

Procedural Programming

- sequence
- selection
- iteration

10/09/2015

Proced-oriented Programming

- inheritance (constructing new things by existing things)
- encapsulation.
- polymorphism.

14/03/2015

Program Development (Software Development)

Analysis: understand the problem

Determine inputs & outputs

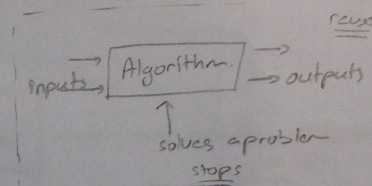
Design: Developing algorithm.

pseudo code: like natural language (Java)

flowchart: graphical representation of steps.

implementation/coding

→ Mapping steps into a programming language
(like sorting numbers)



Testing

Bugs: Error

Debug, Debugging: correcting program

Deployment: use

Maintenance

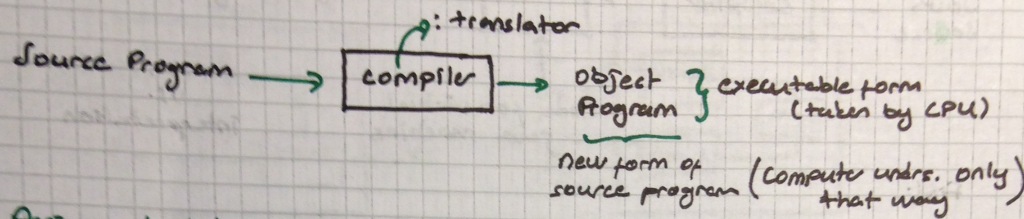
Effectiveness: correctness

Efficient; (time), (memory)

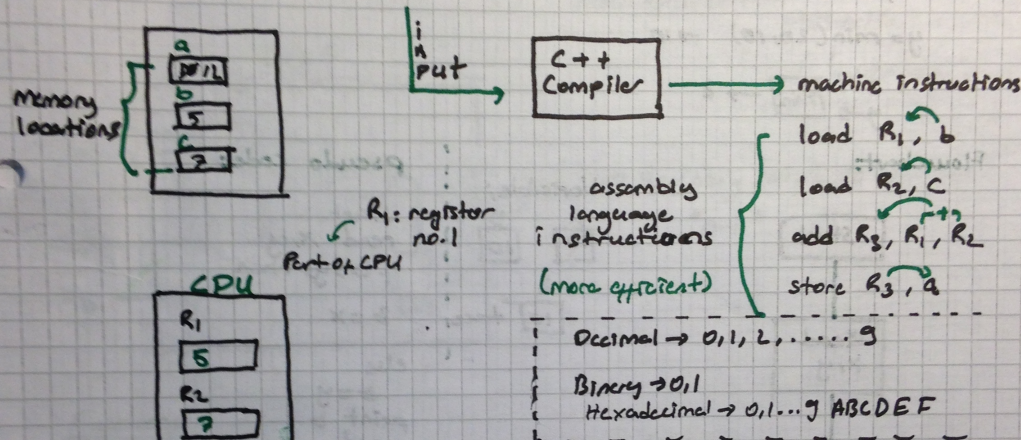
1st Chapter:

17/09/2016

$y = f(x) \rightarrow$ Algorithms are like that function $\equiv$ method



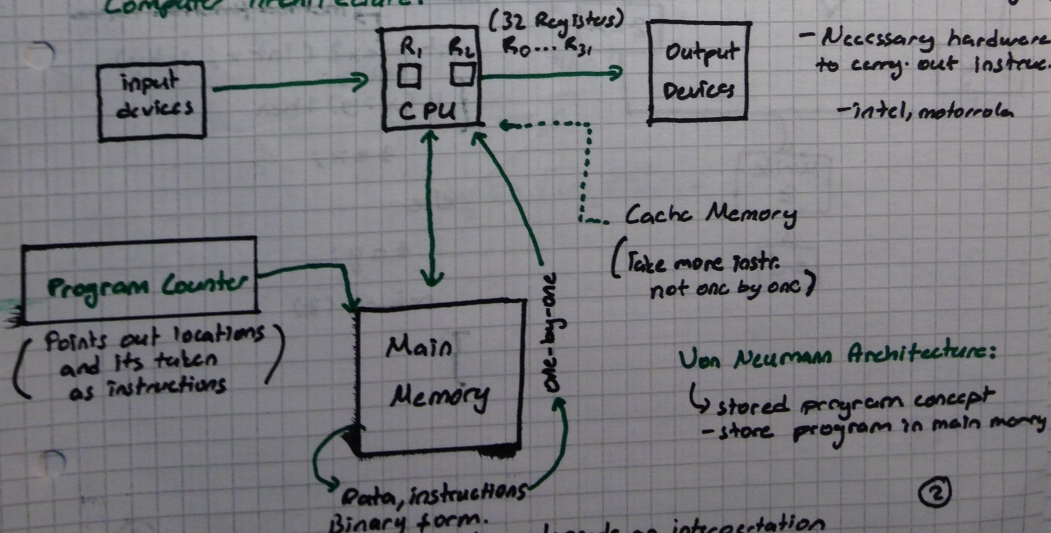
Assignment Statement: $a = b + c;$



Harddisk: I/O Device

CPU: Central Processing Unit

Computer Architecture:

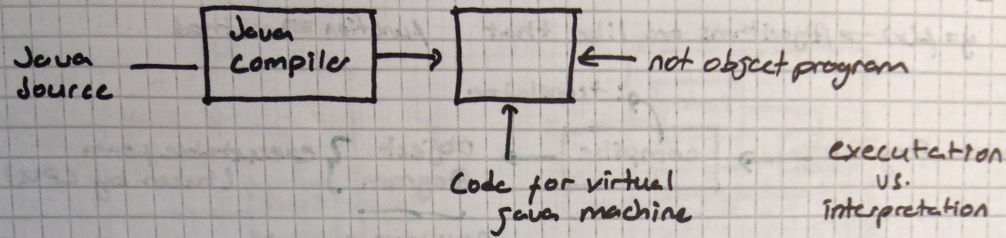


Von Neumann Architecture:

- stored program concept
- store program in main memory

②

For Java;



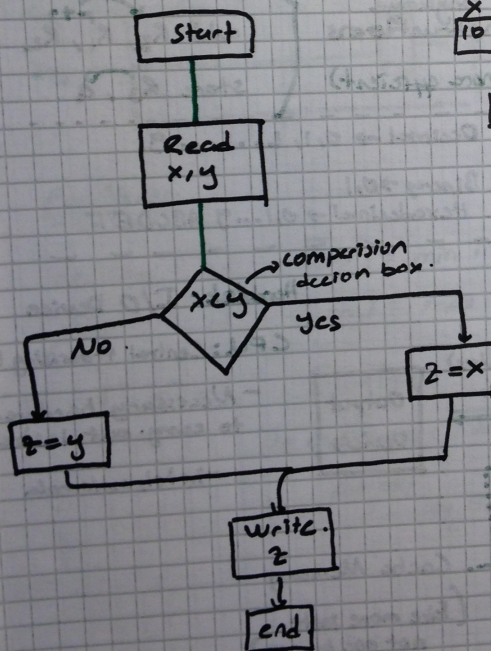
Find;

Min of two numbers;

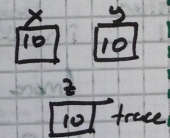
$y = \min(20, 10) \rightarrow 10$

$x \rightarrow \text{min} \rightarrow z$
 $y \rightarrow \text{min} \rightarrow z$

Flowchart:



Variable;



pseudo code:

```
start
read x, y
if (x > y) then
    z = x
else
    z = y
print z
end
```

Java:

method function name

```
int max2 (int x, int y)
int z;
{
    if (x > y) then
        z = x;
    else
        z = y;
    return (z);
}
```