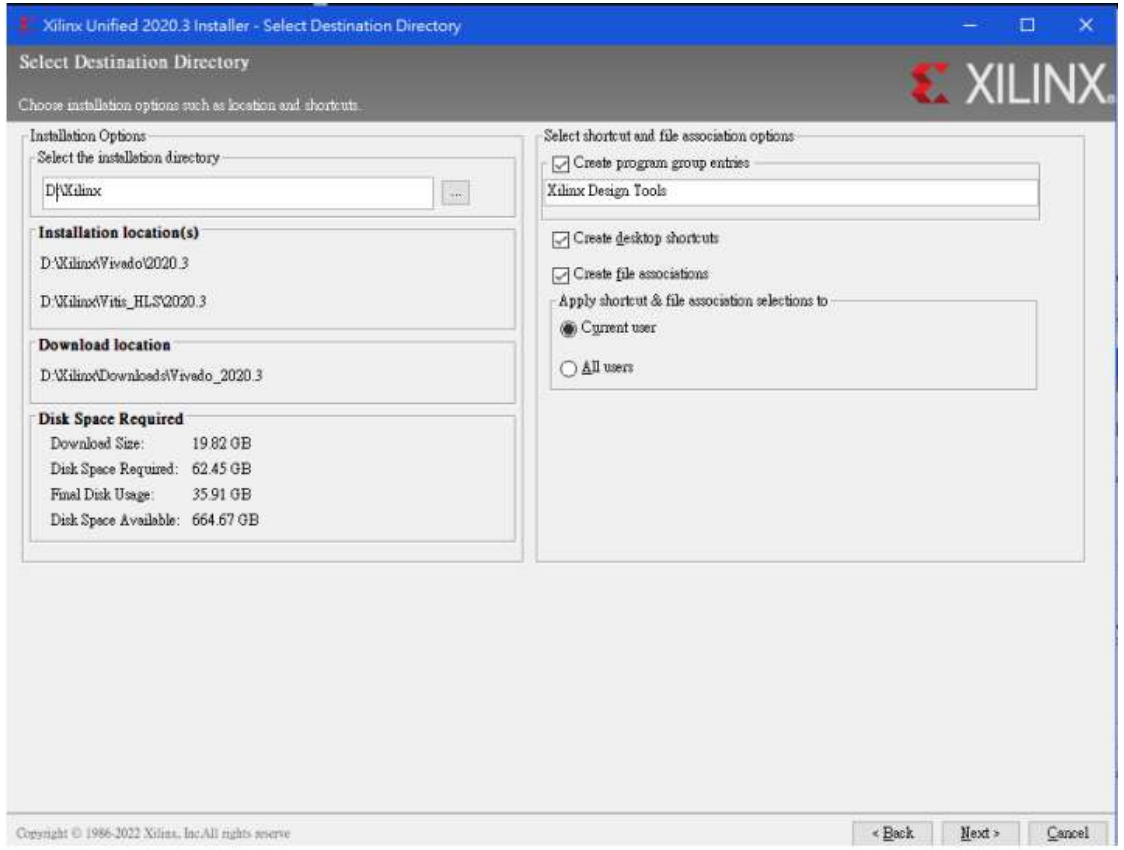
- We only need behavioral simulation function, so I disabled other unnecessary functions.



Step 8

- You can decide your own installation directory.



