**Handson 2 : Implementing the Factory Method Pattern**

1. Interface:

Document – base interface for all document types.

2. Concrete Classes:

WordDocument, PdfDocument, ExcelDocument – implement Document.

3. Abstract Factory:

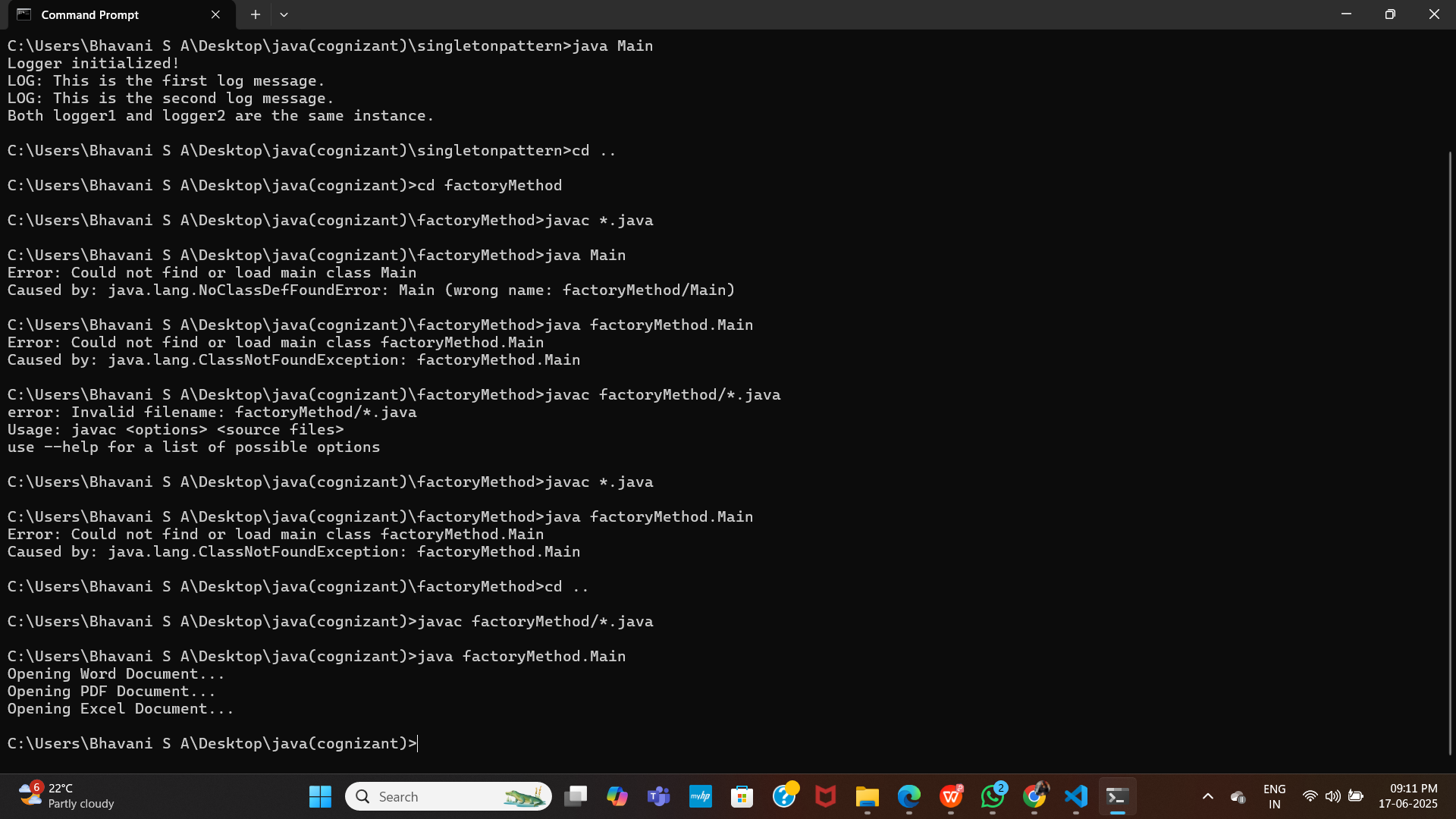
DocumentFactory – has abstract createDocument() method.

4. Concrete Factories:

WordFactory, PdfFactory, ExcelFactory – implement createDocument().

I used the Factory Method Pattern to separate the logic of object creation from the usage. Each document type (Word, PDF, Excel) has its own class, and I created factory classes to handle their creation. This makes it easy to scale if more document types are added — I just make a new factory without touching existing code

**Output:**

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