

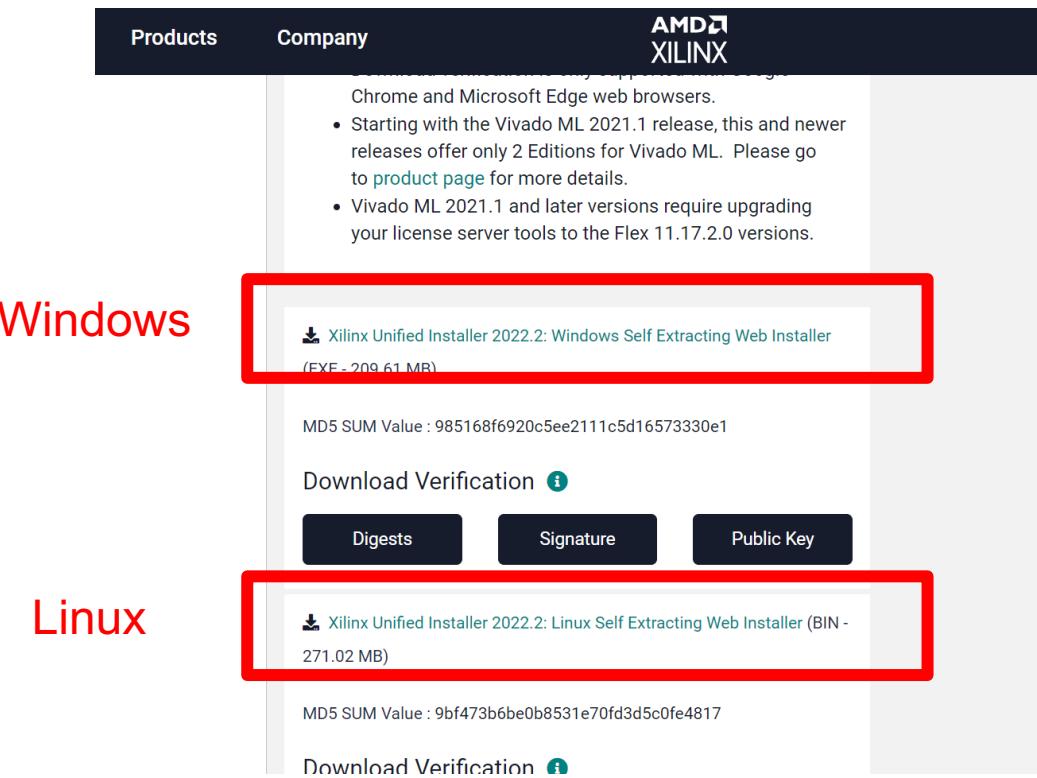
Xilinx Vivado Installation Tutorial

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



The image shows the AMD login page. It features the AMD logo at the top, followed by the Chinese characters "登入" (Login). Below this are two input fields: "電子郵件地址" (Email Address) and "密碼" (Password), both with placeholder text. A large blue rectangular button labeled "登入" (Login) is centered below the fields. At the bottom of the page is a black rectangular button labeled "創建密碼" (Create Password). Below the buttons is a link "忘記/重設密碼？" (Forgot/Reset Password?). At the very bottom, there are links for "幫助" (Help), "隱私權" (Privacy), and "使用條款" (Terms of Use).



The image shows the AMD account creation page. The title "AMD 賬戶創建" (AMD Account Creation) is at the top. Below it is a note: "如需創建帳戶，請填寫以下表格。" (If you want to create an account, please fill out the following form.) Another note states: "帶有訪問令牌的帳戶激活消息將通過電子郵件發送至您在下方預留的電子郵件地址。" (Activation messages for accounts with access tokens will be sent via email to the email address you provide below.) The form contains several input fields: "名 *" (First Name *), "姓 *" (Last Name *), and "電子郵件 *" (Email *). A note below the email field says: "對於商業用戶，請提供您公司的電子郵件地址，以便完全訪問許可、技術支持和服務等專區內容。對於其他用戶，請使用您的個人電子郵件地址。" (For business users, please provide your company's email address to fully access the permission, technical support and service sections. For other users, please use your personal email address.) There is also a dropdown menu for "語言首選項 *" (Language Preference *), currently set to "英文" (English), and another dropdown menu for "居住地 *" (Residence *), currently set to "選擇一個" (Select one). At the bottom, a note states: "創建帳戶即表示您同意 AMD 使用條款和隱私政策。" (Creating an account indicates that you agree to AMD's Terms of Use and Privacy Policy.)

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*
 State/Province

City*
 Postal Code

Phone

Job Function*

You can read about how we handle your personal data, your personal data rights, and how you can contact us in our [privacy policy](#).

Step 4

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

The screenshot shows the AMD Xilinx download page. At the top, there are tabs for 'Products' and 'Company'. The 'Company' tab is selected, displaying the AMD XILINX logo. Below the tabs, there is a note about browser compatibility: 'Chrome and Microsoft Edge web browsers.' followed by a bulleted list:

- Starting with the Vivado ML 2021.1 release, this and newer releases offer only 2 Editions for Vivado ML. Please go to [product page](#) for more details.
- Vivado ML 2021.1 and later versions require upgrading your license server tools to the Flex 11.17.2.0 versions.

Under the 'Company' tab, there are download links for 'Xilinx Unified Installer 2022.2: Windows Self Extracting Web Installer' (EXE - 209.61 MB) and 'Xilinx Unified Installer 2022.2: Linux Self Extracting Web Installer (BIN - 271.02 MB)'. Each link includes an MD5 sum value and a 'Download Verification' button.

U.S. Government Export Approval

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• 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.