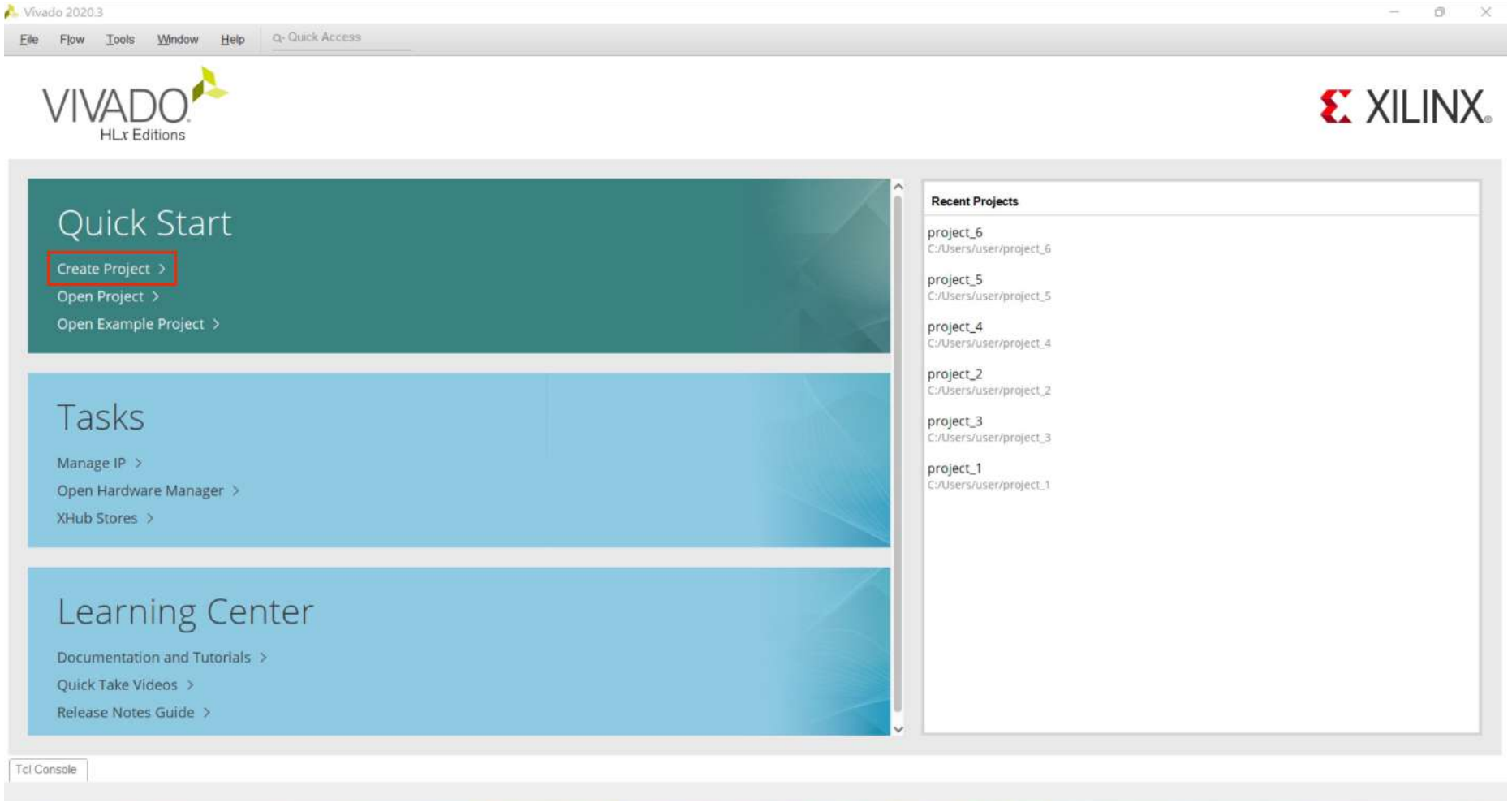


Step 9

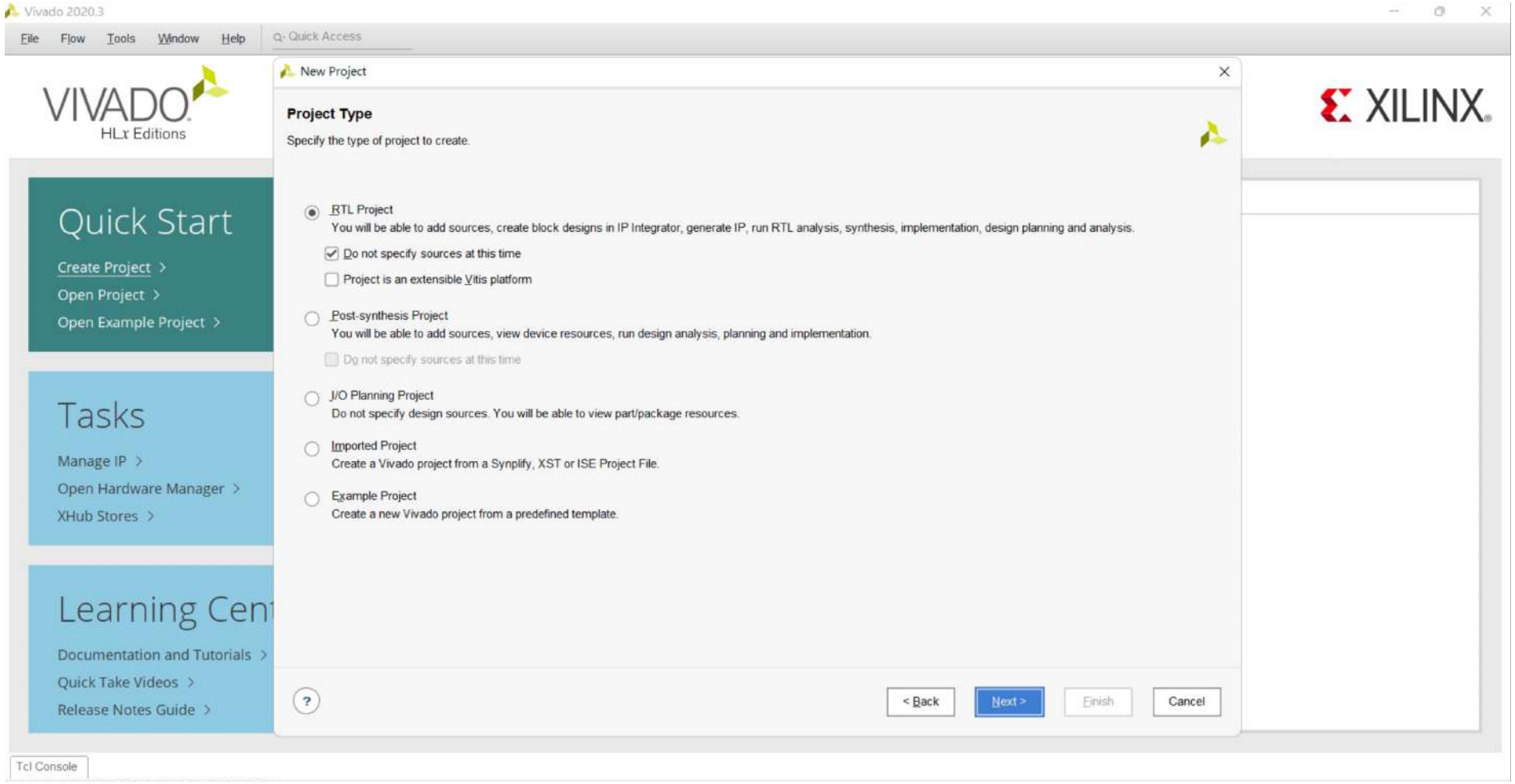
- Finally, wait for the installer to install the software. Note that the installer probably needs much time to install.
- You may need to reboot the computer after the installation.

