

UltraFast Design Methodology Checklist Demo Script

Introduction

In this demonstration, you will be introduced to the UltraFast™ Design Methodology Checklist, which is designed to answer common questions and recommend good FPGA design and debugging techniques.

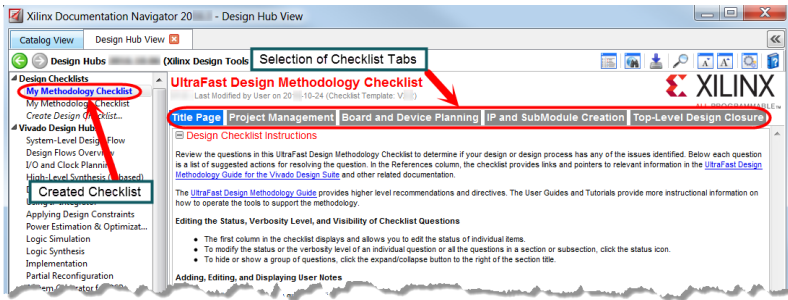
Preparation:

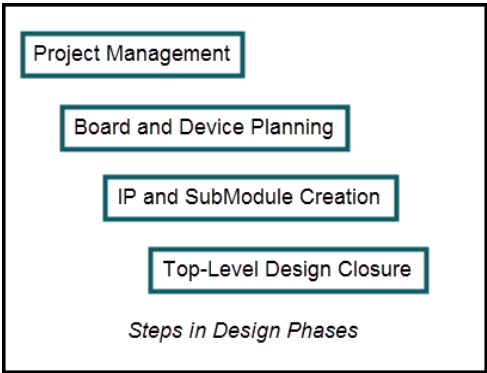
- Required files: None
- Required hardware: None
- Required tools: Document Navigator (DocNav), which is installed along with the Vivado® Design Suite
- Supporting materials: None

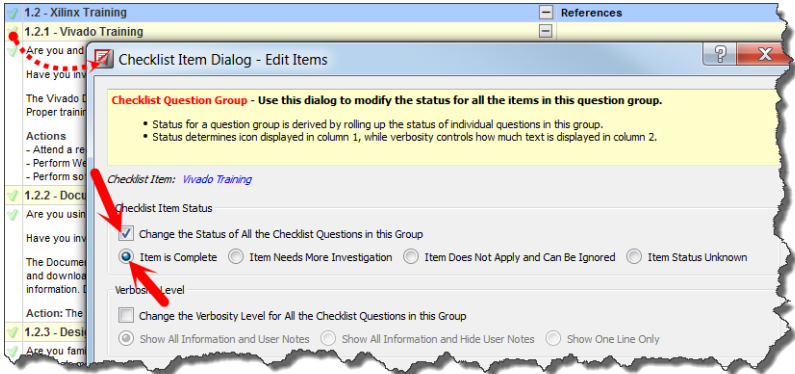
UltraFast Design Methodology Checklist

Action with Description	Point of Emphasis and Key Takeaway
<ul style="list-style-type: none">• Launch the Vivado Design Suite.	
<ul style="list-style-type: none">• Select Help > Documentation and tutorials to open the Documentation Navigator.• If the Documentation Navigator update pop-up appears, click OK.• Click the Update Catalog option from the Documentation Navigator.	<ul style="list-style-type: none">• The Documentation Navigator is an intuitive and powerful tool for navigating, viewing, and searching our technical documentation• The Documentation Navigator is the place where you can access all documentation and videos.