For name and email, fill in your own information

First Name* Last Name*
Business E-mail*

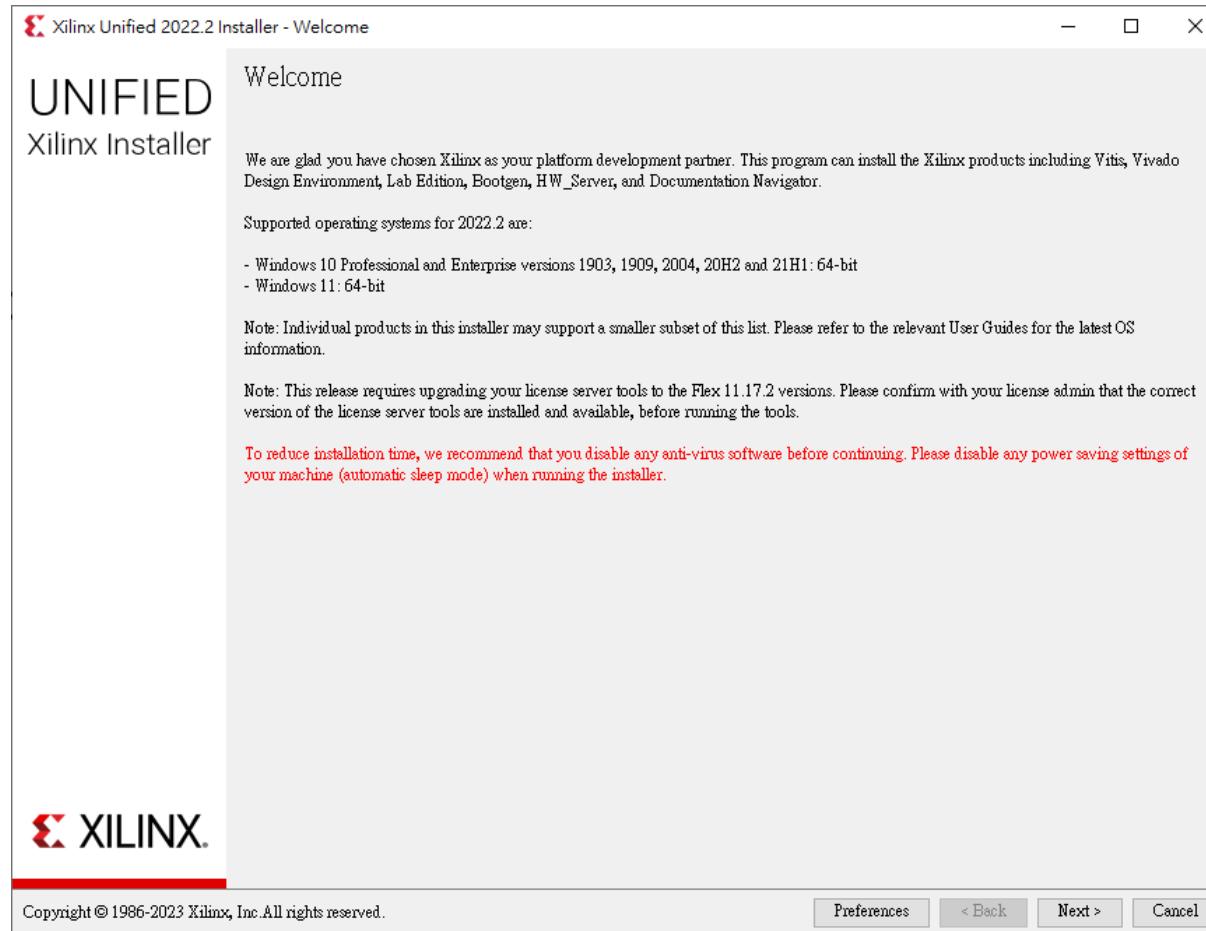
Company Name* Please enter the name of your business or institution.
Address 1* Please enter your Company Address.
Address 2
Location* State/Province
City* Postal Code
Phone
Job Function* [privacy policy](#)

These can be filled out with reference to the examples provided.

Download

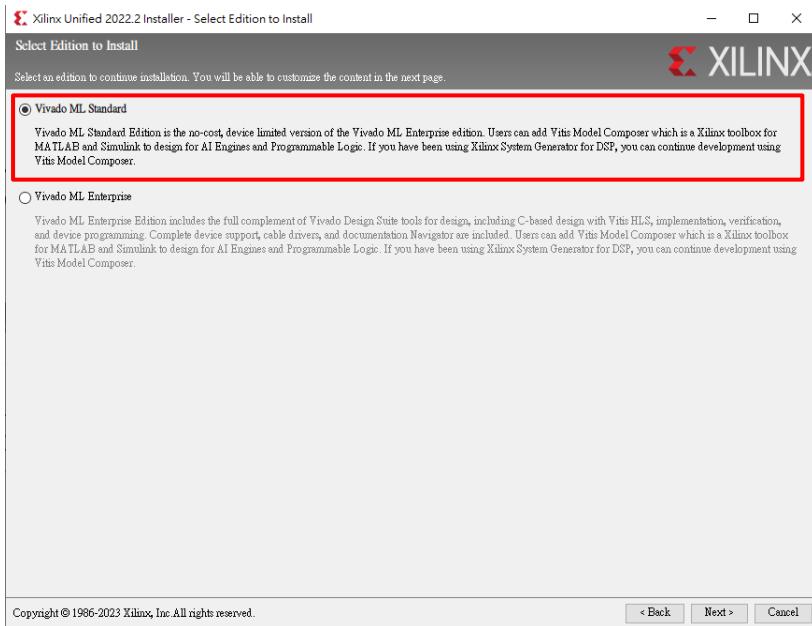
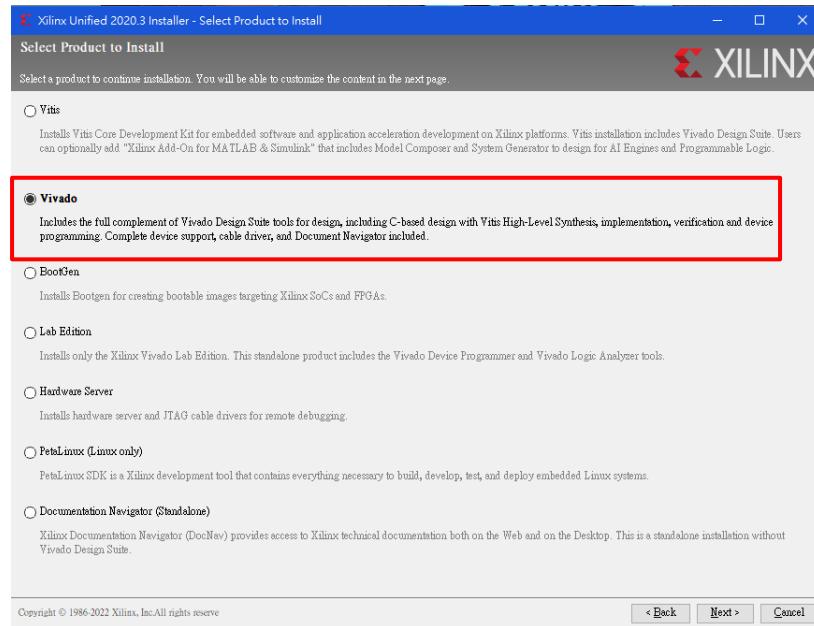
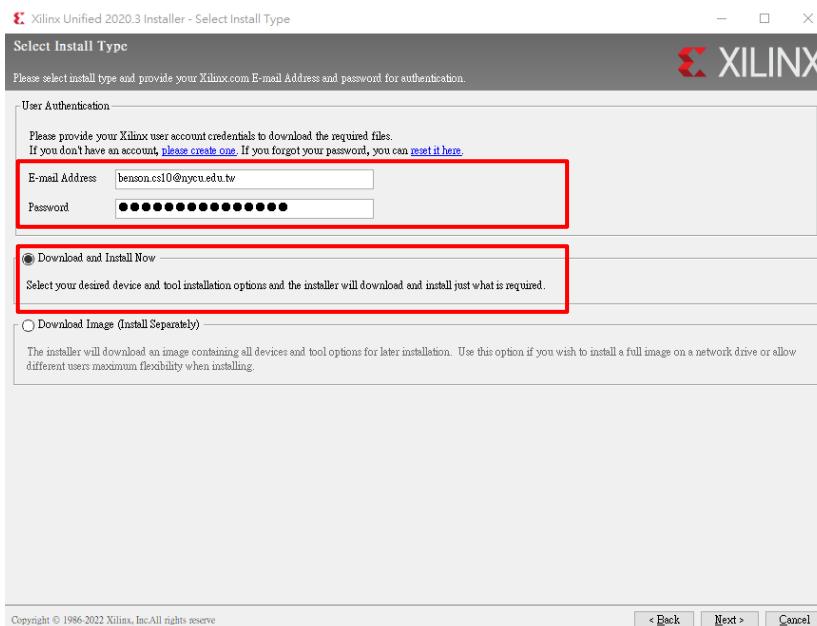
Step 5

- After downloading, run the installer.



