1 Compound statements

1.1 Conditionals

```
if expression:
    commands
elif expression:
    commands:
else:
    commands
```

1.2 Loops

```
while expression:
    commands
else:
    commands
```

```
for element in list:
    commands
else:
    commands
```

Note: A **break** statement executed in the first suite terminates the loop without executing the **else** clause's suite.

To terminate immediately the nearest enclosing loop, use **break**. To skip to the next iteration instead, use **continue**.

Loopnig on dictionaries and sets loops on keys.

2 Built-in types

2.1 Booleans

There are eight comparison operations in Python: **<**, **<=**, **>**, **>=**, **==**, **!=**, **is**, **is not**. Booleans are a subtype of integers (**True == 1**, **False == 0**).

These are the Boolean operations, ordered by ascending priority: **or**, **and**, **not**.

2.2 Numeric types

Python supports three numeric types: integers, floats and complex numbers. Integers have unlimited precision. Complex numbers have real (**z.real** and imaginary part (**z.imag**, both are floats.

Numeric types support the following operations, sorted by ascending priority:

+, **-**, *****, **/**, **//** (floored quotient), **%** (remainder),

abs(x), **int(x)**, **float(x)**, **complex(re, im)**,

c.conjugate, **divmod** (quotient and remanider),

pow(x, y) == xy**.

2.3 Sequence types

Useful:

```
for index, value in enumerate(list):
    commands
```

2.4 Strings

Case conversion: **s.capitalize**, **s.casefold** (aggresive lowercase), **s.lower**, **s.upper**, **s.swapcase**, **s.title**.

Justification:

s.center, **s.ljust**, **s.rjust**,

s.zfill (left fills string with a zero),

s.strip (removes leading/trailing characters).

Checks: **s.is**…, **s.startwith**, **s.endswith**.

Searching: **s.count s.find s.index**

Splitting and joining:

s.join(seq) joins elements of sequence by the s separator,

s.split gives a list of words in the string, using s as the separator,

s.partition(sep) return `(before, sep, after)`.

Encoding: **s.encode**

2.5 Sets

A set object is an unordered collection of distinct hashable objects. Frozenset is an immutable set.

Set theoretic operations: **| & - ^** (union, intersection, difference, symmetric difference)

< <= > >= inclusion relations

add, **remove**, **discard** operate on single elements

clear removes all elements

2.6 Dictionaries

3 Text processing

3.1 Regular expressions (re)

search(pattern, string) scans through a string, looking for any place where the regex matches.

match(pattern, string) checks whether the regex matches at the beginning of the string.

findall(pattern, string) returns all substrings where the regex matches as a list

finditer(pattern, string) returns all substrings where the regex matches as an iterator.