Add Sources and Simulation

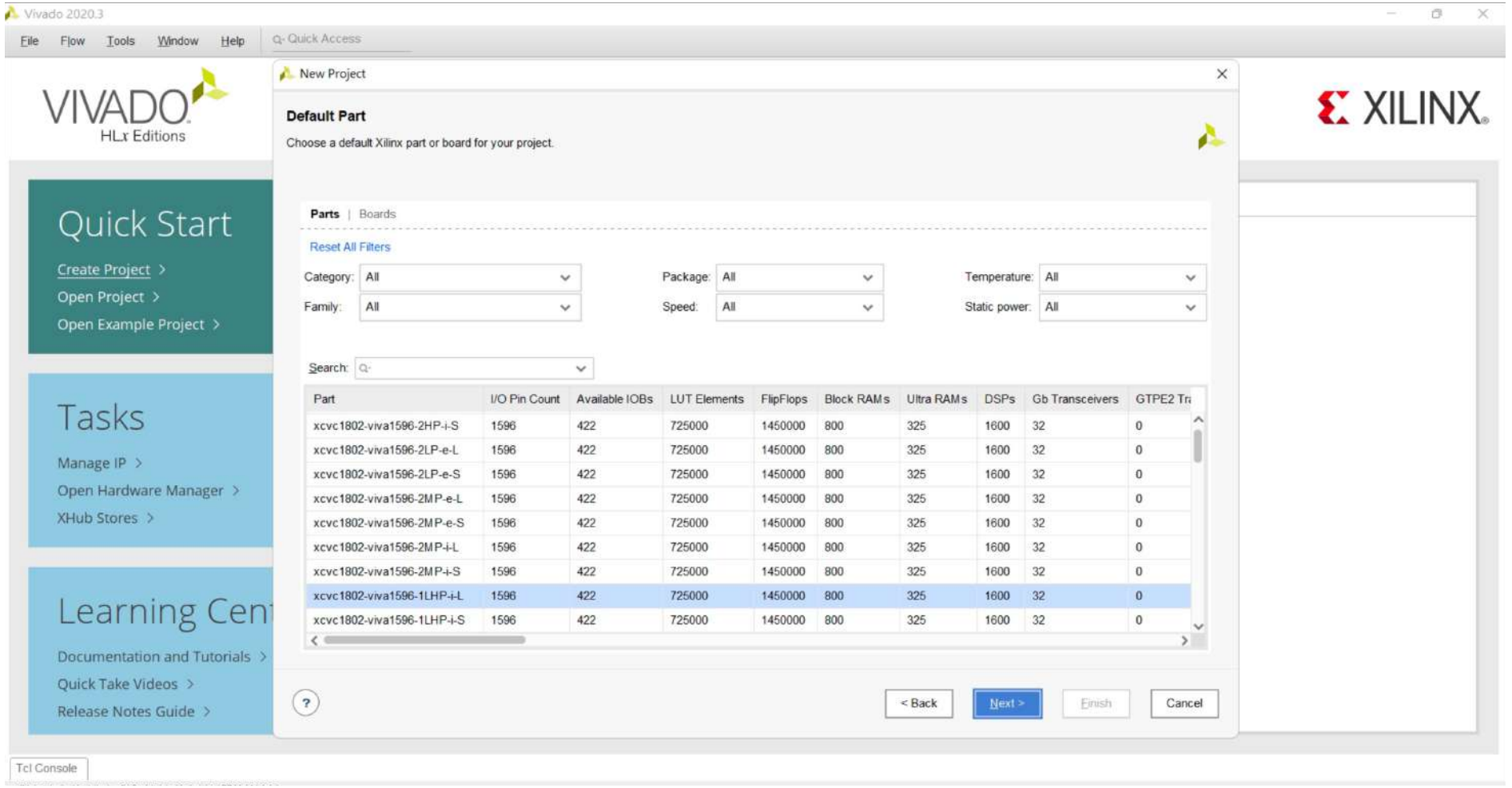
Create project



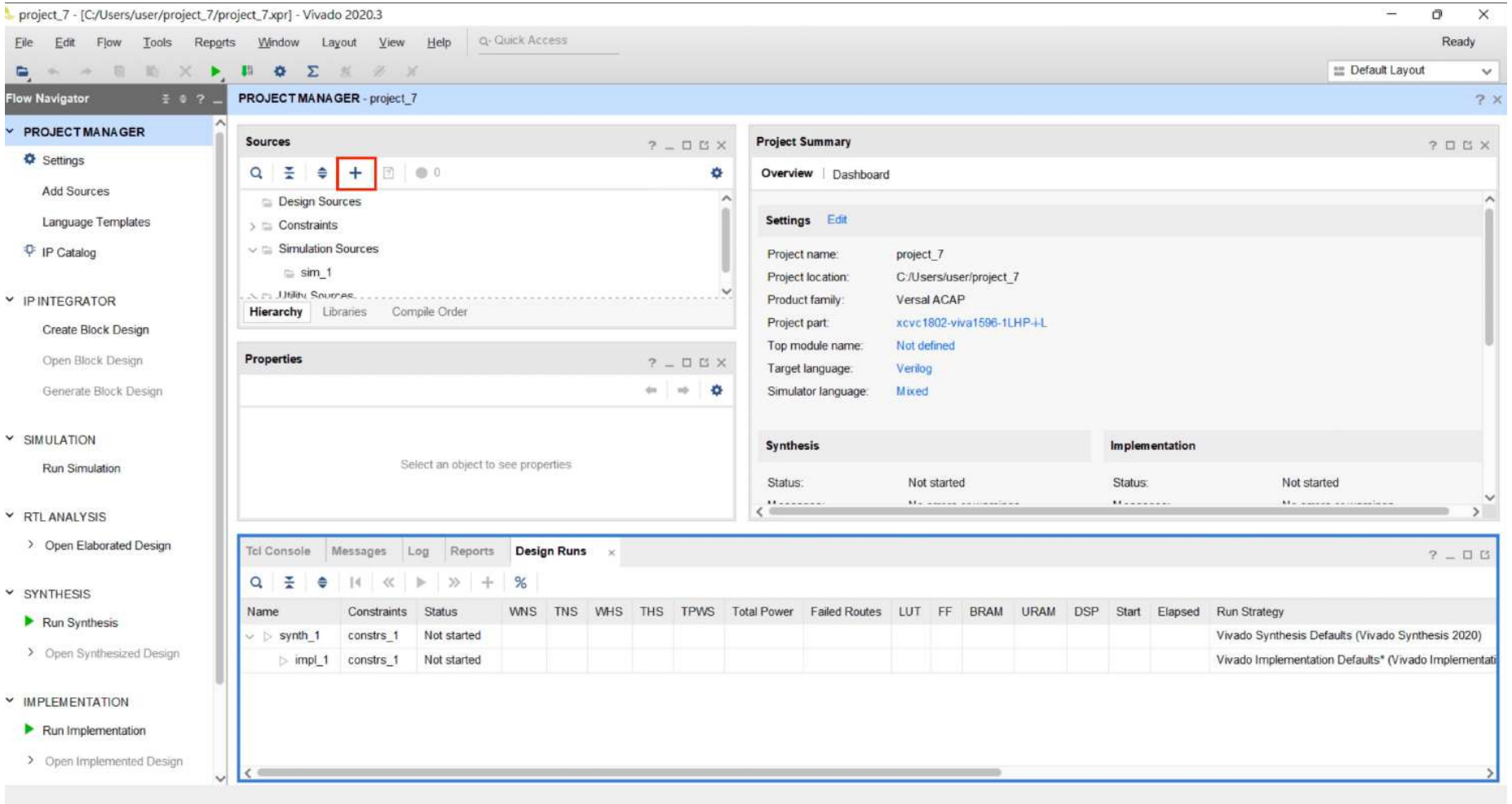
Select project type

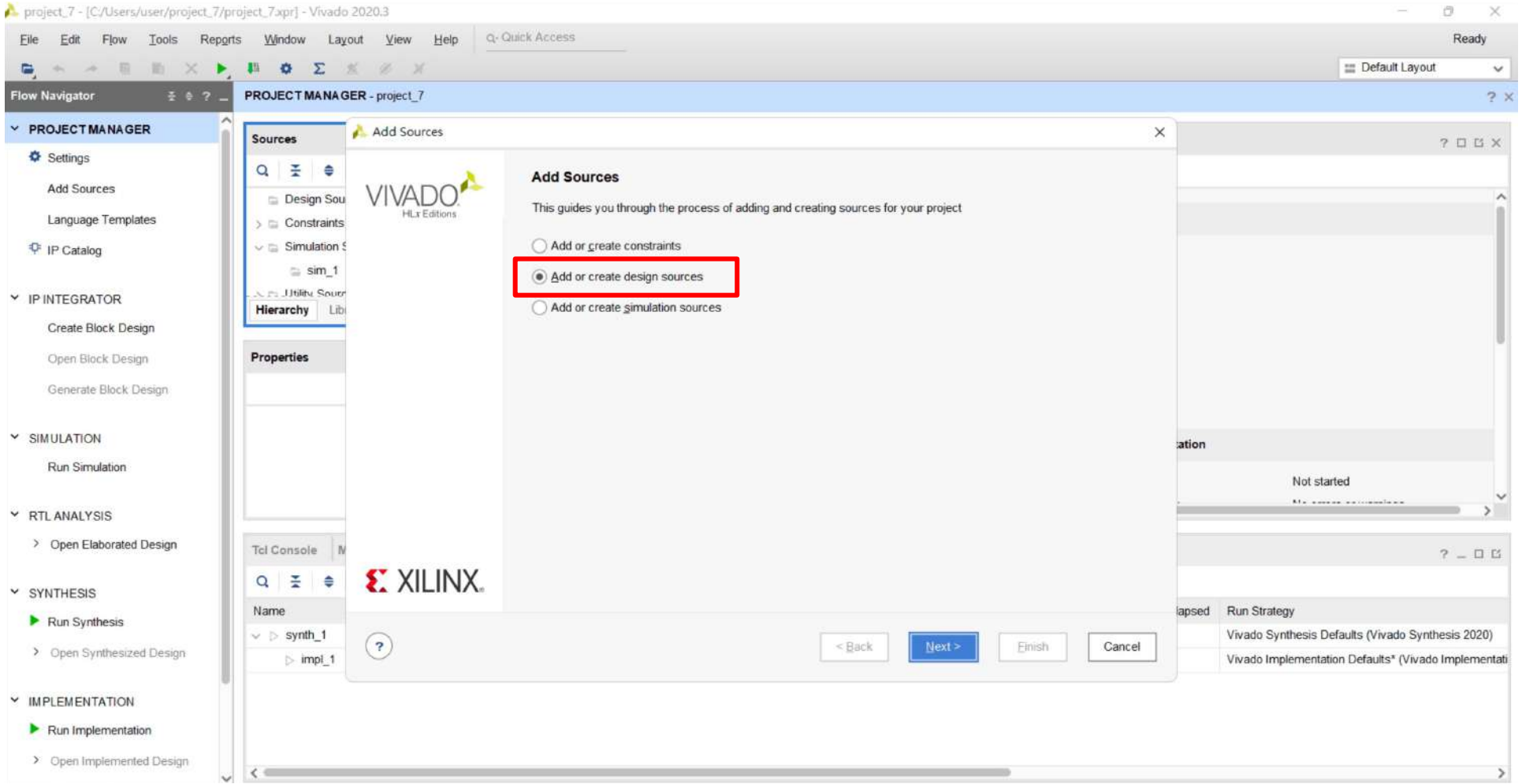


Select default part



Add design sources