Step 6

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



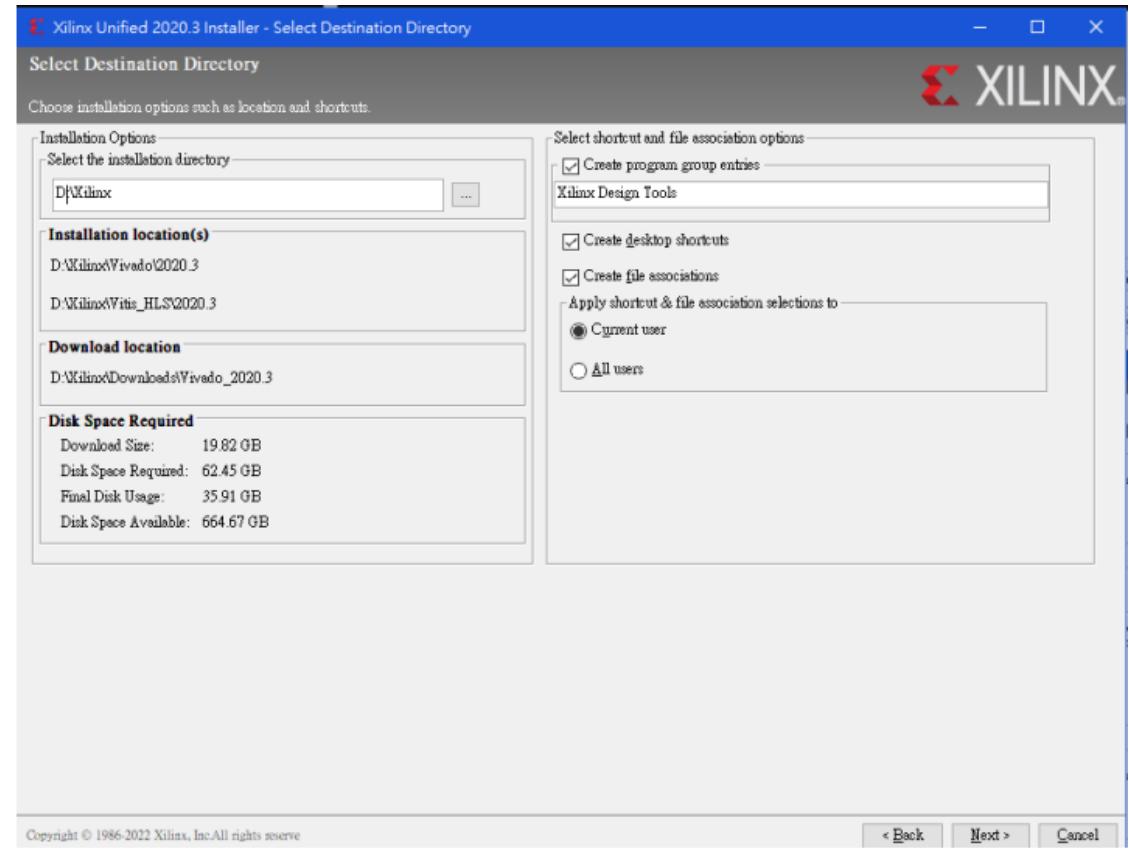
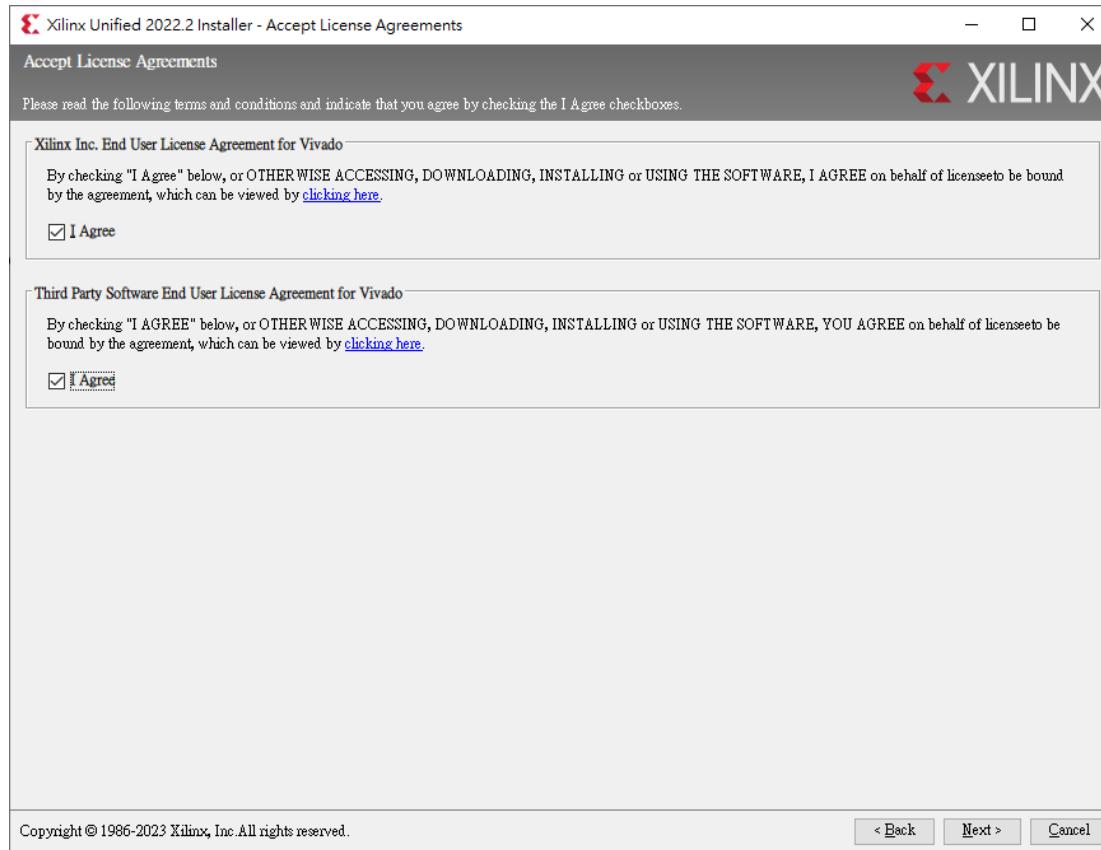
Step 7

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



Step 8

- You can decide your own installation directory.

