Command-Line Interface

You can start by creating a directory for your username, if it doesn't exist yet:
```
% hadoop fs -mkdir -p root
```
In my case, I'm using **root** user.

We can do all usual filesystem operations, e.g., creating and listing directories, reading and moving files, deleting data, etc. Use:
```
% hadoop fs -help
```
to get detailed help on every command.

Use:
```
% hadoop fs -copyFromLocal file.txt
        hdfs://localhost/user/root/file_copied_a.txt
```
to copy a file from the local filesystem to HDFS. Equivalent to:
```
% hadoop fs -copyFromLocal file.txt
        /user/root/file_copied_b.txt
```
(it takes the default host URI, hdfs://localhost, from core-site.xml).
And, if the destination path is relative, it'll go to the home directory:
```
% hadoop fs -copyFromLocal file.txt file_copied_c.txt
```

To remove a file, just use:
```
% hadoop fs -rm file_copied_c.txt
```

You can create and list a directory in the DFS:
```
% hadoop fs -mkdir my_subdir
```
You can also list all the files in a directory:
```
% hadoop fs -ls .
```

```
Found 3 items
drwxr-xr-x   - root supergroup          0 2021-04-25 10:31 my_subdir
-rw-r--r--   1 root supergroup      10000 2021-03-25 10:40 file_copied_a.txt
-rw-r--r--   1 root supergroup      10000 2021-03-25 10:42 file_copied_b.txt
```

You can use:
```
% hdfs fsck / -files -blocks
```
to list the blocks that make up each file in the filesystem.

If you copy a file back to the local file system:
```
% hadoop fs -copyToLocal file_copied_a.txt
        file_back_from_hdfs.txt
```
And check if it was well copied:
```
% md5sum file.txt file_back_from_hdfs.txt
```

```
83407c9b2d1bc4edb96cc057ef57ae57  file.txt
83407c9b2d1bc4edb96cc057ef57ae57  file_back_from_hdfs.txt
```

Note that you can access the local filesystem through Hadoop interfaces with:
```
hadoop fs -ls file:///root
```

```
Found 9 items
-rw-r--r--   1 root root       3106 2019-12-05 14:39 file:///root/.bashrc
drwx------   - root root       4096 2021-03-25 09:39 file:///root/.cache
-rw-r--r--   1 root root        161 2019-12-05 14:39 file:///root/.profile
drwx------   - root root       4096 2021-03-21 10:18 file:///root/.ssh
-rw-r--r--   1 root root      10000 2021-03-25 10:34 file:///root/file.txt
-rw-r--r--   1 root root      10000 2021-03-25 10:57 file:///root/file_back_from_hdfs.txt
-rwxr-xr-x   1 root root       1773 2021-03-21 09:57 file:///root/first-test.sh
-rwxr-xr-x   1 root root        136 2021-03-21 10:10 file:///root/start-hadoop.sh
-rwxr-xr-x   1 root root         83 2021-03-08 06:19 file:///root/stop-hadoop.sh
```

Utilities

Use:
```
< /dev/urandom tr -dc "\t\n [:alnum:]" | head -c10000 >
    file.txt
```
To generate a random file.