project_7 - [C:/Users/user/project_7/project_7.xpr] - Vivado 2020.3
File Edit Flow Tools Reports Window Layout View Help
Quick Access
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Default Layout
Flow Navigator
PROJECT MANAGER
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Add Sources
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Create Block Design
Open Block Design
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SIMULATION
Run Simulation
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PROJECT MANAGER - project_7
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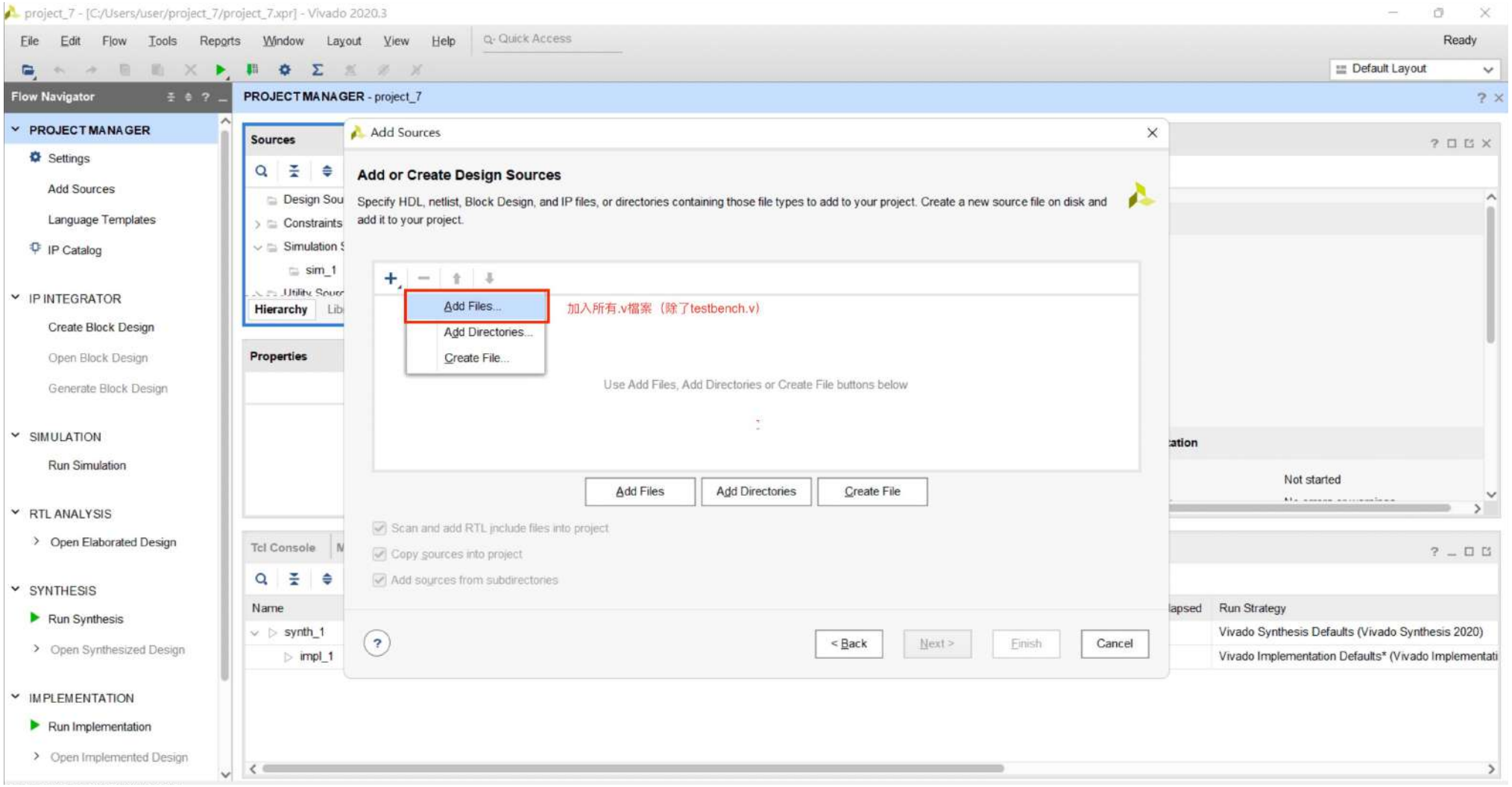
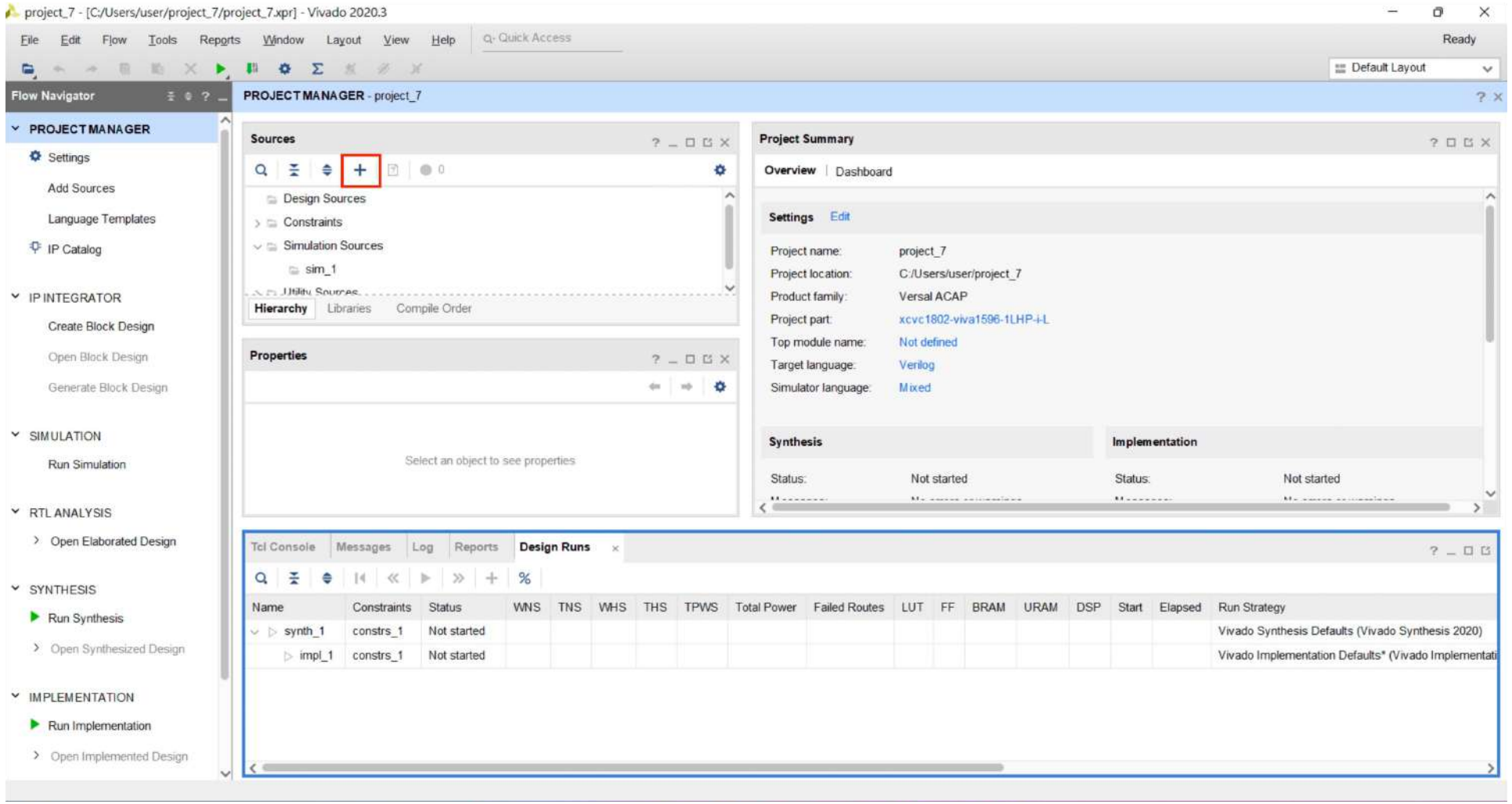
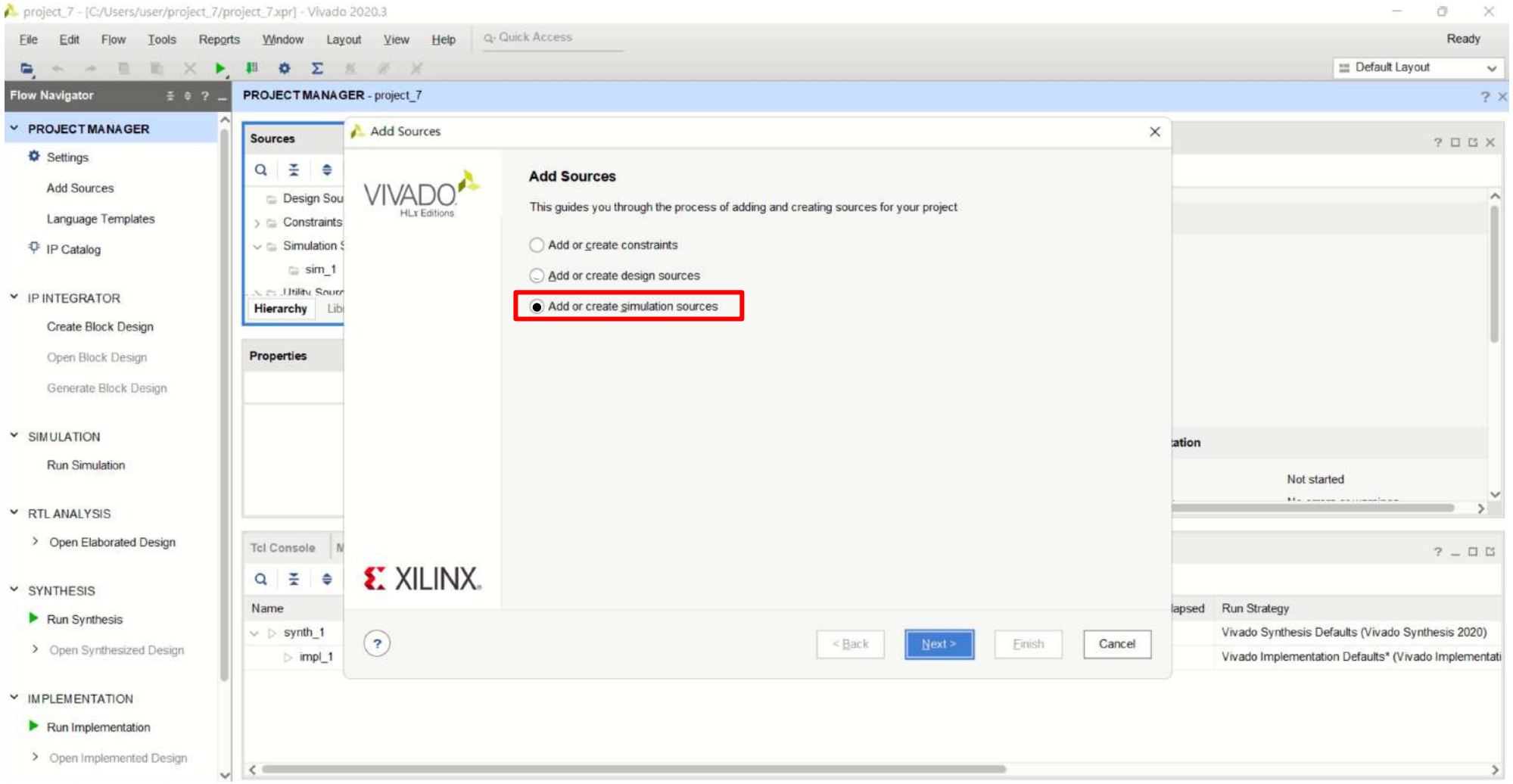
Add .v files (except TestBench.v)