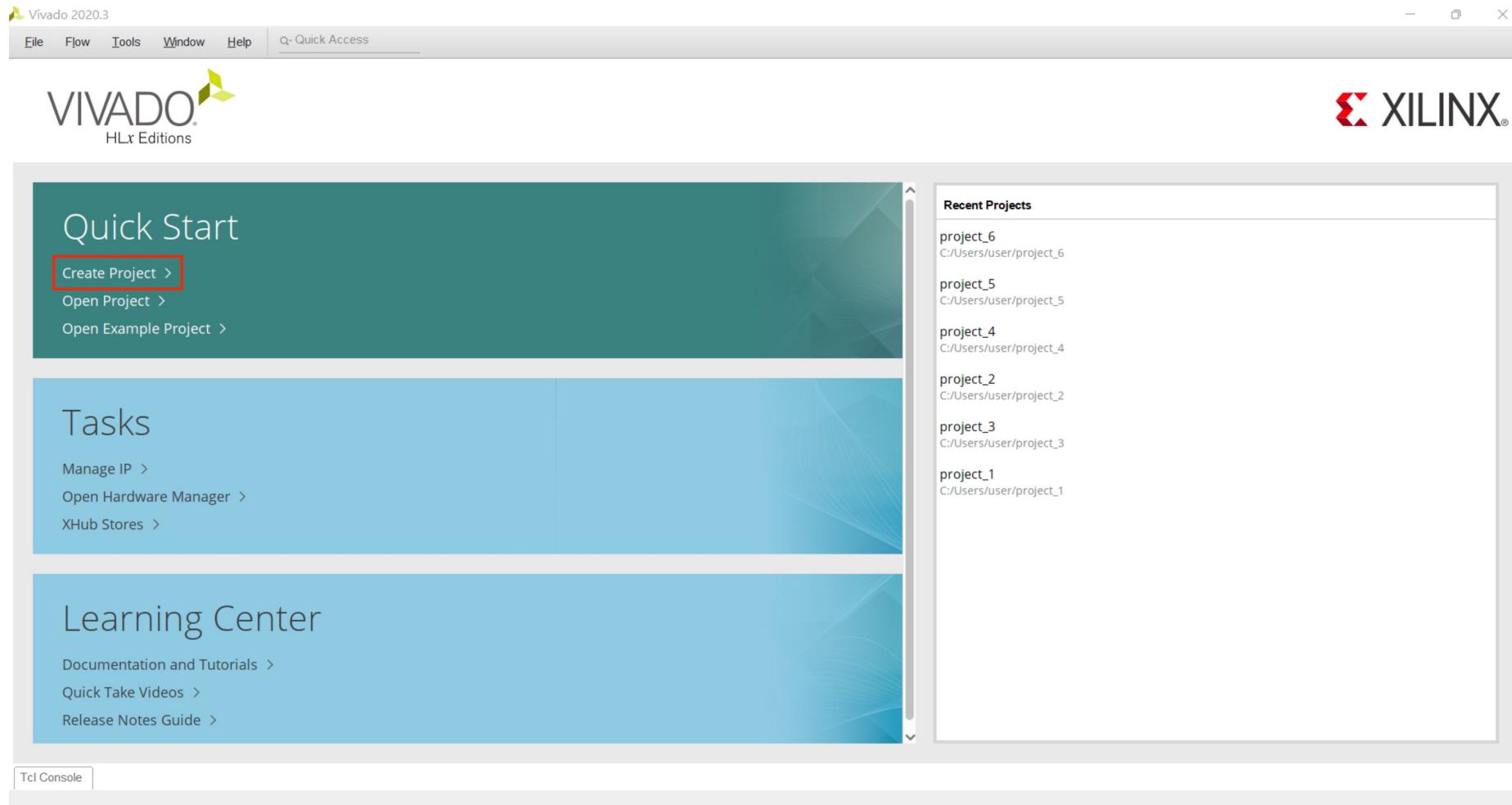


Step 9

- 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.

