



WIRTSCHAFTS
UNIVERSITÄT
WIEN VIENNA
UNIVERSITY OF
ECONOMICS
AND BUSINESS



Principles of Software Programming: Version Control

Svitlana Vakulenko, MSc.

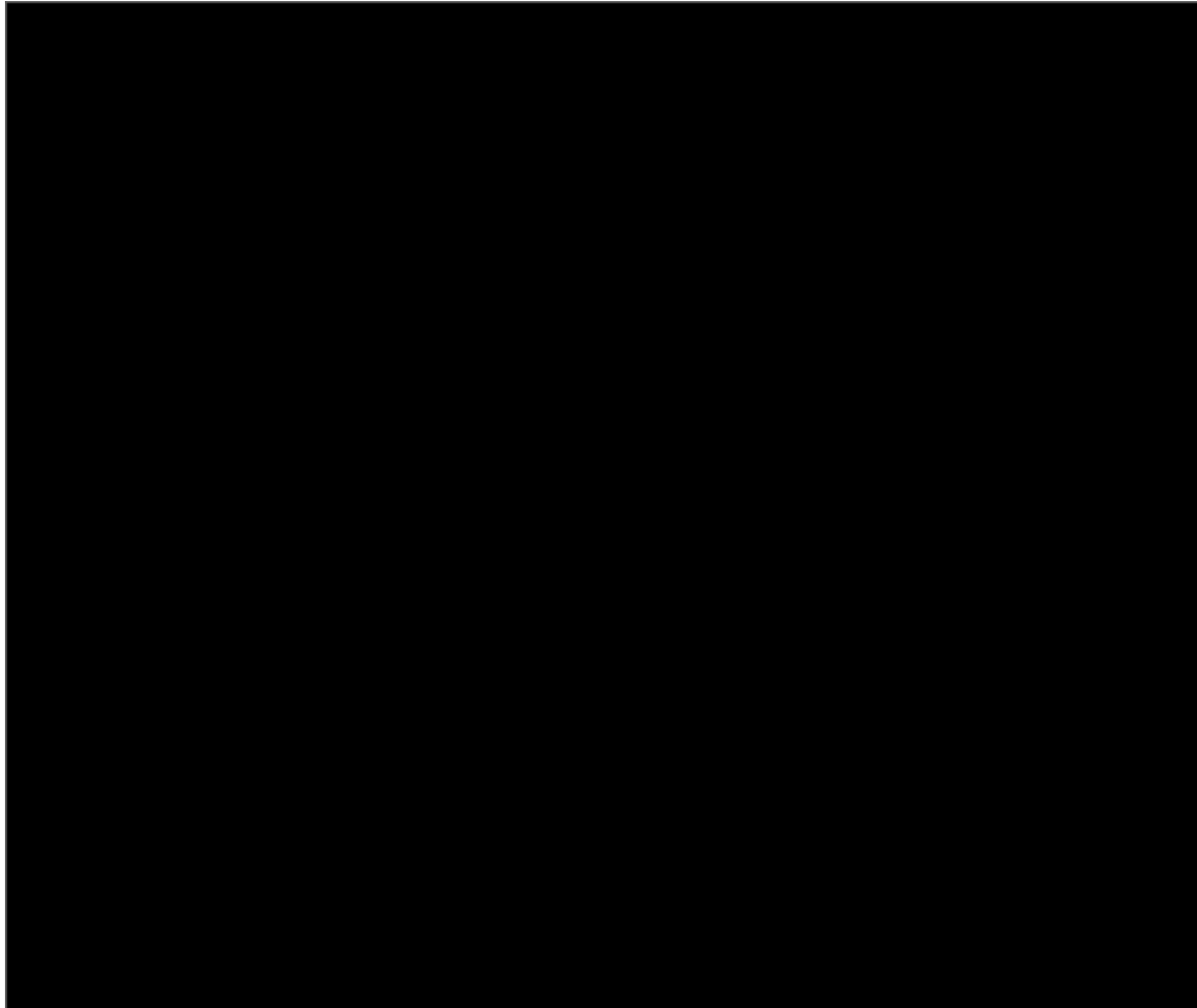
WS 2017

This Episode

- 13:00-15:45
- Version Control:
 - Git & GitHub
 - Editor
 - Compiler/Interpreter
 - Chatbot