Add simulation sources




project_7 - [C:/Users/user/project_7/project_7.xpr] - Vivado 2020.3
File Edit Flow Tools Reports Window Layout View Help
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PROJECT MANAGER
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Add Sources
Language Templates
IP Catalog
IP INTEGRATOR
Create Block Design
Open Block Design
Generate Block Design
SIMULATION
Run Simulation
RTL ANALYSIS
Open Elaborated Design
SYNTHESIS
Run Synthesis
Open Synthesized Design
IMPLEMENTATION
Run Implementation
Open Implemented Design
PROJECT MANAGER - project_7
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Add or create design sources
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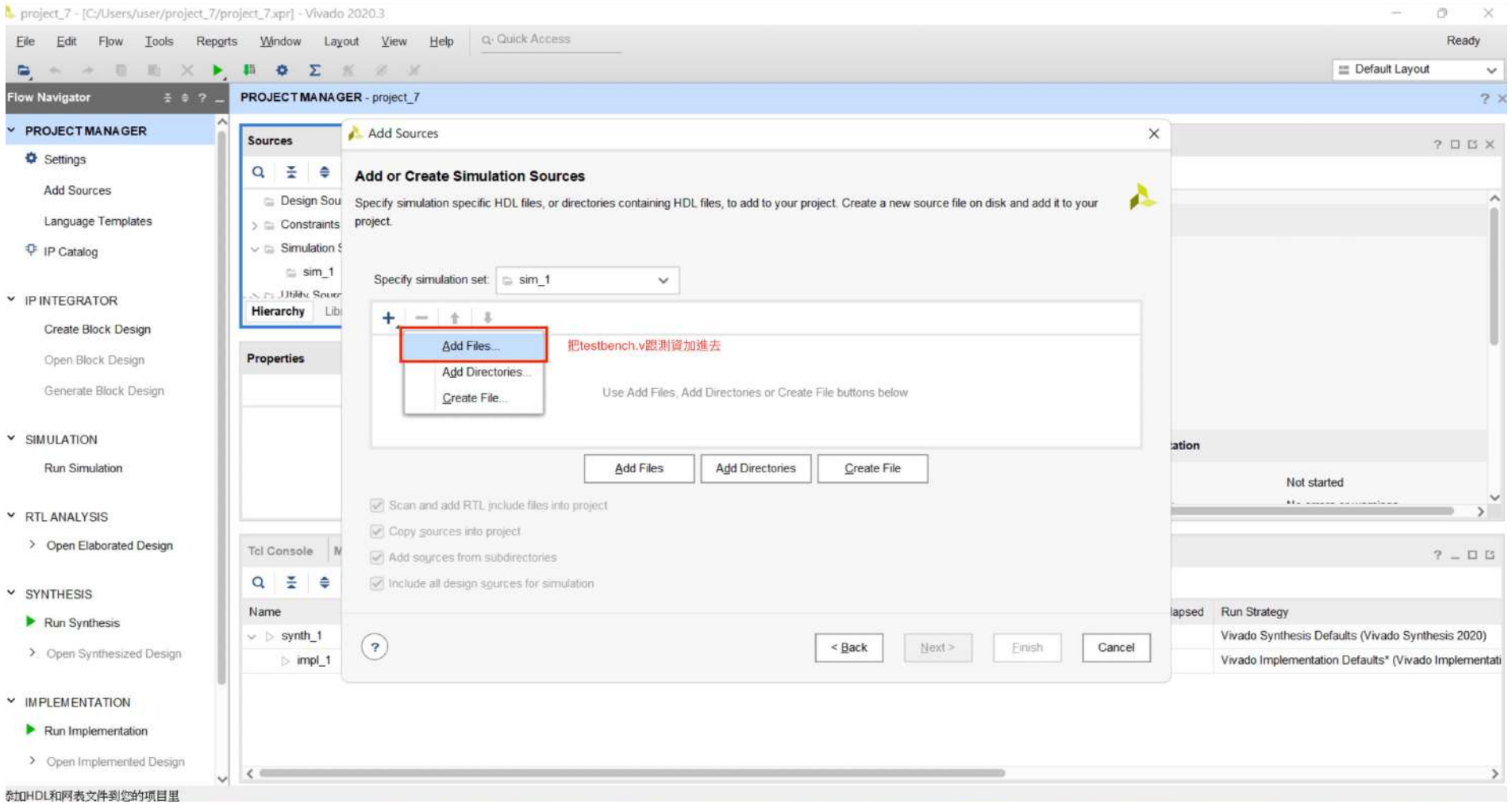
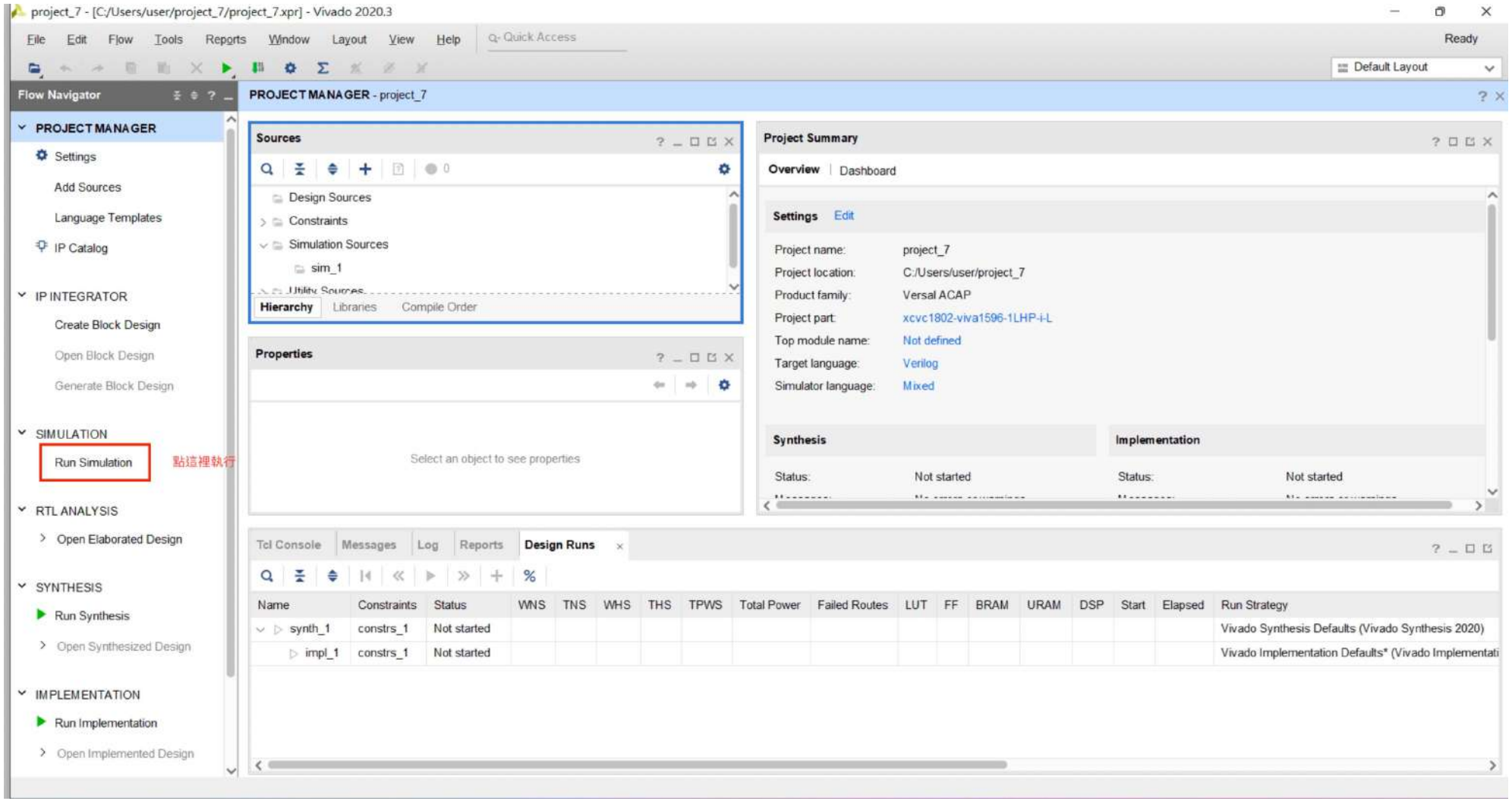
Add TestBench.v and test case file



Run Simulation



QA

- If you encounter any problems, please search for information online first. If you still can't solve the problem, then ask the TA through E3.