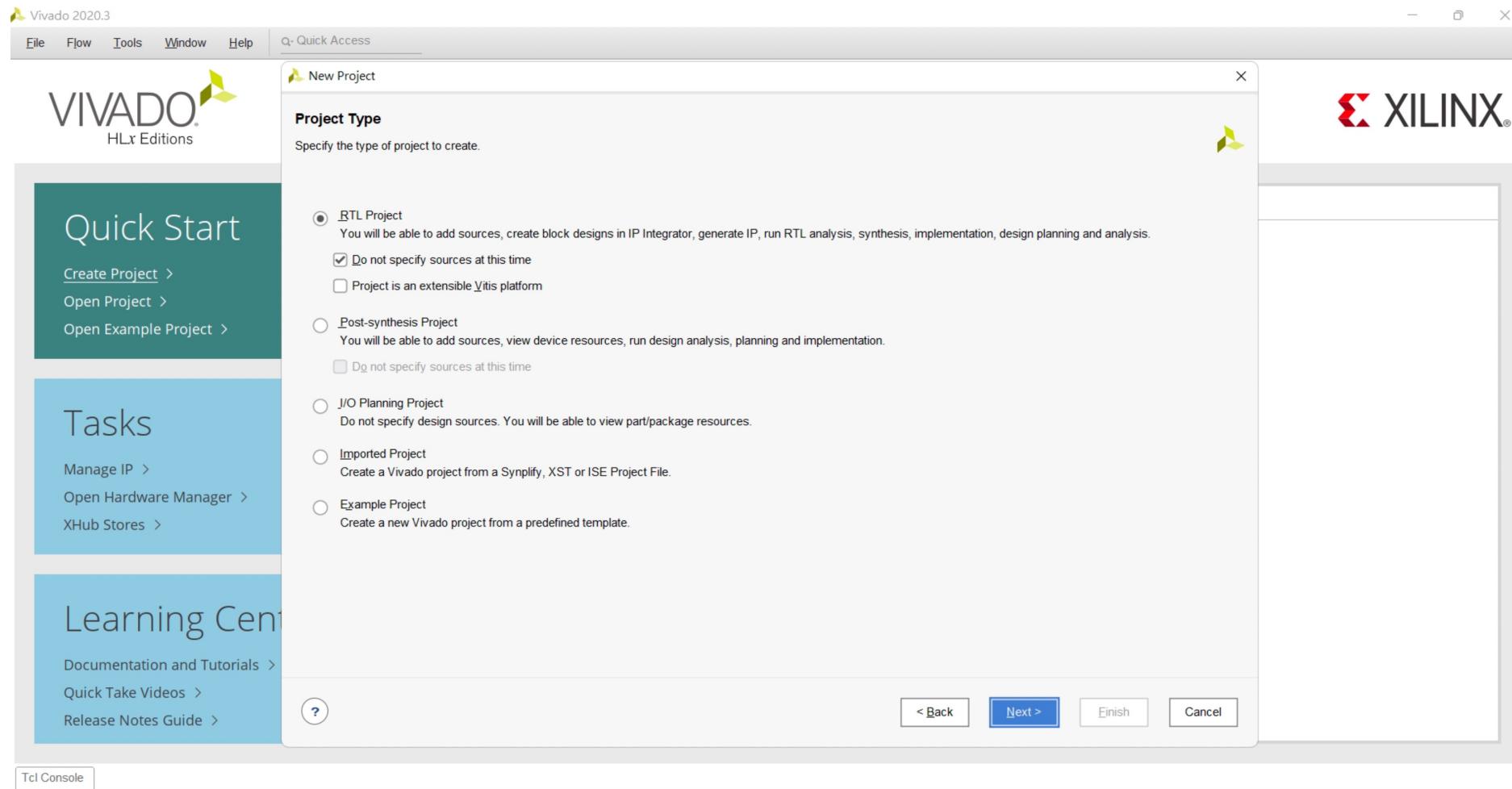
Add Sources and Simulation

Create project

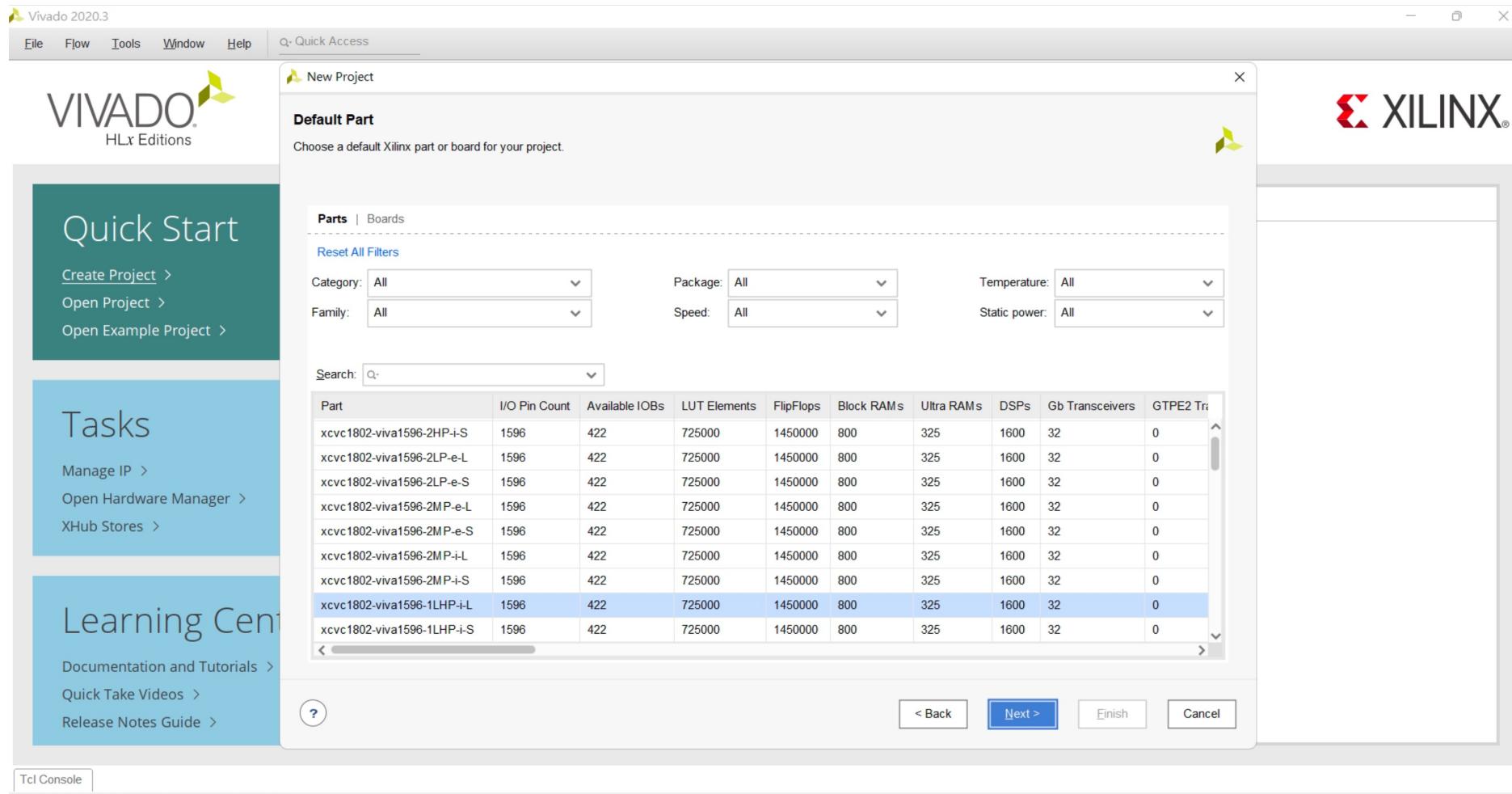


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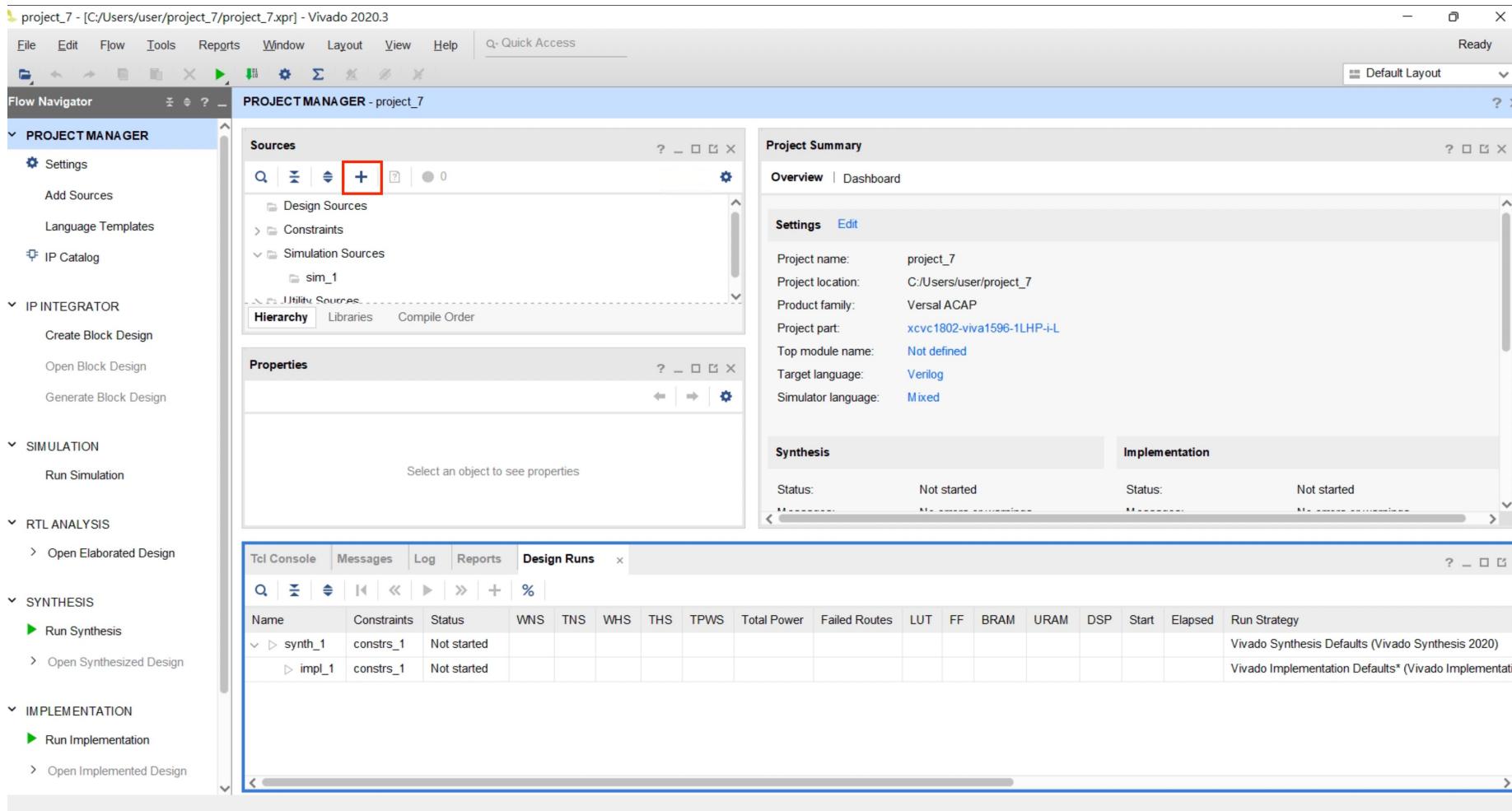
Select project type