- Open Source software repository: "Sharing is Caring"
- Licenses! CC-BY MIT Apache Mozilla
- Git
- <https://github.com>
- Start a project

CMD (Terminal)



CMD (Terminal)

- **pwd** displays the name of current directory
- **cd** (chdir) change directory
- **md** (mkdir) make directory
- **dir (ls)** display a list of files and subfolders
- **ren** rename a file or files

Git commands

- git init
- git clone
- git pull
- git add
- git commit
- git push

Git resources

- <http://learngitbranching.js.org>
- <https://try.github.io>

Sublime Text editor

```
1 #!/usr/bin/env python
2 #-*- coding: utf-8 -*-
3
4 '''
5 Created on Jun 28, 2017
6 .. codeauthor: svitlana vakulenko
7 <svitlana.vakulenko@gmail.com>
8
9 Test table parsing service
10 '''
11
12 from pyyacp.yacp import YACParser
13
14 TEST_TABLE_URL = "https://www.wien.gv.at/finanzen/ogd/hunde-wien.csv"
15
16
17 def csvclean_service(url):
18     """
19     ... returns parsed table object from the YACParser
20     ... """
21     ... table = YACParser(url=url, sample_size=100)
22     ... return table
23
24
25 def test_csvclean_service(url=TEST_TABLE_URL):
26     ... table = csvclean_service(TEST_TABLE_URL)
27     ... print table.meta
28     ... print table.descriptionLines
29     ... print table.header_line
30
31     ... # for cell in table:
32     ... #     print "; ".join(cell)
33     ... for row in table.sample[1:]:
34     ...     print row
35
36
37 if __name__ == "__main__":
38     ... test_csvclean_service()
39
40
```

