INTRODUCTION TO PYTHON

Introduction

- Most recent popular (scripting/extension) language
  - although origin ~1991
- heritage: teaching language (ABC)
  - Tcl: shell
  - perl: string (regex) processing ,biological data processing
- object-oriented
  - rather than add-on (OOTcl)

Python philosophy

- Coherence
  - not hard to read, write and maintain
- Power
- Large set of Libraries
- Open Source
- Scope
  - rapid development + large systems
- Objects
- integration
  - hybrid systems

Python features

Interpreted	rapid development cycle
no type declarations	simpler, shorter, more flexible
automatic memory management	garbage collection
high-level data types and operations	fast development
object-oriented programming	code structuring and reuse
embedding and extending in C	mixed language systems
classes, modules, exceptions	"programming-in-the-large" support
dynamic loading of C modules	simplified extensions, smaller binaries
dynamic reloading of C modules	programs can be modified without stopping