Exam Revision Lecture

Approx. 1hr.

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Example revision areas

- Sorted(), Split(), len
- Iteration for each in ‘list’
- ‘word’ in ‘another word’
- Operators
  - ie ‘something’ == ‘something’
- .format(key arguments)
- “{ } ”.format(with key/arguments)
- Tuple, List, Dictionary
- While, For, If, Break, continue
- Data types, String, int, char, boolean, float
- Pseudocode

- Arguments, paramaters
- Fix code
  - Syntax, runtime
  - Functions
- Describe code
- Ascii table, ordinal to char, char to ordinal
- Global vs local variables
- Coding:
  - Pseudocode
  - Solution
  - Problem

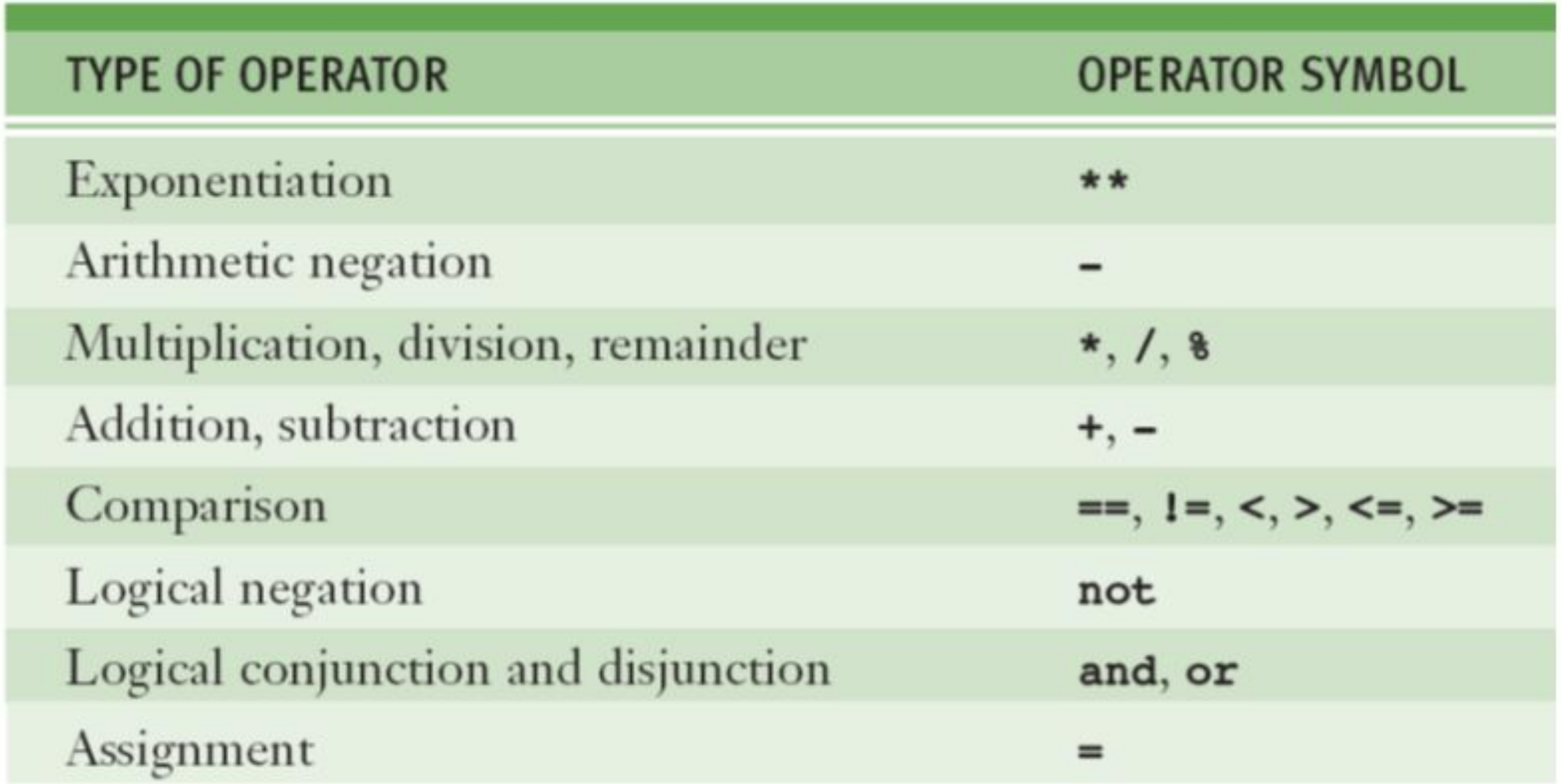
Key arguments: examples

```
def main():
    show_interest(rate = 0.01, periods = 10, principal = 100.0)

def show_interest(principal, rate, periods):
    interest = principal * rate * periods
    print('The simple interest will be {.2}’.format(interest))

main()
```

Logical Operators and Compound Boolean Expressions (continued)



TYPE OF OPERATOR	OPERATOR SYMBOL
Exponentiation	`**`
Arithmetic negation	`-`
Multiplication, division, remainder	`*`, `/`, `%`
Addition, subtraction	`+`, `-`
Comparison	`==`, `!=`, `<`, `>`, `<=`, `>=`
Logical negation	`not`
Logical conjunction and disjunction	`and`, `or`
Assignment	`=`