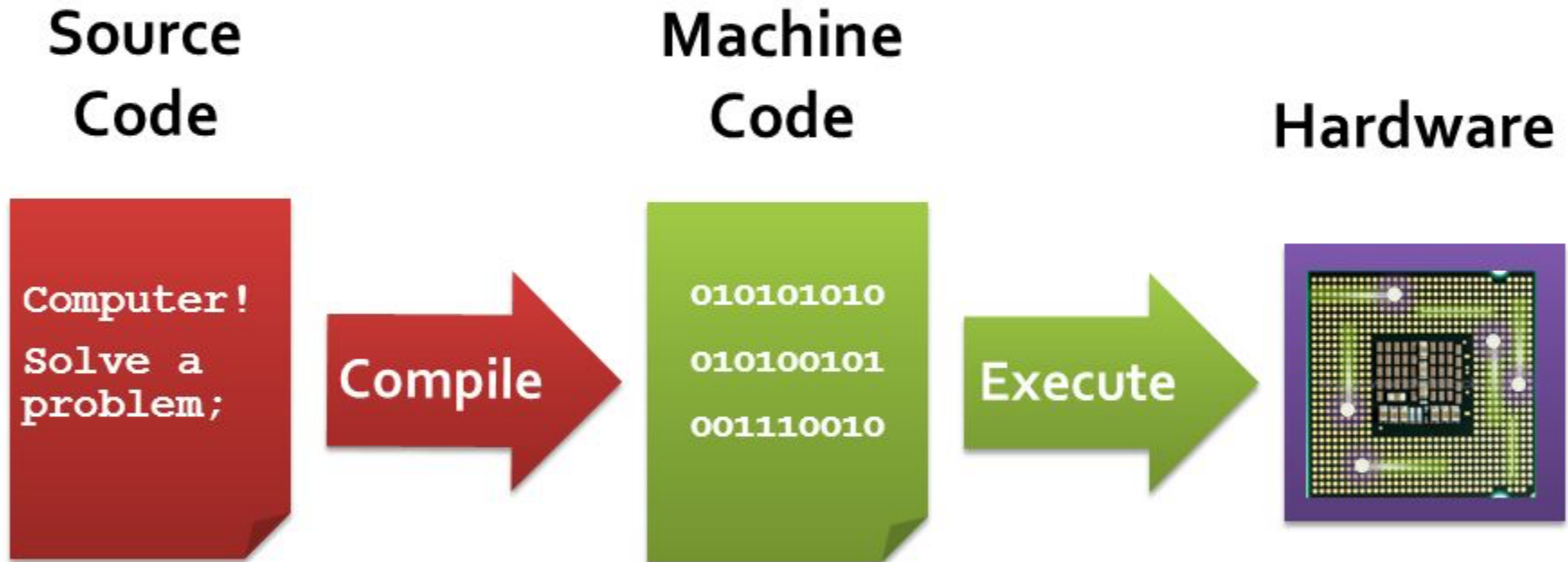

Ex.1: Infinite Counter

```
90965890975890985890995891005891015891025891035891045891055891065891075891085891095891105891115
89129589130589131589132589133589134589135589136589137589138589139589140589141589142589143589144
58916258916358916458916558916658916758916858916958917058917158917258917358917458917558917658917
45891955891965891975891985891995892005892015892025892035892045892055892065892075892085892095892
27589228589229589230589231589232589233589234589235589236589237589238589239589240589241589242589
26058926158926258926358926458926558926658926758926858926958927058927158927258927358927458927558
92935892945892955892965892975892985892995893005893015893025893035893045893055893065893075893085
89326589327589328589329589330589331589332589333589334589335589336589337589338589339589340589341
58935958936058936158936258936358936458936558936658936758936858936958937058937158937258937358937
15893925893935893945893955893965893975893985893995894005894015894025894035894045894055894065894
24589425589426589427589428589429589430589431589432589433589434589435589436589437589438589439589
45758945858945958946058946158946258946358946458946558946658946758946858946958947058947158947258
94905894915894925894935894945894955894965894975894985894995895005895015895025895035895045895055
89523589524589525589526589527589528589529589530589531589532589533589534589535589536589537589538
58955658955758955858955958956058956158956258956358956458956558956658956758956858956958957058957
85895895895905895915895925895935895945895955895965895975895985895995896005896015896025896035896
21589622589623589624589625589626589627589628589629589630589631589632589633589634589635589636589
65458965558965658965758965858965958966058966158966258966358966458966558966658966758966858966958
96875896885896895896905896915896925896935896945896955896965896975896985896995897005897015897025
89720589721589722589723589724589725589726589727589728589729589730589731589732589733589734589735
58975358975458975558975658975758975858975958976058976158976258976358976458976558976658976758976
55897865897875897885897895897905897915897925897935897945897955897965897975897985897995898005898
18589819589820589821589822589823589824589825589826589827589828589829589830589831589832589833589
85158985258985358985458985558985658985758985858985958986058986158986258986358986458986558986658
98845898855898865898875898885898895898905898915898925898935898945898955898965898975898985898995
89917589918589919589920589921589922589923589924589925589926589927589928589929589930589931589932
58995058995158995258995358995458995558995658995758995858995958996058996158996258996358996458996
25899835899845899855899865899875899885899895899905899915899925899935899945899955899965899975899
15590016590017590018590019590020590021590022590023590024590025590026590027590028590029590030590
04859004959005059005159005259005359005459005559005659005759005859005959006059006159006259006359
00815900825900835900845900855900865900875900885900895900905900915900925900935900945900955900965
90114590115590116590117590118590119590120590121590122590123590124590125590126590127590128590129
59014759014859014959015059015159015259015359015459015559015659015759015859015959016059016159016
```

Infinite Counter

```
1 def infinite_counter(x):  
2     while x>0:  
3         x=x+1  
4         print(x, end=" ")  
5  
6 infinite_counter(1)
```

