



Building Blocks of Python

School of Information Studies
Syracuse University

Program Components

Input: outside world

Output: What are the results we want?

Sequential execution: one step at a time

Conditional execution: What conditions?

Looping: repetitive operations

Subroutines: reusing code

Python Variables

Numbers

Strings

Values

Using variables

Variables: Numbers

```
>>>number = 7
```

```
>>>number
```

(displays its value)

```
7
```

```
>>>average = (number +9)/2
```

(standard math ops)

```
>>>average
```

(displays its value)

```
8
```

Variables: Strings

```
>>>string1 = 'Monty'
```

```
>>>string2 = 'Python'
```

```
>>>string1 + string2      ('MontyPython')
```

Variable Types

Types can matter.

- Type function – type (number1)

Name variables to be meaningful.

- Letters, numbers, underscore
- No keywords

Print Function

Python displays value

Explicit PRINT function

Print (balance)

Result – 125

Print (“The balance is “, balance) Result – The balance is 125.

User Input

Getting data from the user—type is a string

```
>>>username = input('What is your name? ')
```

What is your name? Tom

```
>>>print('Hello, ',username)
```

Hello, Tom

```
>>>year = input('What year were you born? ')
```

What year were you born? 1989

```
>>>print('BirthYear: ',year)
```

Birthyear: 1989

Using Input in Calculations

Must convert to numeric type

```
>>>type (year)
```

```
<class 'str'>
```

```
>>>age=2018-int (year)
```

```
>>>print ('Age: ',age)
```