

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

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

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.