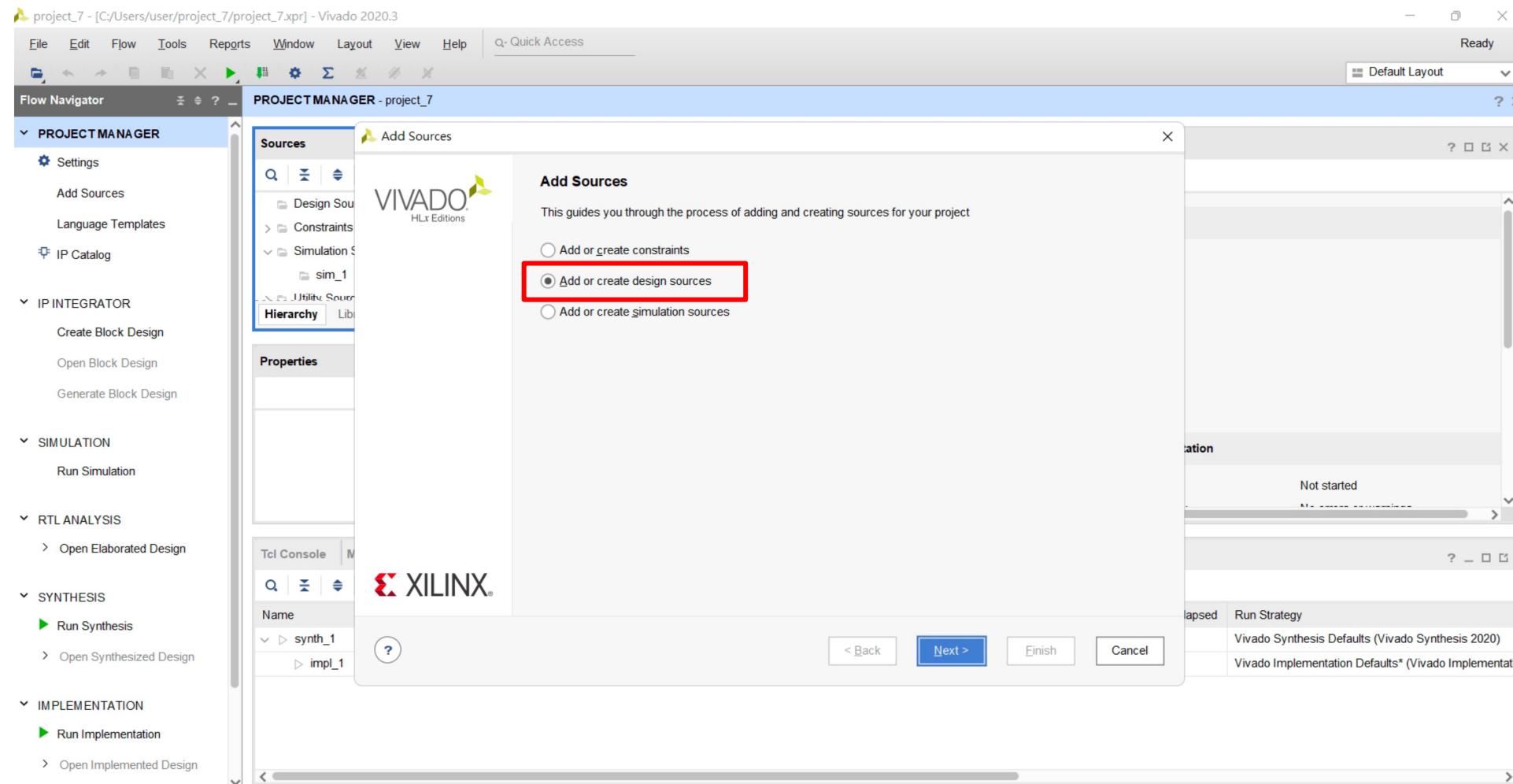


Select default part

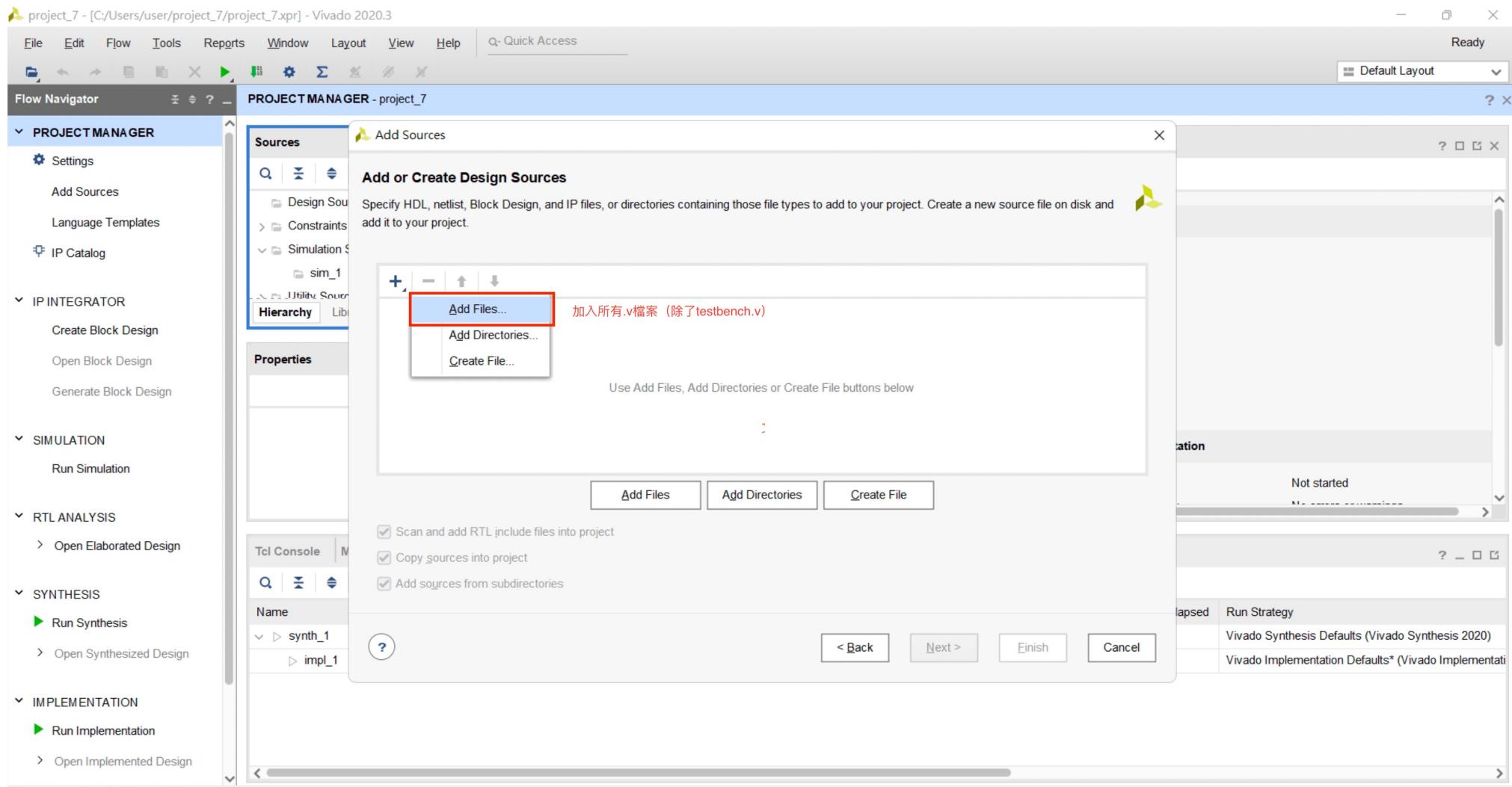


Add design sources

