

```

public class IF_ID {

    //Properties
    Instruction_ instruction_write = new Instruction_();
    Instruction_ instruction_read = new Instruction_();
    //read
    int incrPC_read = 0;
    String inst_read = "0";
    //write
    int incrPC_write = 0;
    String inst_write = "0";

    //Constructors
    public IF_ID(){

    }

    //Methods

    public void runThisStageWrite( DataCycle theCycle ){
        setDataWrite(theCycle);
    }

    public void runThisStageRead(){
        this.setDataRead();
    }

    private void setDataWrite( DataCycle theCycle ){
        this.instruction_write = theCycle.getInstructionInSetOfInstructionsObjects(
this.incrPC_write );
        this.inst_write = theCycle.getInstructionsAtIndex( incrPC_write );
        this.incrPC_write ++;
    }

    public void setDataRead(){
        this.instruction_read = this.instruction_write;
        this.incrPC_read = this.incrPC_write;
        this.inst_read = inst_write;
    }

    //getters and setters

    public String getInst_read() {
        return inst_read;
    }
    public void setInst_read(String inst_read) {
        this.inst_read = inst_read;
    }
    public String getInst_write() {
        return inst_write;
    }
    public void setInst_write(String inst_write) {
        this.inst_write = inst_write;
    }
}

```