Translator



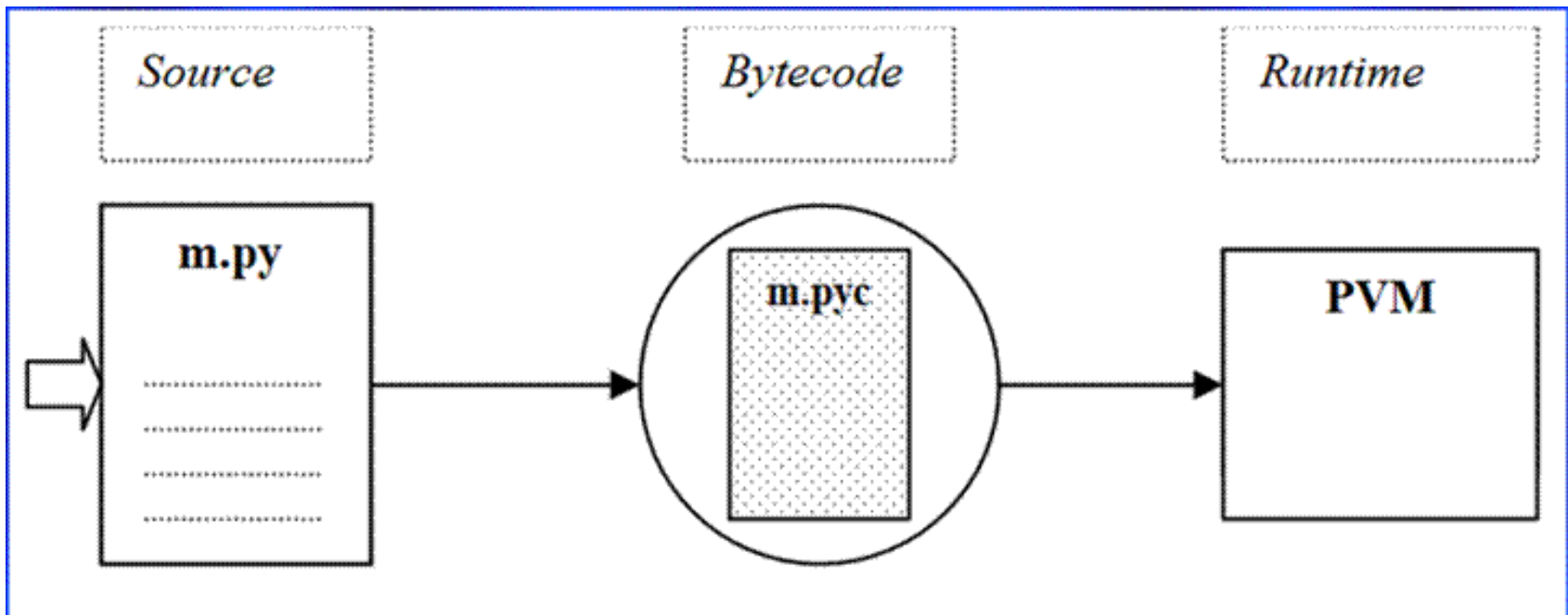
- **Interpreted (scripting)** languages: JavaScript, **Python**
- **Compiled** languages: **Java** and C+

