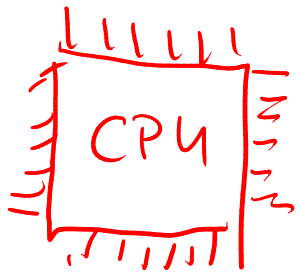
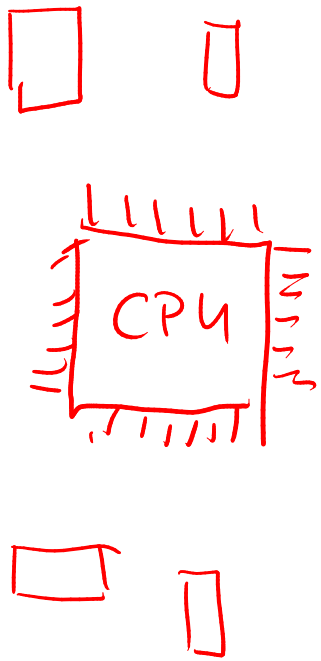
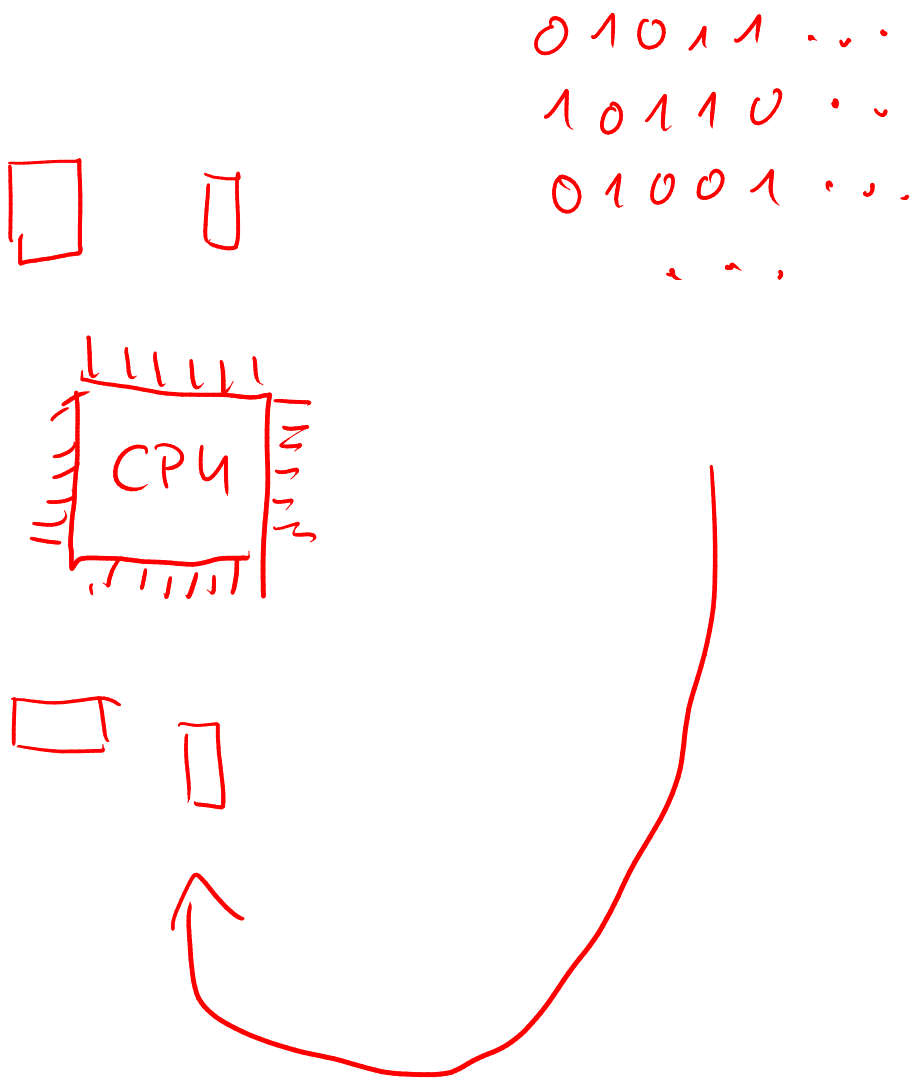
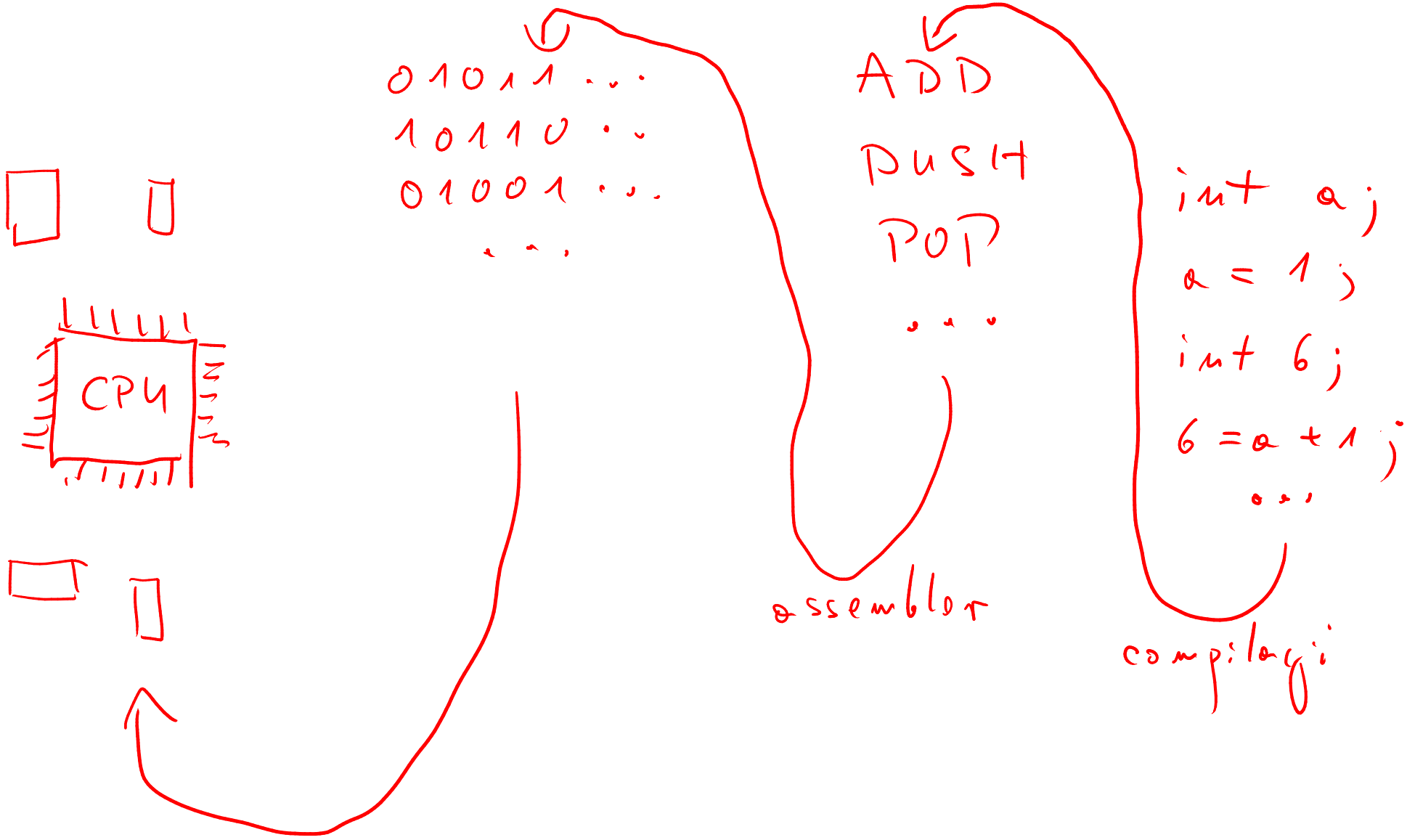
python for beginners 1

