File Handling

INTRODUCTION
File Handling

LEARNING OBJECTIVES

At the end of this lesson, you will be able to:
○ Understanding File Class
○ Create Files and Directories using File class
○ Using methods of File class

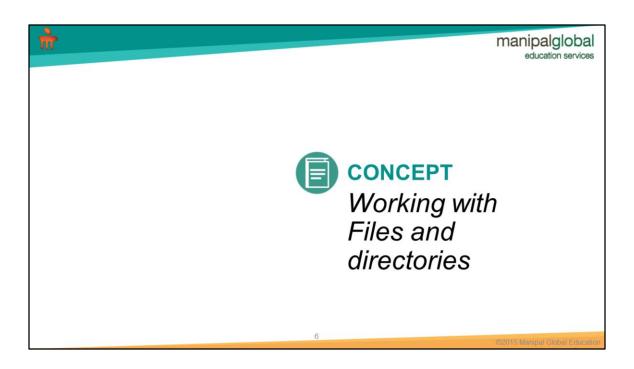Refer package **com.mgait.io** in the provided code base for demo programs on the topics covered in this presentation

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

CONCEPT
*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");
```
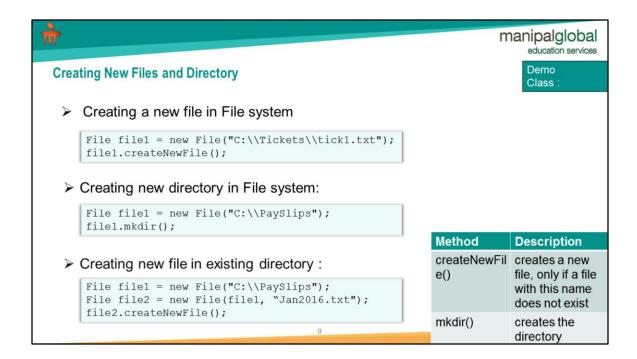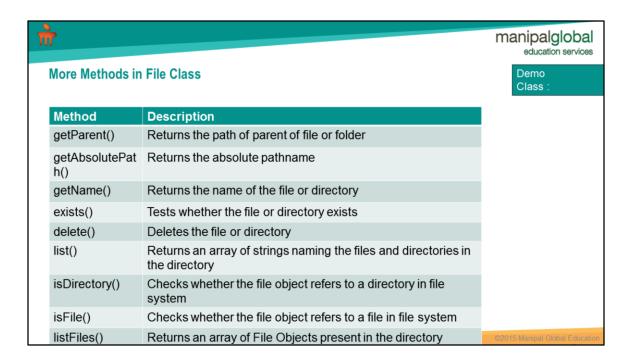
```
File(File parent, String child)

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

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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

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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

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

File[] fileList = myFile.listFiles();

for(File file : fileList){
      if(file.isFile()){
            System.out.println(file.getName());
      }
}
```

References

➢ Refer following demo videos on EduNxt
  • M6l1l2 Using File Api To Browse Directories - Demo

SUMMARY

In this lesson, you've learned to:

- ○ Create Files and Directories
- ○ Use methods of File class
- ○ Listing files in a directory

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