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Working with the file system

Outline

1. What is file?
2. Creating file
3. Opening file
4. Deleting file
5. Appending to a file

1. What is file?

1. What is file?

- A file is a collection of data that is stored together
- Files can be stored on a hard drive, a floppy disk, or a CD.
- Everything that a computer does is based on data stored in files.
- You can do lots of things with files: create them, edit them, rename them, save them, or delete them. Certain files can even be looked at, listened to, and run.

2. Creating file

Create a new file with name simpile_file.txt and mode w+ for *read and write access* to the file.

```
my_file = File.new("File/simple_file.txt", "w+")
my_file.close
```

We also have more options on Ruby IO Docs .

3. Opening file

We open an existing file using `File.open`. We will pass the file name and a second argument which will decide how the file will be opened. Usually, the following are used:

- r: read-only (starts at beginning of file)
- w: write-only (if the file exists, overwrites everything in the file)
- w+: read and write (if the file exists, overwrites everything in the file)
- a+: read-write (if file exists, starts at end of file. Otherwise creates a new file). Suitable for updating files.

3. Opening file

We will be open file to read. And reading file contents is easy in Ruby.

Here are two options:

```ruby
# Spits out entire contents of the file.
File.read("file_name")
# Reads the entire file based on individual lines and returns those lines in an array.
File.readlines("file_name")
```

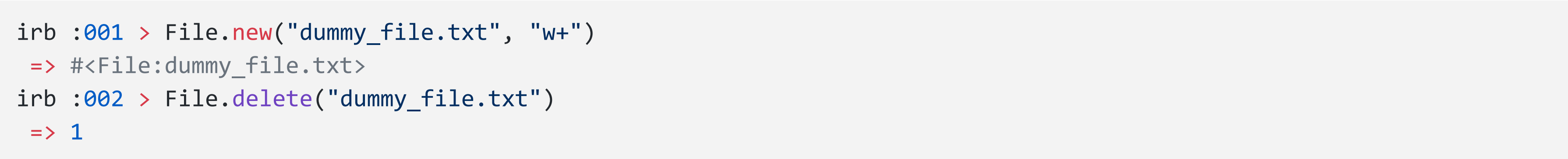
3. Opening file

And open file to writing

```
irb :001 >  sample = File.open("simple_file.txt",  "w+")
 => #<File:simple_file.txt>
irb :002 > sample.puts("another example of writing to a file.")
 => nil
irb :003 > sample.close
 => nil
irb :004 > File.read("simple_file.txt")
 => "another example of writing to a file.\n"
```

4. Deleting file

By the way, we use `File.delete`, we can do that by passing the name or reference to a file we want to delete



```
irb :001 > File.new("dummy_file.txt", "w+")
 => #<File:dummy_file.txt>
irb :002 > File.delete("dummy_file.txt")
 => 1
```

5. Appending to a file

Almost time, we always want to appending more the content on a file. There are more examples to show that:

- ❖ The system logs
- ❖ Exporting data to file (excel, csv, …)
- ❖ …

5. Appending to a file

```
10.times do
  sleep 1
  puts "Record saved ..."
  File.open("server.log", "a") {|f| f.puts "Server started ar: #{Time.new}"}
end

Result =>
➜  ~ cat server.log
Server started ar: 2017-11-09 16:42:34 +0700
Server started ar: 2017-11-09 16:42:35 +0700
Server started ar: 2017-11-09 16:42:36 +0700
...
Server started ar: 2017-11-09 16:42:43 +0700
```

Exercise

Read and show result as html list from remote file

References

- http://ruby-doc.org/
- https://launchschool.com/books/ruby/read/files
- https://github.com/awesome-academy/RubyExample_TFW

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Question & Answer?

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