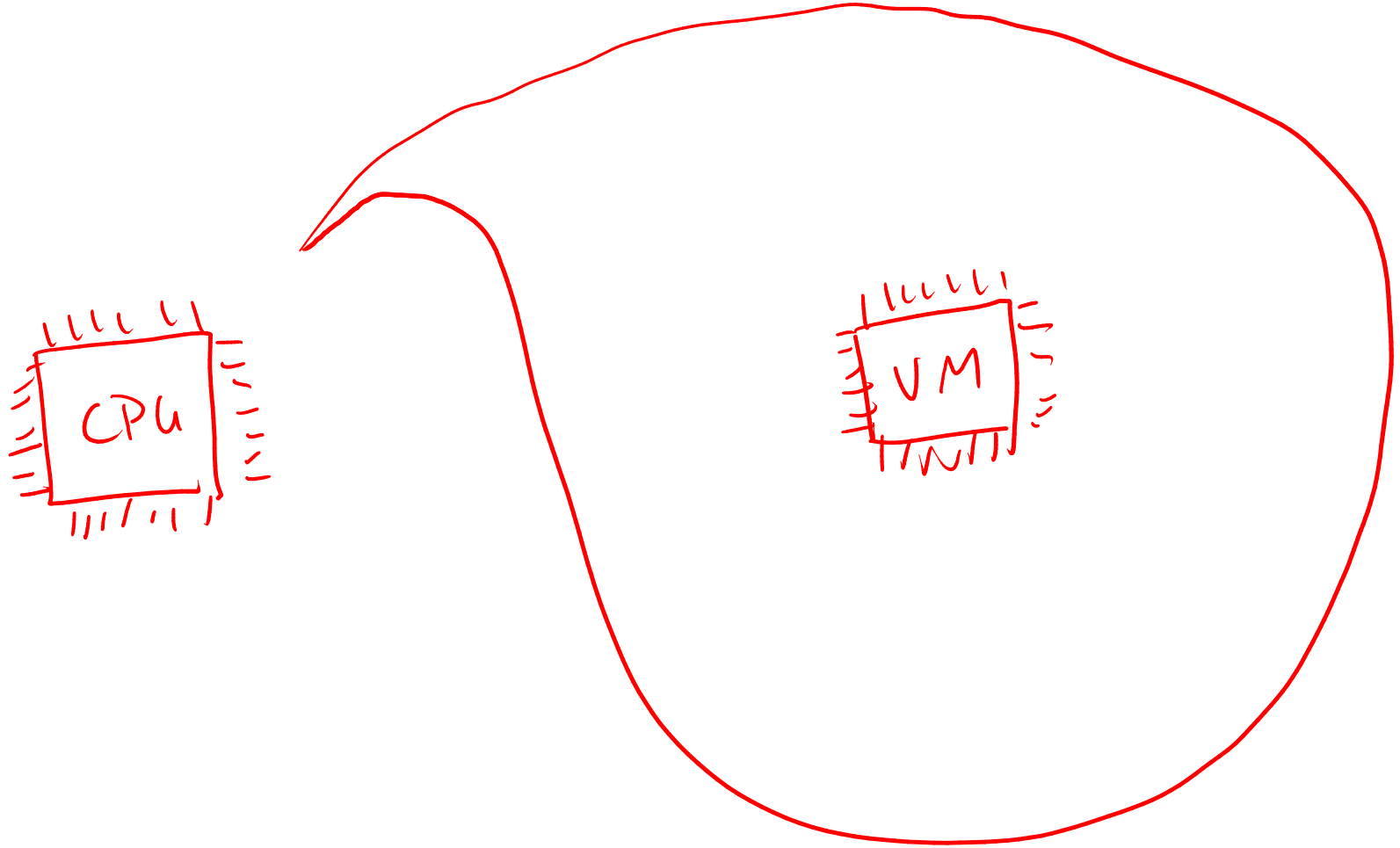
kacper.topolnicki@uj.edu.pl

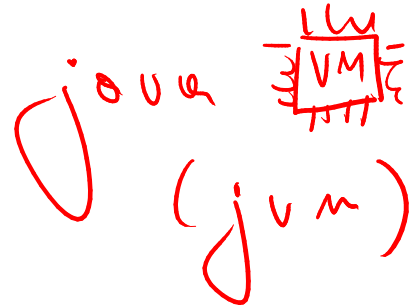

CPU

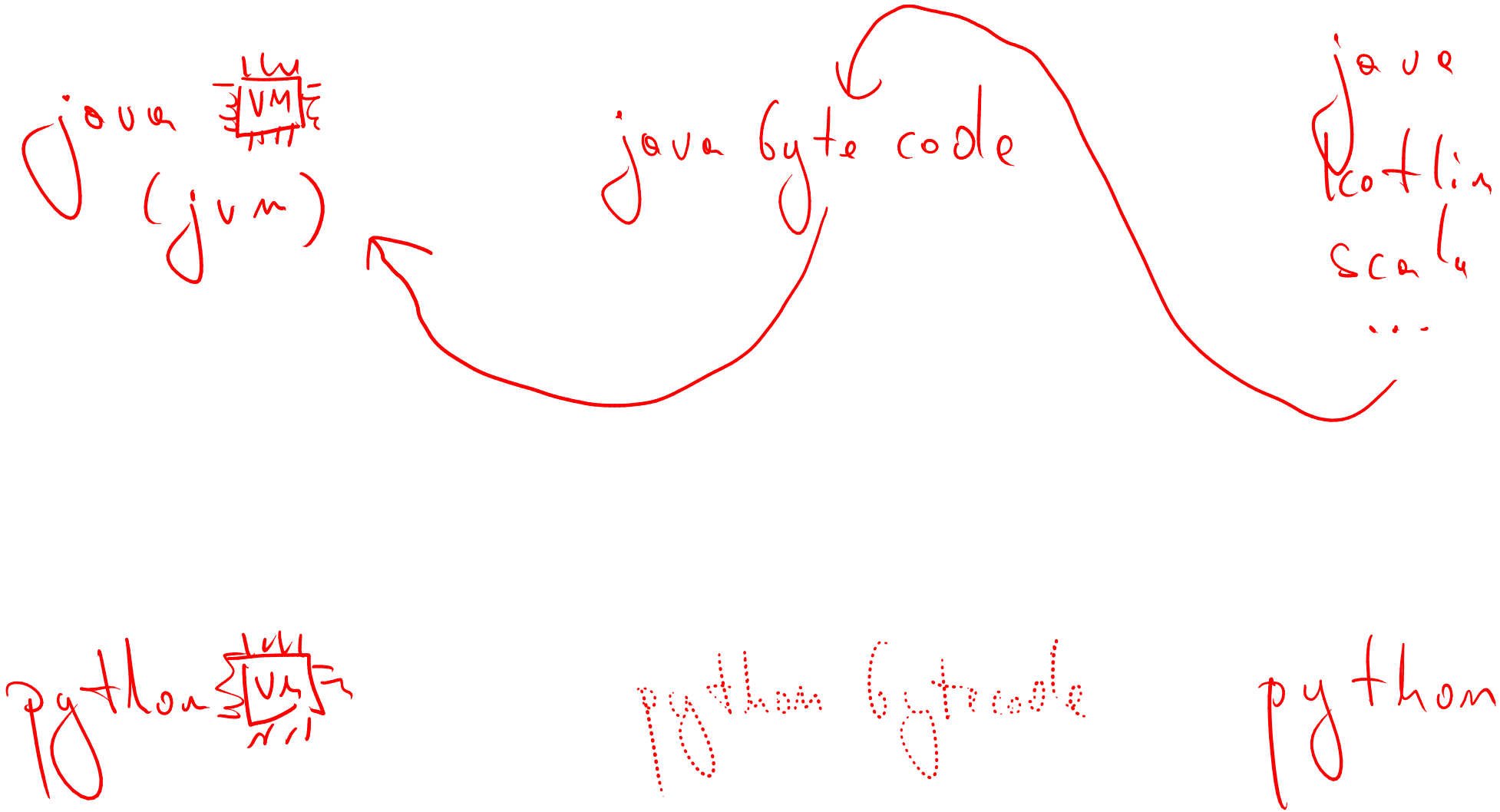

CPU

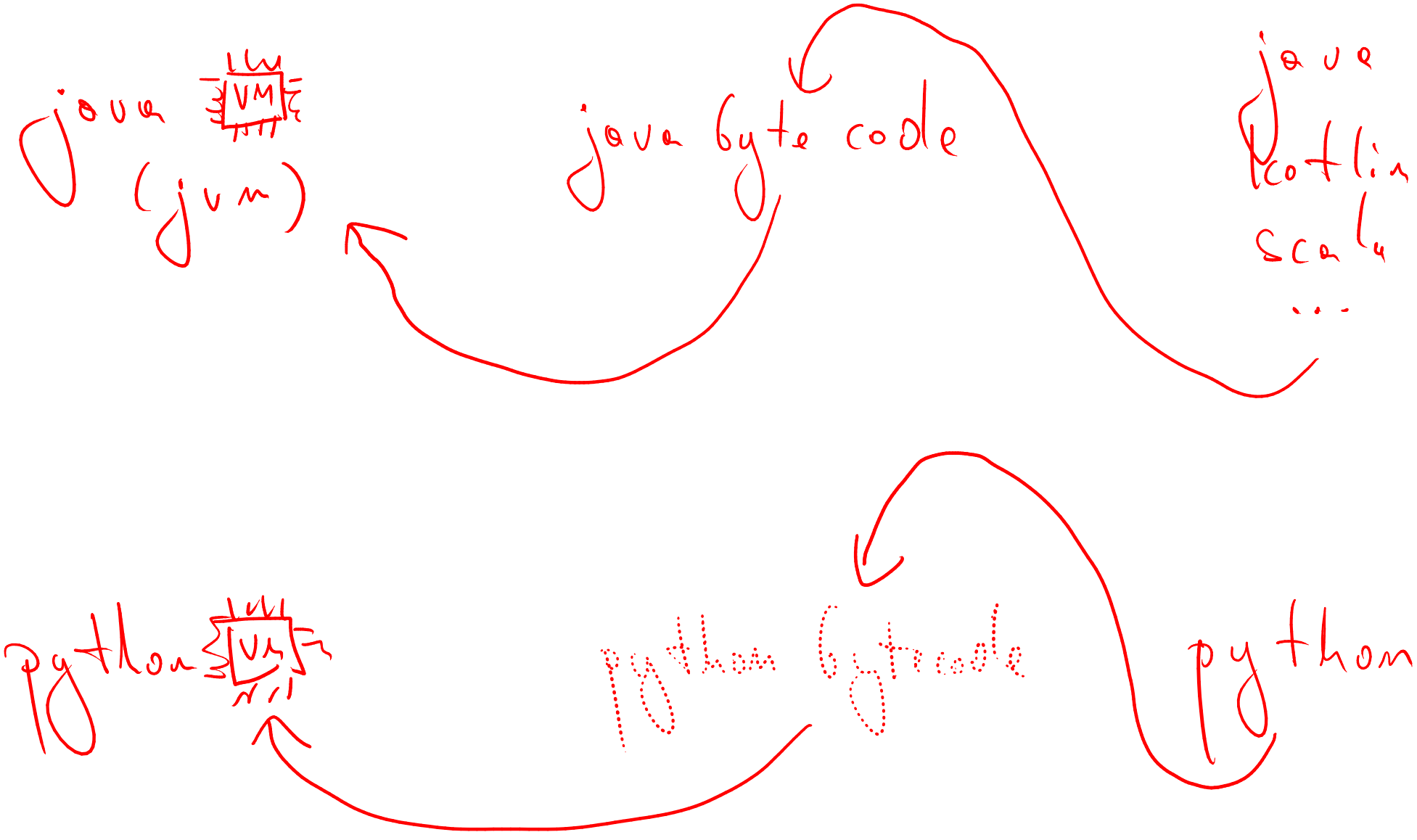

01011 ...
10110 ...
01001 ...
...
CPU


CPU
01011...
10110...
01001...
...
ADD
PUSH
POP
...
assembler
int a;
a = 1;
int b;
b = a + 1;
...
compilaji


CPU
VM


Java
VM
(jvm)


java
VM
(jvm)
java byte code
java
kotlin
scala
...
python
VM
python bytecode
python


java
VM
(jvm)
java byte code
java
kotlin
scala
...
python
VM
python bytecode
python

Factorial

Factorial

↳ pseudo code:

```
<calculate n!>
x ← 1
loop i = 1 .. n
    x ← x * i
return x
```

factorial

pseudo code:

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<calculate n!>
x ← 1
loop i = 1..n
    x ← x * i
return x
```

python

```
...
x = 1
for i in range(1, n+1):
    x = x * i
print(x)
```

factorial

pseudo code:

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python

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1...n

Factorial

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python

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```

1...n

functions in python:

Functions in python:

```
def nameofFunction(a, b, c, ...):
    ...
    ...
    ...
    return ...
```