**Class: X86CPU.java**

Function: SingleStep()

simulate the action of “SINGLE STEP” pc = pc + 1, set new MAR MBR

Function: GetMar()

Output: the string content of MAR

Function: GetMbr()

Output: the string content of MBR

**Class: X86GPRegister.java**

Function: GetValueWithInt(int i8Idx)

Input: the index of register.

Output: the decimal content of the register

Function: GetBinaryString(int i8Idx)

Input: the index of register.

Output: the binary content of the register

**Class: X86PCRegister.java**

Function: GetValueWithInt(int i8Idx)

Input: the index of register.

Output: the decimal content of the register

Function: GetBinaryString(int i8Idx)

Input: the index of register.

Output: the binary content of the register

**Class: X86PCMemory.java**

Function: GetContent()

Output：A two-digit array ，fist is the address, second is the value

**Class: Instruction.java**

Function: store\_content (String content\_16\_now)

Input: the Hexadecimal string of instruction

Save by structure of instruction

**Class: X86ArchSimulator**

Build the GUI and simulator the architecture.