# *File Handling*

# What does I/O Package contain?

- IO Package contains classes/Interfaces required for
  - system input and output operations
  - handling files
  - saving and restoring object states
  - writing common data to multiple files

- Uses concept of streams to do IO processing

# *Working with Files and directories*

# What is File Class?

- File Class
  - Provides abstract representation for files and directory pathnames
  - Contains methods for handling files.

  - File class can be used for
    - Creating new files and directories
    - Renaming files and directories
    - Deleting files and directories
    - Listing files in a directory

  - It **cannot** be used for reading and writing file contents

# Instantiating File Object

- Constructors commonly used to create file objects

```
File(String pathname)

File file1 = new File("C:\\Tickets\\tick1.txt");
File file2 = new File("book.txt");
```

```
File(String parent, String child)

File file1 = new File("C:\\Tickets","tick1.txt");
```

```
File(File parent, String child)

File dir = new File("C:\\Tickets");
File file1 = new File(dir,"tick1.txt");
```

**Note:**

- Creating file object *does not create* a file on the file system
- If file exists in the path specified, variable will refer to the existing file
- File separator used for Unix systems is ***/*** and for windows is \\

# Creating New Files and Directory

- Creating a new file in File system

```
File file1 = new
File("C:\\Tickets\\tick1.txt");
file1.createNewFile();
```

- Creating new directory in File system:

```
File file1 = new File("C:\\PaySlips");
file1.mkdir();
```

- Creating new file in existing directory :

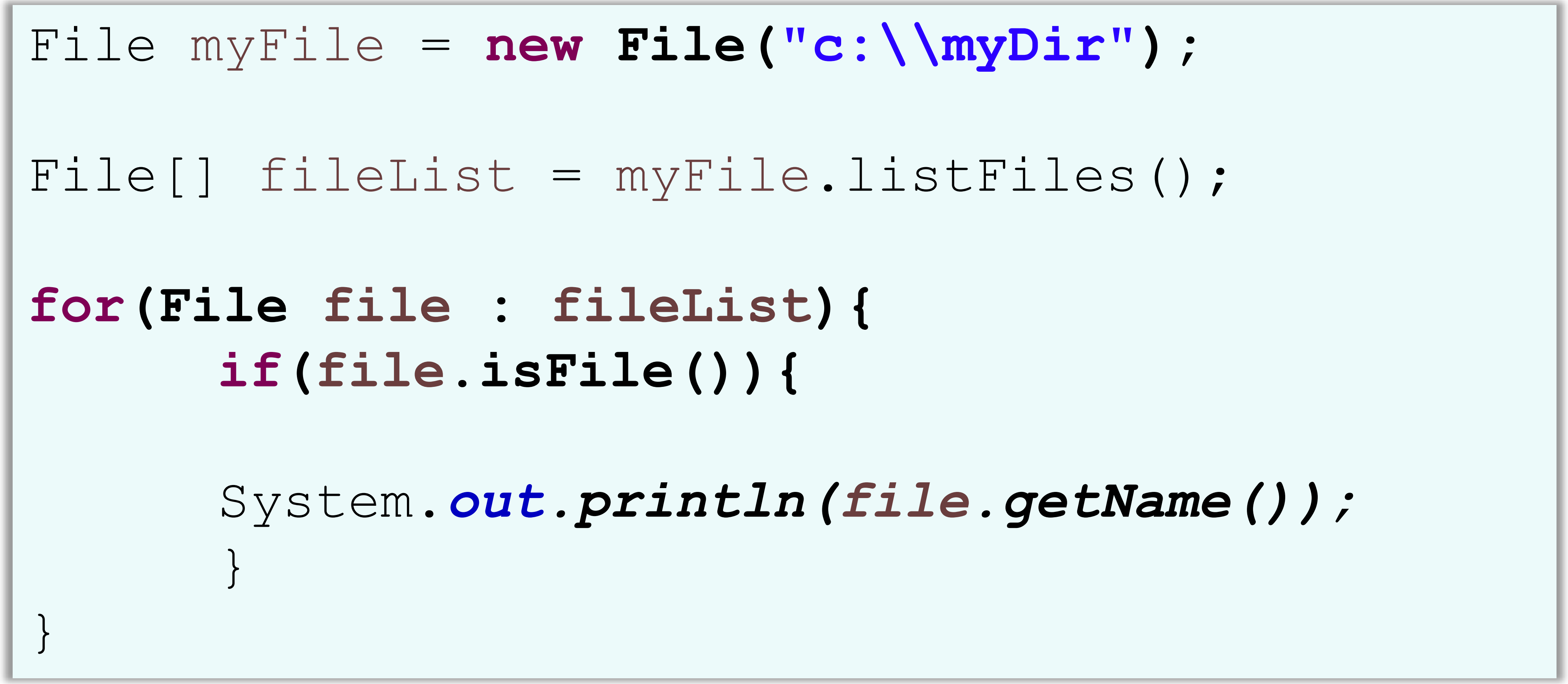
```
File file1 = new File("C:\\PaySlips");
File file2 = new File(file1,
“Jan2016.txt");
file2.createNewFile();
```

| Method | Description |
|---|---|
| createNewFile() | creates a new file, only if a file with this name does not exist |
| mkdir() | creates the directory |

# More Methods in File Class

| Method | Description |
|---|---|
| getParent() | Returns the path of parent of file or folder |
| getAbsolutePath() | Returns the absolute pathname |
| getName() | Returns the name of the file or directory |
| exists() | Tests whether the file or directory exists |
| delete() | Deletes the file or directory |
| list() | Returns an array of strings naming the files and directories in the directory |
| isDirectory() | Checks whether the file object refers to a directory in file system |
| isFile() | Checks whether the file object refers to a file in file system |
| listFiles() | Returns an array of File Objects present in the directory |

# Listing Files in a Directory



```
File myFile = new File("c:\\myDir");

File[] fileList = myFile.listFiles();

for(File file : fileList){
      if(file.isFile()){

      System.out.println(file.getName());
      }
}
```