Development of Virtual lab :Round 2 (R2)-Storyboard - Template (Worksheet)

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Discipline to which the Lab belongs: computer information technology

Name of the Lab: WELCOME TO LOGIC DESIGN AND COMPUTER ORGANISATION LAB

Name of experiment : carry look ahead adder

(only one Experiment per worksheet):

Kindly Refer these documents before filling the worksheet

Coursework (MOOC) on Pedagogy , Storyboard , Lab Manual : http://bit.ly/Vlabs-MOOC

Additional Documentation booklet for reference. http://vlabs.iitb.ac.in/vlabs-dev/document.php

Sample Git Repository. :http://github.com/ankitkunta18/virtual-lab.git

Round 2

1. Story Outline:

Choose the input A and B. select the last digt of A and B which will be denoted as Ai and Bi. choose another input Ci(0,1). then with the help of logic gates Pi is calculated. now the arry input will be generated as Gi. now the value of sum and carry will be displayed as Pi and Ci through Exclusive OR gate.

2. Story:

2.1 Set the Visual Stage Description:

Inputs are given visually to the gates.Both the inputs entered passes through the gates and perforn the operation of sum and carry.Then the respective outpusts are displayed visually to the user so that the user can understand the experiment properly.

2.2 Set User Objectives & Goals:

The main objective of this experiment is to perform the experiment of carry look ahead adder virtually using gates.

The goal of this experiment is to make the user understand the concepts of carry look ahead adder virtually.

2.3 Set the Pathway Activities:

Input the four digit value in a and B .select the respective Ai and Bi. enter the value of Ci and hence the operation is performed .now the sum and carry is displayed.

2.4 Set Challenges and Questions/Complexity/Variations in Questions:

Q1. Which one of the following is better way to compute sum in less time?

Q2.Give the correct formula of Pi and Gi?

2.5 Allow pitfalls:

1.Wrong implementation of procedure will generate wrong value.

2.Knowledge of logic gates is required.

2.6 Conclusion:

The addition of two biary numbers in less time is displayed.

2.7 Equations/formulas:

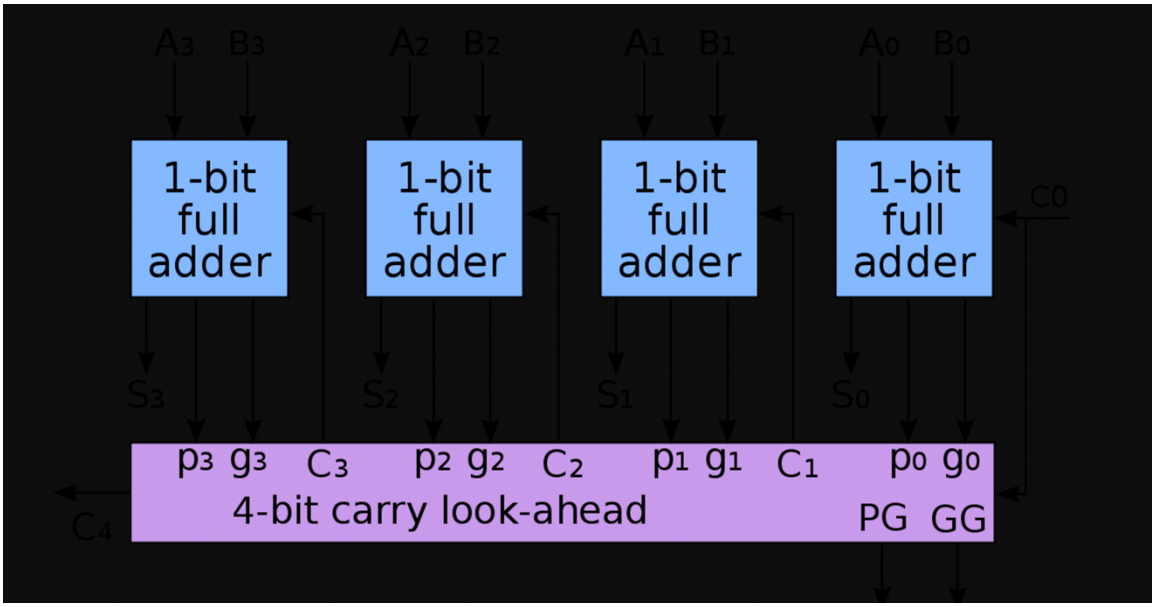
Pi=Ai*Bi~ +Ai~ *Bi

Gi=Ai*Bi

Si=Pi*Ci~+Pi~*Ci

C(i+1)=Gi+Pi*Ci

3. Flowchart



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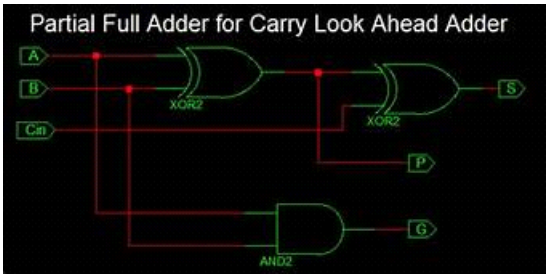
4. Mindmap



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5. Storyboard

Choose the input A and B. select the last digt of A and B which will be denoted as Ai and Bi. choose another input Ci(0,1). then with the help of logic gates Pi is calculated. now the arry input will be generated as Gi. now the value of sum and carry will be displayed as Pi and Ci through Exclusive OR gate.

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