NUST CHIP DESIGN CENTRE

Digital Design Verification

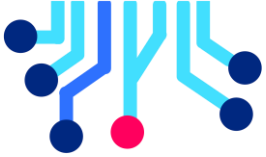
Tasks

RISC-V – Procedures

Release: 1.0

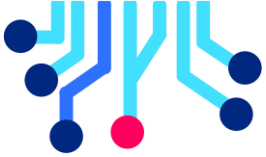
Date: 9-Sep-2024

NUST Chip Design Centre (NCDC), Islamabad, Pakistan

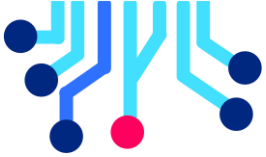


Revision History

Revision Number	Revision Date	Revision By	Nature of Revision	Approved By
1.0	3/06/2024	Muhammad Imran	Complete manual	-



Contents



Objective

The objective of this lab is to:

- Practice implementing assembly language tasks.

Tools

- Venus

Task 1

Implement a RISC-V assembly language procedure, named **multiply**, which performs multiplication of two signed numbers without using multiply (mul) instruction. Assume that the numbers are in a0 and a1 and after multiplication, the result is stored in a2. Call the function from main procedure to verify its functionality.

Task 2

Implement a RISC-V assembly language procedure, named **divide**, which performs the division of two signed numbers without using divide (div) instruction. Assume that the numbers are in a0 and a1 and after division (a0/a1), the quotient is in a2 while the remainder is in a3. Call the function from main to verify its functionality.