



University of Dhaka  
**Institute of Information Technology (IIT)**  
Bachelor of Science in Software Engineering (BSSE)



**Course:** SE 506 Design Patterns  
**Lab 08:** Composite Design Pattern  
**Time:** 2 hours

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Consider a file system of an operating system. In the file system, there are two types of objects: **File** and **Folder**. There are cases when **File** and **Folder** are treated to be the same way. For example, a search operation of a particular keyword needs to be executed. Now, this search operation applies to both **File** and **Folder**. For a **File**, it will just look into the contents of the file and for a **Folder**, it will go through all files in the hierarchy in that folder to find that keyword.

Design and implement the above scenario using the Composite design pattern.