[TABLE 3-4] Operator precedence, from highest to lowest

American Standard Code for Information Interchange - **ASCII**

…	0	1	2	3	4	5	6	7	8	9
4	(	)	*	+	,	-	.	/	0	1
5	2	3	4	5	6	7	8	9	:	;
6	<	=	>	?	@	A	B	C	D	E
7	F	G	H	I	J	K	L	M	N	O
8	P	Q	R	S	T	U	V	W	X	Y
9	Z	[	\	]	^	_	'	a	b	c
10	d	e	f	g	h	i	j	k	l	m
11	n	o	p	q	r	s	t	u	v	w
12	x	y	z	{	|	}	~			

Basic for and while loop

```
# for loop using list
for i in range(10):
    # do something 10 times from range 0 to 9
    print(‘Hello’, i)

# while loop using range
i = 0
while I < 10:
    print (’hello’ , i)
    i += 1
```

Basic For loop

```
# for loop using list
for i in [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]:

    print(‘Hello’, i)




#  What are break, continue, pass used for?
```

Data types

- string (str)
  - “Something” or ‘Something’ etc.
- Int
  - 1, 2, 3, 4, 1002, etc.
- Char (chr)
  - A, or b, or C, or $, or (etc.
- Float
  - 12.1, or 1.0001, or 199.99   etc.
- Boolean
  - True or False, 1 or 0 (binary)

Tuple, List, Dictionary

- (Tuple)
  - (1, 2, 3, 'Bob')
- [List]
  - [1, 2, 3, 'Bob']
- {Dictionary}
  - {'a': 1, 'b': 2, 'c':3, 'd':'Bob'}

Global vs Local

```
number = 1

def something():
   number = 10

something()

print(number)
```

Basic functions

Parameter

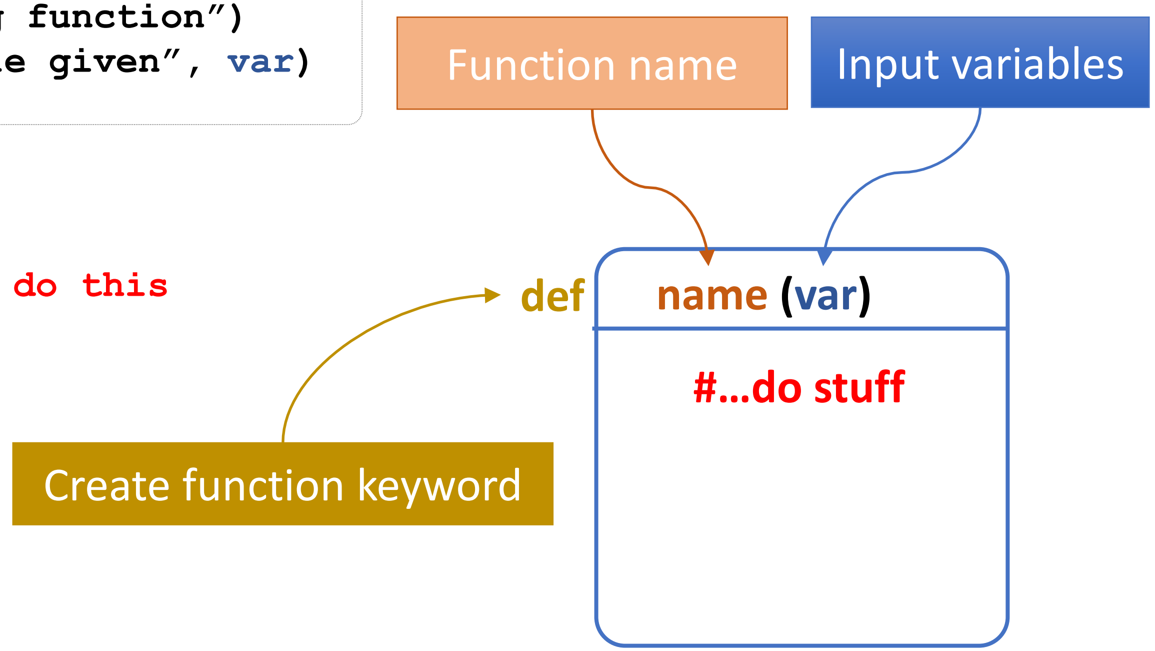
```
def name(var):

        print(“Running function”)
        print(“variable given”, var)
```

```
# to run a function we do this

name(‘Tom’)
```

Argument



Function name

Input variables

def

name (var)

#...do stuff

Create function keyword

Output:

```
Running function
variable given Tom
```

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Basic function

```
def name():

        print(“Running function”)
```

Input parameters

Basic function with input parameter

```
def name(any_num_of_vars):

        print(“Running function”)
```

Return

Basic function with return value

```
def name():

        print(“Running function”)

        return ‘something’
```

Basic function with input parameter and return value

```
def name(any_num_of_vars):

        print(“Running function”)

        return ‘something’
```

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