## Program

int \_length
Node \* \_head
list <Function> myfunc;

- +Program()
- +Program(Program const&)
- +Program (FILE \* )
- +~Program()

...

#### Instruction

t\_Operator \_op

t\_Format \_format

t Inst type

Operand \*\_op1

Operand \*\_op2

Operand \*\_op3

int \_nbrOper

- +Instruction(string, t\_Operator,
- t Format, t Inst, Operand \*, Operand
- \*, Operand \*)
- +virtual ~Instruction()
- +Operand\* getOp1()
- +void setOp1(Operand \*)
- +Operand\* getOp2()
- +void setOp2(Operand \*)
- +Operand\* getOp3()
- +void setOp3(Operand \*)
- +t\_Operator getOPcode()
- +string stringOPcode()
- +void setOPcode(t\_Operator)
- +t\_Format getFormat()
- +t\_Inst getType()
- +virtual t\_Line typeLine()
- +virtual string toString()
- +virtual string getContent()
- +void setContent(string)
- +string stringForm()
- +string stringType()
- +t\_Dep is\_dependant(Instruction)
- +bool RAW(Instruction)
- +bool WAR(Instruction)
- +bool WAW(Instruction
- +int getNumberOper()
- +void setNumberOper(int)
- +virtual bool isFunction()
- +Operand \* getRegDst()
- +Operand \* getRegSrc1()
- +Operand \* getRegSrc2())

### **OPExpression**

- +OPExpression(string)
- +virtual ~OPExpression()
- +virtual string getOp()
- +virtual t OpType getOptype()
- +virtual string toString()
- +virtual void setOp( string)
- +virtual t Src Dst getType()

#### Node

Node \* \_next Line \* \_content

- +Node(Line \* content)
- +~Node()
- +Node \* getnext()
- +void setNext(Node \*r)
- +Line \* getLine()
- +void setLine(Line \* )

# Label

- +Label(string)
- +virtual ~Label()
- +virtual string getContent()
- +virtual void setContent(string)
- +virtual t Line typeLine()
- +virtual string toString()
- +virtual bool isFunction()
- +virtual t\_Inst\_getType()

# Operand Abstract

string \_oper

- +virtual ~Operand() +virtual string getOp()
- Lyintual vaid actOn(atring)
- +virtual void setOp(string)
- +virtual t\_OpType
- getOptype()
- +virtual string toString()
- +virtual t\_Src\_Dst getType()



#### **Directive**

Line

string \_line

+virtual ~Line()

+virtual string getContent()

+virtual t Line typeLine()

+virtual string toString()

+virtual t\_Inst\_getType()

+virtual bool isFunction()

+virtual void setContent(string)

string \_dir string \_value bool \_isfunction

- +Directive(string)
- +Directive(string, string)
- +Directive(string,string,bool)

Abstract

- +virtual ~Directive()
- +virtual string getContent()
- +virtual void setContent(string)
- +virtual t Line typeLine()
- +virtual string toString()
- +bool isFunction()
- +virtual t\_Inst\_getType()

## **OPRegister**

int\_reg t Src Dst type

- +OPRegister(string, t Src Ds)
- +OPRegister(string, int,t\_Src\_Ds)
- +OPRegister( int ,t\_Src\_Ds)
- +virtual ~OPRegister()
- +int getReg()
- +void setReg( int)
- +virtual string getOp()
- +virtual t\_OpType getOptype()
- +virtual string toString()
- +virtual void setOp( string)
- +virtual t\_Src\_Dst getType()
- +void setType(t\_Src\_Dst )

### OPLabel

- +OPLabel(string)
- +virtual ~OPLabel()
- +virtual string getOp()
- +virtual t\_OpType getOptype()
- +virtual string toString()
- +virtual void setOp( string)
- +virtual t Src Dst getType()

#### **OPImmediate**

- +OPImmediate(string)
- +OPImmediate(int)
- +virtual ~OPImmediate()
- +virtual string getOp()
- +virtual t\_OpType getOptype()
- +virtual string toString()
- +virtual void setOp( string)
- +virtual t\_Src\_Dst getType()