

Introduction to Application Development in Python

Lecture 5

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Questions? Previous lecture topics

- Arithmetic
 - Addition
 - Subtraction
 - Multiplication
 - Division
- Repetition of functions from lecture 2
- Repetition of conditions from lecture 2

Lecture topics

- Power
- Square root
- Greatest Common Divisor
 - Euclidian algorithm
- Least common Multiple

Power & Square root

- Make use of multiply function
 - On its turn that makes use of add function
- Similar solution for square root

2^8



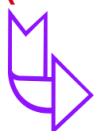
$2*2*2*2*2*2*2*2$



$(2+2)*2*2*2*2*2*2$



$(2+2+2+2)*2*2*2*2*2$



$(2+2+2+2+2+2+2+2)*2*2*2*2$



etc.

Power



Multiplication



Addition

Questions? Previous lecture topics

- Arithmetic
 - Addition
 - Subtraction
 - Multiplication
 - Division
- Repeat functions from lecture 2 on your own
- Repeat conditions from lecture 2 on your own

Lecture topics

- Arithmetic
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Greatest common divisor

- Definition:
The greatest common divisor of two integers is the largest positive integer that divides each of the integers
- Example: The $\text{gcd}(48, 120)$ is 24
- Can be found using Euclidian algorithm
<https://www.youtube.com/watch?v=p5gn2hj51hs>
- What you have to implement exactly is described on the course webpage

Least common multiple

- Definition:
The least common multiple of two integers a and b is the smallest positive integer that is divisible by both a and b .
- First understand the meaning of Least common multiple
<https://www.youtube.com/watch?v=Z6-LksV08qU>
- Then implement the given algorithm on the course website.
 - The formula is directly given.

Assignment

- Please see schedule and assignments on course website:
 - Implementation of power
 - Implementation of square root
 - Implementation of greatest common divisor
 - Implementation of least common multiple