PEP Scala (4)

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Slides & Code: KEATS

Office Hour: Fridays 11:00 – 12:00
Location: N7.07 (North Wing, Bush House)

Pollev: https://pollev.com/cfltutoratki576

Last Week: Pattern Matching

```scala
def fizz_buzz(n: Int) : String =
  (n % 3, n % 5) match {
    case (0, 0) => "fizz buzz"
    case (0, _) => "fizz"
    case (_, 0) => "buzz"
    case _ => n.toString
  }
```

Last Week: Pattern Matching

```scala
def mkeps(r: Rexp) : Val = r match {
  case ONE => Empty
  case ALT(r1, r2) => ...
  case SEQ(r1, r2) => ...
  case STAR(r) => ...
  case RECD(x, r1) => Rec(x, mkeps(r))
  ...
}
```

Reverse Polish Notation

$$(3 + 1) * (2 + 9)$$
$$\Longrightarrow$$
$$3 \quad 1 \quad + \quad 2 \quad 9 \quad + \quad *$$

Reverse Polish Notation

$(3 + 1) * (2 + 9)$

$\Rightarrow$

$3 \quad 1 \quad + \quad 2 \quad 9 \quad + \quad *$

```
ldc 3
ldc 1
iadd
ldc 2
ldc 9
iadd
imul
```

Regular Expressions

Suppose you have the regular expression `(a*)b` :

"aaaaaaaaaaaaaaab"

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`"aaaaa...........aaaaaaaaaaaaaaaaaaaa"`
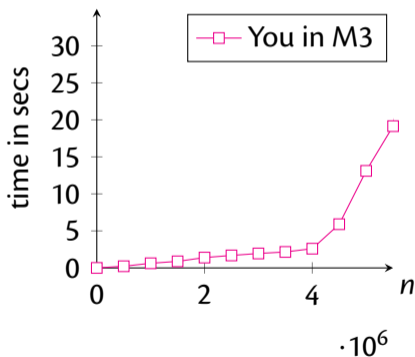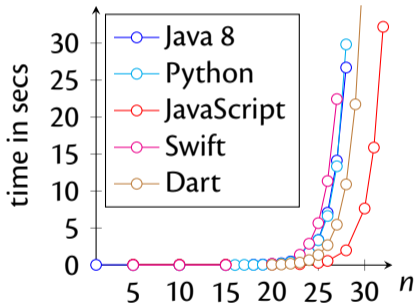
Regular Expressions

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`"aaaaa...........aaaaaaaaaaaaaaaaaaaa"`

How long does Python need to find out?

Main 3: Regexes

Graphs: regex (a*)*b and strings $\underbrace{a \ldots a}_{n}$

https://vimeo.com/112065252

MacOSX

0) (if needed) `brew install java` or `brew reinstall java`

1) `curl -s "https://get.sdkman.io" | bash`

2) `sdk install scala 2.13.7`

Windows / Linux Ubuntu

0) (if needed) `sudo apt-get remove scala-library scala`

1) `sudo wget https://downloads.lightbend.com/scala/2.13.7/scala-2.13.7.deb`

2) `sudo dpkg -i scala-2.13.7.deb`

other Linux distros: `sudo apt-get scala`