CodeClub
25.02.2015

TUT Innovation and Business Centre
MEKTORY
MODERN ESTONIAN KNOWLEDGE TRANSFER ORGANIZATION FOR YOU

POWERED BY:
THORGATE

EAS
Enterprise Estonia

Euroopa Liit
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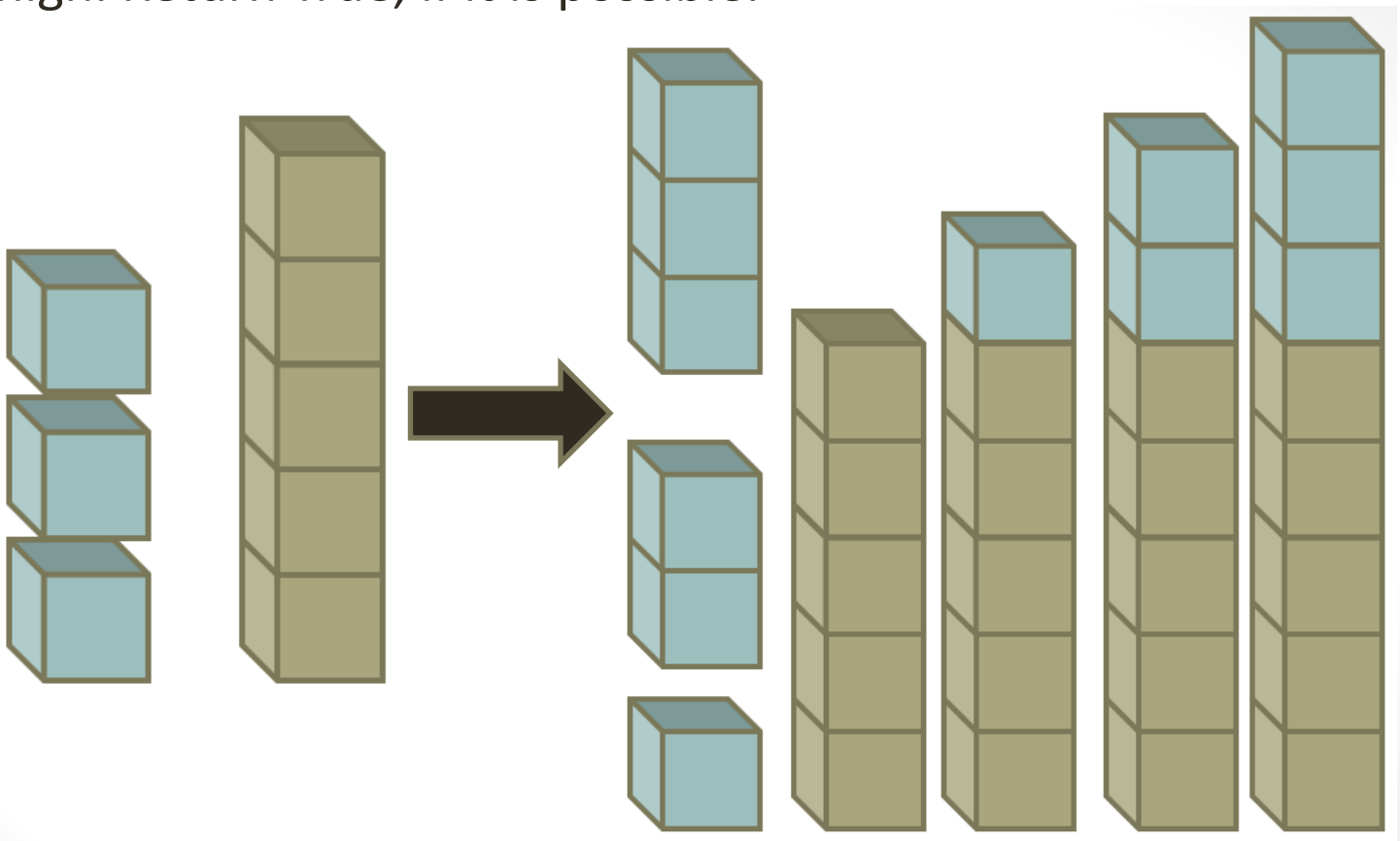
Eesti tuleviku heaks

Lego tower

- You are given *x* small bricks (length 1) and *y* big bricks (length 5). We want to know if you can build a tower *exactly z* bricks high. Return True, if it is possible.



Tools 1

- Today you will need some math, logical operators and conditionals
- Check out what math happens with +; -; *; /; **; //; %
- 14*3
- 42
- 14/3
- 4.6666666667
- 14**3
- 2744
- 14//3
- 4 (3 fits into 14 4 times)
- 14%3
- 2 (3 fits into 14 4 times, and the 2 is extra)

Tools 2

- Logical operations are done with similar operators, as in maths: ==, <, >,<=, =>
- 4==4
- True
- 4<4
- False
- 4=<4
- True

Tools 3

- Conditions can be checked with If statements:
- def condition(number):

```
    If number > 4:
            return ''Bigger than  4''
    Elif number == 4:
            return 'Is 4''
    Else:
            return 'Smaller than  4''
```

- Try it out with
- condition(2)
- condition(4)
- condition(2635)

Challenge 1

- def tower(small, big, height):

  #your code here

- Examples:
- def tower(3, 1, 4):
- False
- def tower(3, 1, 8):
- True
- def tower(3, 1, 9):
- False

Challenge 2

- Test your code with:
- (3, 2, 10)T (7, 1, 11)T (22, 2, 33)F
- (3, 2, 9)F (7, 1, 8) T (0, 2, 10)T
- (6, 1, 11)T (7, 1, 13)F (20, 0, 19)T
- (6, 0, 11)F (43, 1, 46)T (20, 0, 21)F
- (1, 4, 11)T (40, 1, 46)F (20, 4, 51)F
- (0, 3, 10)T (40, 2, 47)T (20, 4, 39)T
- (1, 4, 12)F (40, 2, 50)T (41, 1, 47)F
- (3, 1, 7) T (40, 2, 52)F (0, 0, 0)T
- (1, 1, 7)F (2, 1000000, 100003)F
- (2, 1, 7)T (1000000, 1000, 1000100)T

After:

- Now challenge us!
- Or start doing more python:
- http://codingbat.com/python
- https://class.coursera.org/programming1-002
- http://www.codecademy.com/tracks/python

- Many great challenges here:
- https://www.codeeval.com/

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