Action with Description	Point of Emphasis and Key Takeaway
<ul style="list-style-type: none"> • Explore the Catalog View tab and document filters. • To access the <i>UltraFast Design Methodology Guide for the Vivado Design Suite</i>: <ul style="list-style-type: none"> • Select Vivado under the Design Tools category. • Select Methodology Guides from the Document type category. • Click the UltraFast Design Methodology Guide for the Vivado Design Suite option to open it. • Browse to any other document based on your interest. • Right-click any document and notice the options. 	<ul style="list-style-type: none"> • The Catalog View tab allows you to access documents of interest. • It is important to understand that at least one device, design tool, or IP must be selected. Likewise, at least one document type and one functional category must be selected to find a document. • All accessed documents will be opened within the Documentation Navigator. • The Documentation Navigator is also allowed to download the documents. • Update the Documentation Navigator if needed.
<ul style="list-style-type: none"> • Explore the Design Hub View tab: <ul style="list-style-type: none"> • Select System-Level Design Flow under the Vivado Design Hubs category. • Select Logic Synthesis in the Design Flow Overview flow chart. 	<ul style="list-style-type: none"> • The Design Hub View tab provides a set of commonly used documentation and videos for quick access. • The System-Level Design Flow provides access to documentation for various design stages in one place. • When you click on any design stage in the Design Flows, the respective design stage page opens and gives access to all the documentation in one place.

Action with Description	Point of Emphasis and Key Takeaway
<ul style="list-style-type: none"> Create a design checklist: <ul style="list-style-type: none"> Click Create Design Checklist under the Vivado Design Checklists category in the Design Hub View tab. Leave the Display Label as "My Methodology Checklist" in the New Design Checklist dialog box and fill in the rest of the details. Click OK to create My Methodology Checklist. 	<ul style="list-style-type: none"> You can have multiple design checklists with the Documentation Navigator. Each checklist corresponds to a single project. You can also delete checklists for completed projects.
	
<ul style="list-style-type: none"> Access the recently created checklist and review the information in the Title Page tab. 	<ul style="list-style-type: none"> This page includes the Design Checklist Instructions, Project Overview, and Project Notes sections. The Project Overview and Project Notes sections will include user information when the project is created.

Action with Description	Point of Emphasis and Key Takeaway
<ul style="list-style-type: none"> Review the organization of the UltraFast Design Methodology Guide from the hyperlink in the Title Page. <p>The UltraFast design methodology checklist is organized by each of the design phases.</p>	<ul style="list-style-type: none"> As you enter each design phase, we recommend that you review the corresponding tab in the checklist and the chapter in the methodology guide. Note that these steps are usually overlapping in time. Sometimes the process might also return to a previous step resulting in iterations.
 <p>The diagram illustrates the sequence of design phases. It consists of four rectangular boxes arranged in a descending staircase pattern from top-left to bottom-right. The boxes are labeled: 'Project Management', 'Board and Device Planning', 'IP and SubModule Creation', and 'Top-Level Design Closure'. Below the boxes, the text 'Steps in Design Phases' is written in a smaller font.</p>	
<ul style="list-style-type: none"> Review the Project Management tab. Go to 1.2 Xilinx Training. Mark the Vivado Training group as completed. Hover the mouse over the grayed tick mark icon on the left side of the "1.2.1 Vivado Training" group and click. In the Checklist Item Dialog box, select the Change the Status of All the Checklist Questions in this Group option, select the Item is Complete option, and click OK. 	<ul style="list-style-type: none"> Once you are done with reviewing each questions and actions in the group, you can mark it as completed.

Action with Description	Point of Emphasis and Key Takeaway
	
<ul style="list-style-type: none"> Review the questions and actions in the rest of the tabs. 	<ul style="list-style-type: none"> While reviewing, click the hyperlinks in the Reference column to visit the corresponding information in the user guides related to the corresponding items. This section focus on the design creation, coding guidelines, and the timing closure parts of the UltraFast design methodology. For more information about the rest of the UltraFast design methodology, review the <i>UltraFast Design Methodology Guide for the Vivado Design Suite</i> (UG949)

Summary

The UltraFast design methodology checklist is designed as a guide for designers to assist them in getting their design to operate reliably and at the desired system speed.

References:

- Supporting materials
 - Chapter 1 of *UltraFast Design Methodology Guide for the Vivado Design Suite* (UG949)