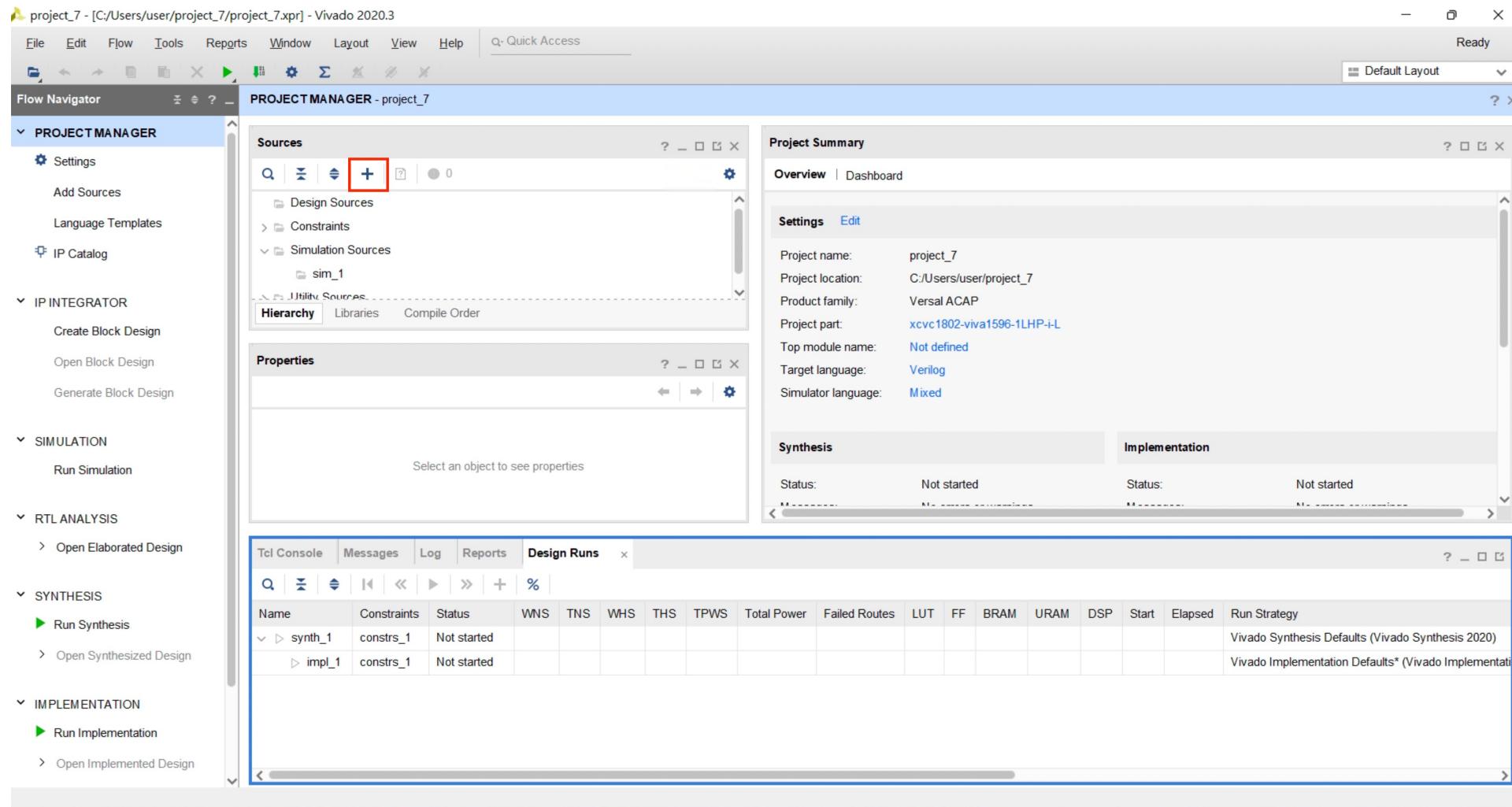


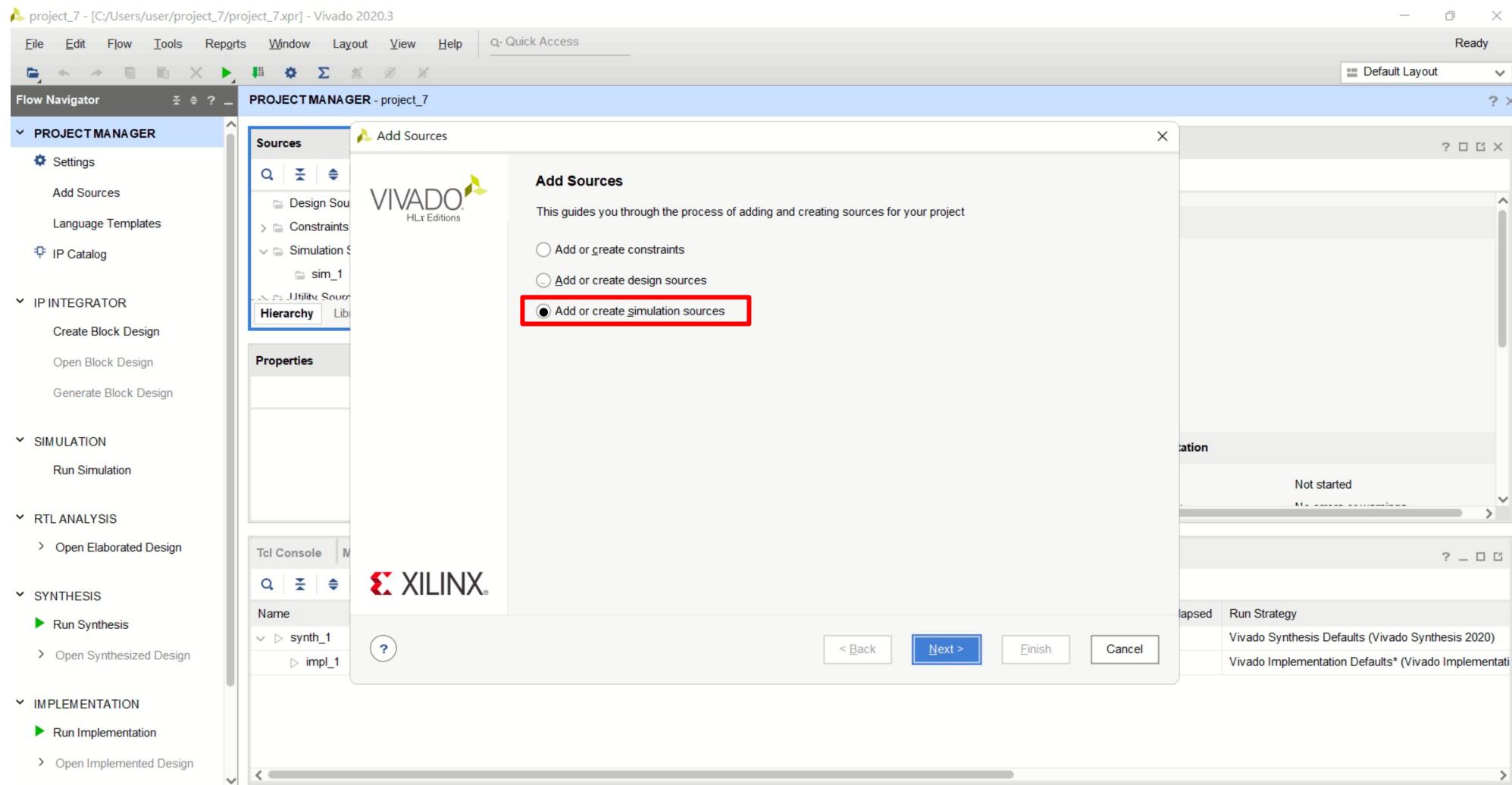


Add .v files (except TestBench.v)

