`-atime`, `-mtime`, and `-ctime` are the time parameter options available with `find`. They can be specified with integer values in "number of days". These integer values are often attached with `-` or `+` signs. The `-` sign implies less than, whereas the `+` sign implies greater than. For example:

- Print all the files that were accessed within the last seven days as follows:

  ```
  $ find . -type f -atime -7 -print
  ```

- Print all the files that are having access time exactly seven-days old as follows:

  ```
  $ find . -type f -atime 7 -print
  ```

- Print all the files that have an access time older than seven days as follows:

  ```
  $ find . -type f -atime +7 -print
  ```

Similarly, we can use the `-mtime` parameter for search files based on the modification time and `-ctime` for search based on the change time.

`-atime`, `-mtime`, and `-ctime` are time-based parameters that use the time metric in days. There are some other time-based parameters that use the time metric in minutes. These are as follows:

- `-amin` (access time)
- `-mmin` (modification time)
- `-cmin` (change time)

For example:

To print all the files that have an access time older than seven minutes, use the following command:

```
$ find . -type f -amin +7 -print
```

Another good feature available with `find` is the `-newer` parameter. By using `-newer`, we can specify a reference file to compare with the timestamp. We can find all the files that are newer (older modification time) than the specified file with the `-newer` parameter.

For example, find all the files that have a modification time greater than that of the modification time of a given `file.txt` file as follows:

```
$ find . -type f -newer file.txt -print
```

Timestamp manipulation flags for the `find` command are very useful for writing the system backup and maintenance scripts.

Search based on file size

Based on the file sizes of the files, a search can be performed as follows:

```
$ find . -type f -size +2k
# Files having size greater than 2 kilobytes

$ find . -type f -size -2k
# Files having size less than 2 kilobytes

$ find . -type f -size 2k
# Files having size 2 kilobytes
```

Instead of `k` we can use different size units such as the following:

- `b`: 512 byte blocks
- `c`: Bytes
- `w`: Two-byte words
- `k`: Kilobyte (1024 bytes)
- `M`: Megabyte (1024 kilobytes)
- `G`: Gigabyte (1024 megabytes)

Deleting based on the file matches

The `-delete` flag can be used to remove files that are matched by `find`.

Remove all the `.swp` files from the current directory as follows:

```
$ find . -type f -name "*.swp" -delete
```

Match based on the file permissions and ownership

It is possible to match files based on the file permissions. We can list out the files having specified file permissions as follows:

```
$ find . -type f -perm 644 -print
# Print files having permission 644
```

`-perm` specifies that `find` should only match files with their permission set to a particular value. Permissions are explained in more detail in the *File permissions, ownership, and the sticky bit* in *Chapter 3*, *File In, File Out*.