
GROUP 9

Class Description

October 8, 2014

DESCRIPTION

package	Class Name	What it is	What it does
edu.gwu.com mon	Util	This is the class for utility	It provides methods: <ol style="list-style-type: none"> 1. Get current time 2. Transformation between Bits and Integer 3. Transformation between Bits and binary-format String 4. Merge list 5. Other commonly used methods
edu.gwu.core	Cache	A class for cache that implements Memory Interface	It provides methods: <ol style="list-style-type: none"> 1. For reading: <ol style="list-style-type: none"> 1. hit: return value 2. miss: load block (replace an exist one under FIFO if necessary) and return the value 2. For writing: <ol style="list-style-type: none"> 1. hit: modify value in cache and memory (write-through) 2. miss: load block (replace an exist one under FIFO if necessary), modify value in cache and memory. (write-through)
	CPU	A class to simulate CPU	It contains: <ol style="list-style-type: none"> 1. Registers like : R0,R1... It provides methods: <ol style="list-style-type: none"> 1. start a new thread for simulating 2. pause the thread as required (debug,or I/O)
	MainMemory	A class to simulate Main memory	It provides methods: <ol style="list-style-type: none"> 1. write 2. read
	Memory	Interface	It provides a protocol for all different kinds of memories(cache, MainMemory)
	ProgramCom piler	This is used to compile instruction code into binary code	It provides methods <ol style="list-style-type: none"> 1. compile code into binary code

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	Register	A class to simulate register	It provides methods: 1. write 2. read It contains information: 1. register name 2. size (how many bits) 3. data
	Setting	simulator setting	It includes information: 1. how long is a WORD 2. size of main memory 3. size of cache 4. ...
	IODevice	Interface	It provides a protocol for all different kinds of IO devices
	Log	A class for log system information	It provides method: 1. add log messages 2. consume messages
edu.gwu.core.basic	InstructionCircle	A class for defining an instruction circle	It defines: 1. type of this circle 2. necessary parameters of this circle
	InstructionCircles	A class for defining a list of circles to group into an instruction	It defines: 1. a list of circles
	InstructionInfo	A class for describing an instruction	It includes information: 1. binary code style (each bit means for) 2. instruction style
	InstructionSet	All the circle list	It defines: 1. instruction set
	InstructionSetInfo	All the circles' information	It stores the list of circle informations
	CPUOutputSignalBuffer	A class for the output buffer of CPU	It stores output signals for all different kinds of devices. One device can read outputs for it from this buffer.

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	Word	A class for a word in our system	It defines the attributes of the word
edu.gwu.exception	IllegalInstructionCodeException	This is the class for illegal instruction code exception.	It defines the action to handle the illegal instruction code exception.
	IllegalMemoryAddressException	This is the class for illegal memory address exception	This is the class for illegal memory address exception. It defines the action to handle the illegal memory address exception.
	IllegalOperationCodeException	This is the class for illegal operation code exception.	This is the class for illegal memory address exception. It defines the action to handle the illegal memory address exception.
	IllegalTrapCodeException	This is the class for illegal trap code exception.	It defines the action to handle the illegal trap code exception.
	InstructionExecuteException	This is the class for instruction executing exception.	It defines the action to handle the instruction executing exception.
	RegisterNotFoundException	This is the class for register not found exception.	It defines the action to handle the register not found exception.
edu.gwu.frame	CachePanel	This is the GUI class for the cache module	It displays the information of cache
	CodeLoader	This is the GUI class for the code loader module	It loads the instructions entered by users to the main memory
	ConsolePanel	This is the GUI class for the console module	It displays the executing information of the instructions
	KeyboardPanel	This is the GUI class for the keyboard module	It simulates the keyboard to let the users enter information
	MainFrame	This is the GUI class for the main frame module	It integrates the different modules and shows them

package	Class Name	What it is	What it does
	MemoryPanel	This is the GUI class for the printer module	It shows the information stored in memory
	RegisterPanel	This is the GUI class for the printer module	It shows the information of all registers
	PrinterPanel	This is the GUI class for the printer module	It displays the results of users' operation.
