CENG 3420 Lab2 Report

Name: Wong Wai Chun SID:1155173231

Lab2.1

Implementation

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Result:

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一張含有 文字 的圖片

自動產生的描述

Lab2.2

Implementation

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A screenshot of a computer

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         \* Lab2-2 assignment: Decode other types of RV32I instructions

         \*/

        case (0x33) :                        //R-type

            switch(funct3){

                case 0:

                    if(MASK31\_25(cur\_inst) == 0){

                        handle\_add(cur\_inst);

                    }else{

                        handle\_sub(cur\_inst);

                    }

                    break;

                case 1: handle\_sll(cur\_inst);break;

                case 4: handle\_xor(cur\_inst);break;

                case 5:

                    if(MASK31\_25(cur\_inst) == 0){

                        handle\_srl(cur\_inst);

                    }else{

                        handle\_sra(cur\_inst);

                    }

                    break;

                case 6: handle\_or(cur\_inst);break;

                case 7: handle\_add(cur\_inst);break;

                default:error("unknown opcode 0x%08x is captured.\n", cur\_inst);

            }break;

        case (0x3):             //load

            switch(funct3){

                case 0: handle\_lb(cur\_inst);break;

                case 1: handle\_lh(cur\_inst);break;

                case 2: handle\_lw(cur\_inst);break;

                default:error("unknown opcode 0x%08x is captured.\n", cur\_inst);

            }break;

        case (0x23):            //S-type

            switch(funct3){

                case 0: handle\_sb(cur\_inst);break;

                case 1: handle\_sh(cur\_inst);break;

                case 2: handle\_sw(cur\_inst);break;

                default:error("unknown opcode 0x%08x is captured.\n", cur\_inst);

            }break;

        case (0x63):                //B-type

            switch(funct3){

                case 0: handle\_beq(cur\_inst);break;

                case 1: handle\_bne(cur\_inst);break;

                case 4: handle\_blt(cur\_inst);break;

                case 5: handle\_bge(cur\_inst);break;

                default:error("unknown opcode 0x%08x is captured.\n", cur\_inst);

            }break;

        case (0x6F): handle\_jal(cur\_inst);break;

        case (0x67): handle\_jalr(cur\_inst);break;

        case (0x37): handle\_lui(cur\_inst);break;

        default:

            error("unknown instruction 0x%08x is captured.\n", cur\_inst);

    }

Result:

Text

Description automatically generatedA picture containing calendar

Description automatically generated

A picture containing background pattern

Description automatically generated一張含有 文字 的圖片

自動產生的描述

A picture containing text

Description automatically generated一張含有 文字 的圖片

自動產生的描述

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