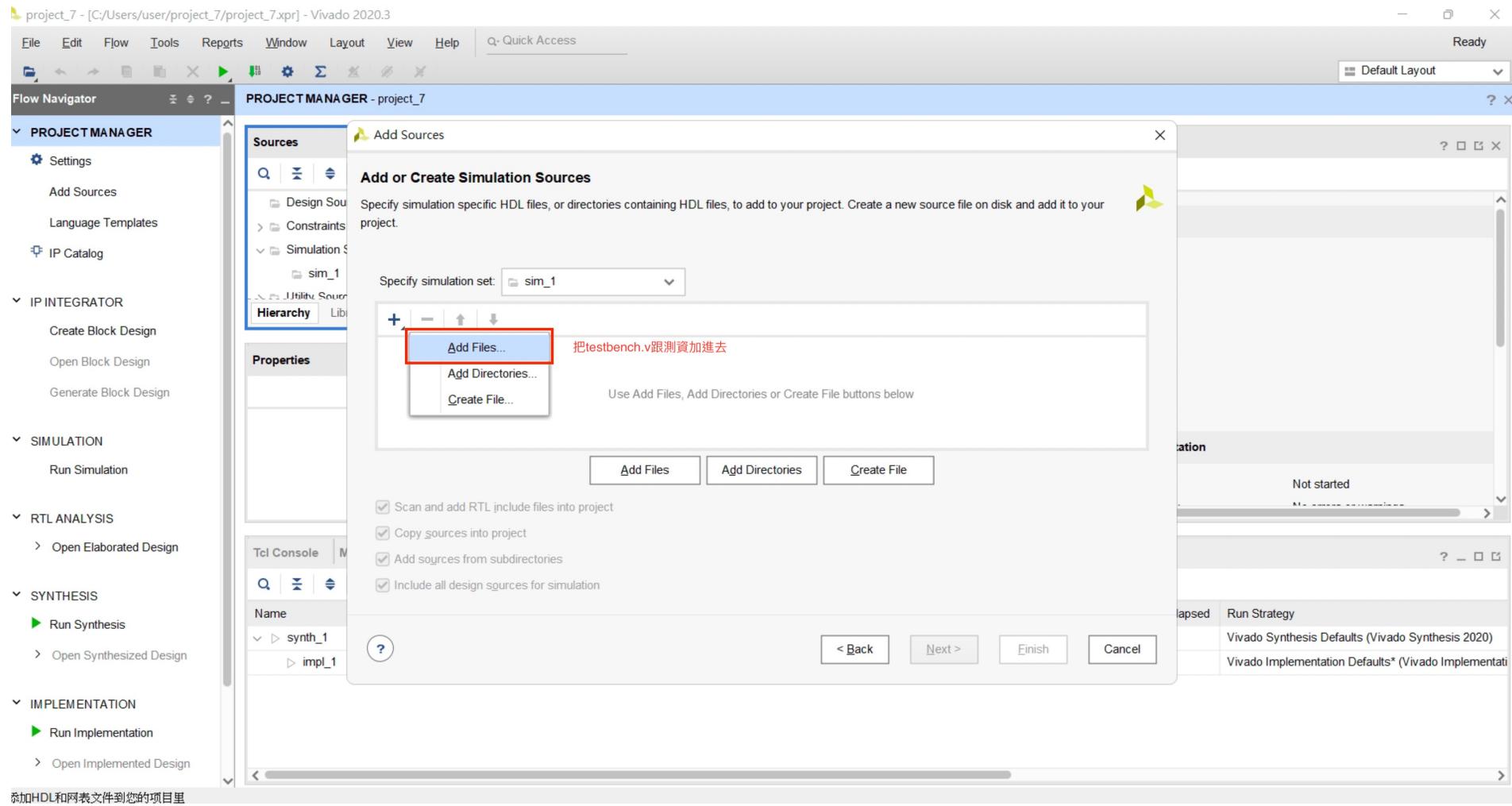


Add simulation sources

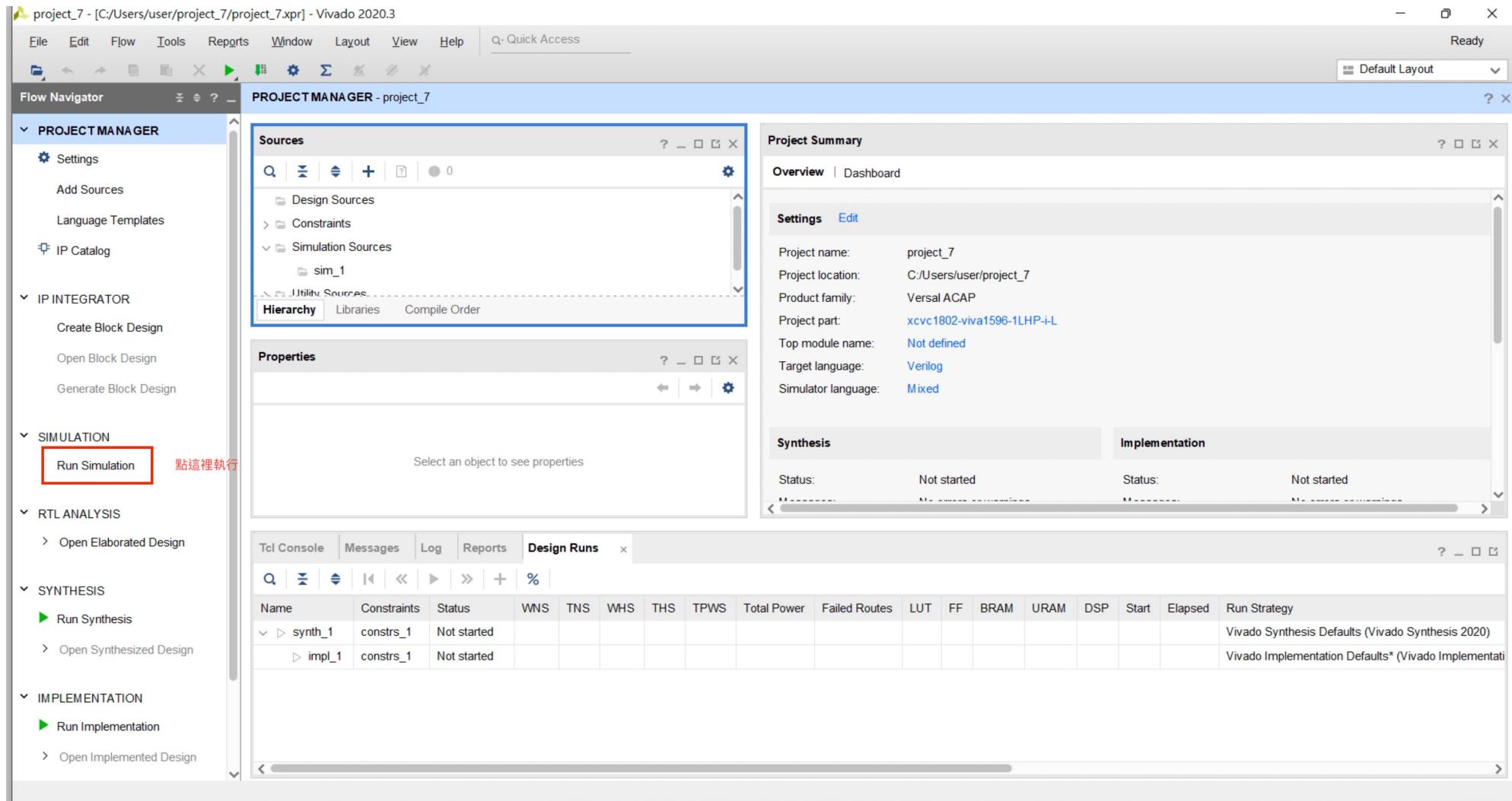




Add TestBench.v and test case file



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.