How Python runs programs

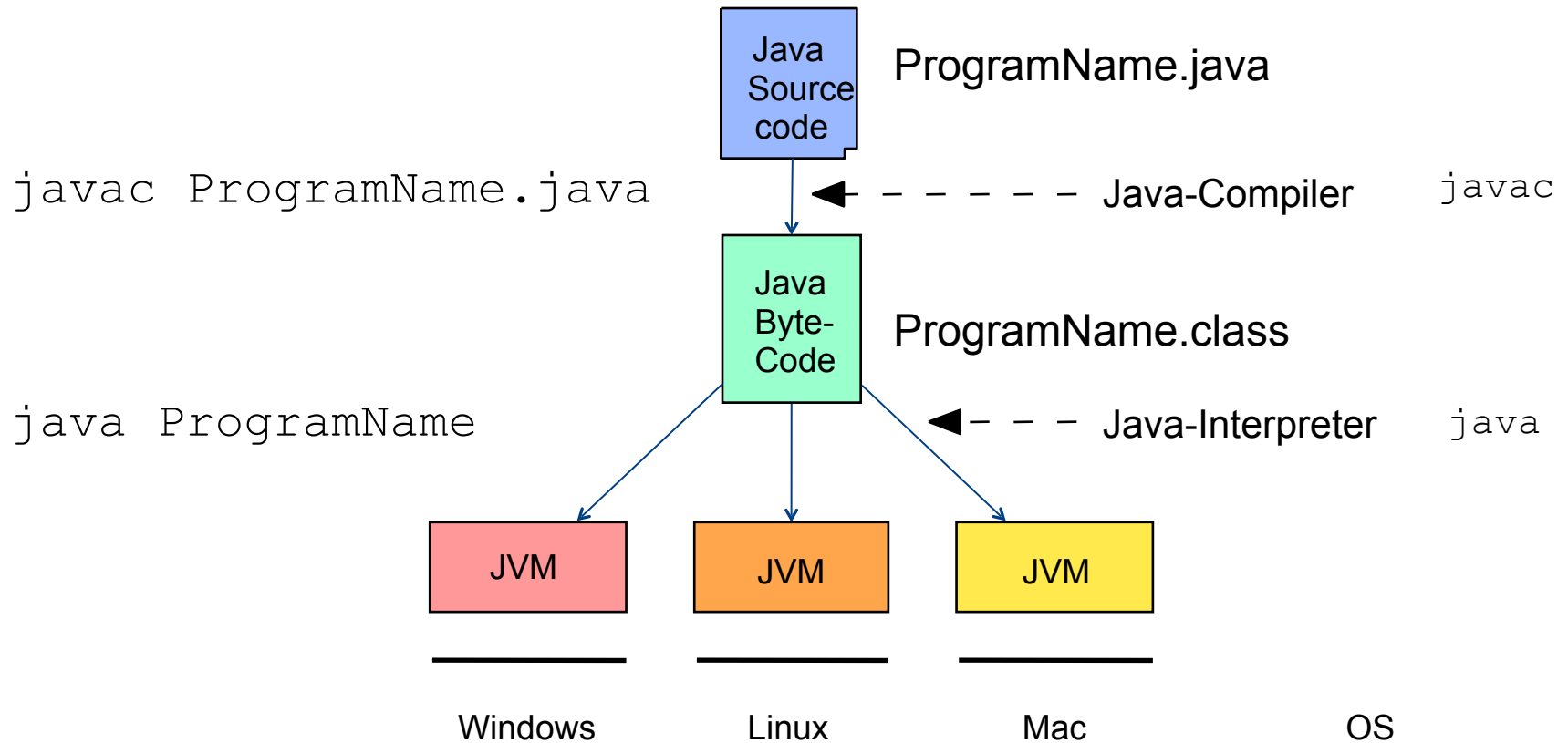
m.py (sourcecode) →

m.pyc (bytecode) →

Python Virtual Machine (PVM)



How Java runs programs



AI: Turing test

Imitation Game, Alan Turing 1950



Ex.2: Eliza

created in 1966 at MIT by Joseph Weizenbaum

```
=====
EEEEEEEE L      IIIIIII ZZZZZZZ      AAA
E         L      I          Z          A    A
E         L      I          Z          A    A
EEEEEE   L      I          Z          A    A
E         L      I          Z          AAAAAA
E         L      I          Z          A    A
EEEEEEEE LLLLLLLL IIIIIII ZZZZZZ      A    A
=====
ELIZA > (PLEASE TYPE IN ALL CAPS) WHAT'S YOUR NAME DEAR ?
AMIT
ELIZA > HI, I'M ELIZA. WHAT DO YOU WANT TO TALK ABOUT ?
AMIT > CAN I TALK ABOUT MY PROBLEM ?
ELIZA > SURE... !
AMIT > DUE TO ON GOING EXAMS IN COLLEGE, I HAVE A LOT OF STRESS.
ELIZA > PLEASE RELAX A LITTLE. SLEEP WELL.
AMIT > THANKS FOR YOUR ADVICE.
ELIZA > NO MENTION.
AMIT > BYE
ELIZA > BYE AND KEEP IN TOUCH...
=====
```


While loop

```
while True:
    n = raw_input("Please enter 'hello':")
    if n.strip() == 'hello':
        break
```