CS220 ASSIGNMENT 7

PDS1

We have taken

register 0 as zero register,

registers 1 to 8 as s0 to s1 respectively,

registers 9 to 16 as t0 to t1 respectively,

Register 17 = reserved for assembler,

Register 18-20 = values from expression and function results,

Register 21-24 = parameters for functions,

Registers 25-30 = saved values represnting final result,

register 31 is the return address when function call is maderegister
The functions of the registers is as per MIPS standards.

PDS2

Register Memory (as per standards) = 32 * 32

Instruction Memory = 256 * 32

Data Memory = 1024 * 32

PDS3

(1) R- Type Instruction

Opcode = [31:26] = 6 bits

Rs = [25:21] = 5 bits

Rt = [20:16] = 5 bits

Rd = [15:11] = 5 bits

Shamt = [10:6] = 5 bits

Funct = [6:0] = 6 bits

(2) I- Type Instruction

Opcode = [31:26] = 6 bits

Rs = [25:21] = 5 bits

Rt = [20:16] = 5 bits

Address / constant = [15:0] = 16 bits

(3) J-Type Instruction

Opcode = [31:26] = 6 bits

Jump address = [25:0] = 26 bits