Chapter 31: os.path

This module implements some useful functions on pathnames. The path parameters can be passed as either strings, or bytes. Applications are encouraged to represent file names as (Unicode) character strings.

Section 31.1: Join Paths

To join two or more path components together, firstly import os module of python and then use following:

```
import os
os.path.join('a', 'b', 'c')
```

The advantage of using os.path is that it allows code to remain compatible over all operating systems, as this uses the separator appropriate for the platform it's running on.

For example, the result of this command on Windows will be:

```
>>> os.path.join('a', 'b', 'c')
'a\b\c'
```

In an Unix OS:

```
>>> os.path.join('a', 'b', 'c')
'a/b/c'
```

Section 31.2: Path Component Manipulation

To split one component off of the path:

```
>>> p = os.path.join(os.getcwd(), 'foo.txt')
>>> p
'/Users/csaftoiu/tmp/foo.txt'
>>> os.path.dirname(p)
'/Users/csaftoiu/tmp'
>>> os.path.basename(p)
'foo.txt'
>>> os.path.split(os.getcwd())
('/Users/csaftoiu/tmp', 'foo.txt')
>>> os.path.splitext(os.path.basename(p))
('foo', '.txt')
```

Section 31.3: Get the parent directory

```
os.path.abspath(os.path.join(PATH_TO_GET_THE_PARENT, os.pardir))
```

Section 31.4: If the given path exists

to check if the given path exists

```
path = '/home/john/temp'
os.path.exists(path)
#this returns false if path doesn't exist or if the path is a broken symbolic link
```

Section 31.5: check if the given path is a directory, file, symbolic link, mount point etc

to check if the given path is a directory

```
dirname = '/home/john/python'
os.path.isdir(dirname)
```

to check if the given path is a file

```
filename = dirname + 'main.py'
os.path.isfile(filename)
```

to check if the given path is symbolic link

```
symlink = dirname + 'some_sym_link'
os.path.islink(symlink)
```

to check if the given path is a mount point

```
mount_path = '/home'
os.path.ismount(mount_path)
```

Section 31.6: Absolute Path from Relative Path

Use `os.path.abspath`:

```
>>> os.getcwd()
'/Users/csaftoiu/tmp'
>>> os.path.abspath('foo')
'/Users/csaftoiu/tmp/foo'
>>> os.path.abspath('../foo')
'/Users/csaftoiu/foo'
>>> os.path.abspath('/foo')
'/foo'
```