Python

Introduction
Time to solution is determined by:
Time to solution is determined by:

how long it takes to
write a program
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run
- human time
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run

- human time
- machine time
Time to solution is determined by:

how long it takes to write a program

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human time

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Every language makes a tradeoff between these
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run

human time

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Every language makes a tradeoff between these

Python
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run

Every language makes a tradeoff between these:

- human time
- machine time

Python
MATLAB
Time to solution is determined by:

how long it takes to write a program  
how long it takes that program to run

human time  
machine time

Every language makes a tradeoff between these

Python  
MATLAB  
Fortran
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run

Every language makes a tradeoff between these:

- Python
- MATLAB
- Fortran
- C
Time to solution is determined by:

how long it takes to write a program

how long it takes that program to run

human time

machine time

Every language makes a tradeoff between these

Python

Java

Fortran

MATLAB

C
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run

human time  machine time

Every language makes a tradeoff between these:

- Python
- MATLAB
- Java
- C#
- Fortran
- C
Time to solution is determined by:

- how long it takes to write a program
- how long it takes that program to run
- human time
- machine time

Every language makes a tradeoff between these:

- Python
- MATLAB
- Java
- C#
- Fortran
- C
Teaching you Python is *not* the point of this course.
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But we have to write examples in some language...
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...and Python has proven to be easier to pick up than alternatives which are also:
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...and Python has proven to be easier to pick up than alternatives which are also:
- free
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  - cross-platform
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- free
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- widely used
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- cross-platform
- widely used
- well documented
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- cross-platform
- widely used
- well documented
- well supported
This course will *not* teach you basic programming
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Assume you already know:
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– variables
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Assume you already know:

- variables
- loops
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- variables
- loops
- conditionals (if / else)
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Assume you already know:

- variables
- loops
- conditionals (if / else)
- lists / arrays
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Assume you already know:

- variables
- loops
- conditionals (if / else)
- lists / arrays
- how to read data from a file
This course will *not* teach you basic programming

Assume you already know:

- variables
- loops
- conditionals (if / else)
- lists / arrays
- how to read data from a file

This lecture will show you how to do these in Python
This course will *not* teach you basic programming

Assume you already know:
- variables
- loops
- conditionals (if / else)
- lists / arrays
- how to read data from a file

This lecture will show you how to do these in Python *well*.