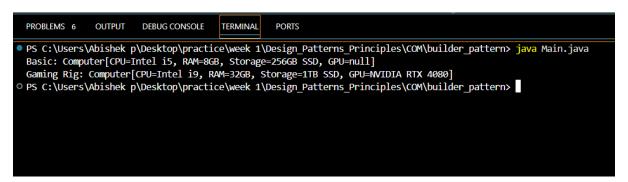# Design Patterns and Principles – output

Exercise 1: Implementing the Singleton Pattern

```
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\singletonpattern> java Main.java
Logger instance created.
[LOG] Application started.
[LOG] Another log entry.
Same instance? true
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\singletonpattern>
```
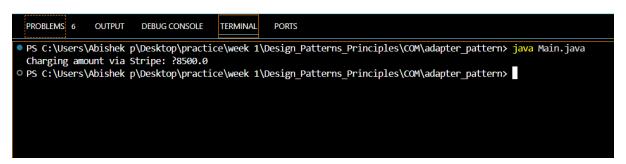
Exercise 2: Implementing the Factory Method Pattern

```
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\factory_method> java Main.java
Opening Word document.
Opening PDF document.
Opening Excel document.
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\factory_method>
```

Exercise 3: Implementing the Builder Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\builder_pattern> java Main.java
Basic: Computer[CPU=Intel i5, RAM=8GB, Storage=256GB SSD, GPU=null]
Gaming Rig: Computer[CPU=Intel i9, RAM=32GB, Storage=1TB SSD, GPU=NVIDIA RTX 4080]
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\builder_pattern>
```

Exercise 4: Implementing the Adapter Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\adapter_pattern> java Main.java
Charging amount via Stripe: ?8500.0
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\adapter_pattern>
```

Exercise 5: Implementing the Decorator Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\decorator_pattern> java Main.java
Sending Email: Your order has been shipped.
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\decorator_pattern>
```

Exercise 6: Implementing the Proxy Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\proxy_pattern> java Main.java
Loading image from remote server: design-pattern.png
Displaying image: design-pattern.png
Using cached image: design-pattern.png
Displaying image: design-pattern.png
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\proxy_pattern>
```

Exercise 7: Implementing the Observer Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\observer_pattern> java Main.java
WebClient received stock price update: ?500.0
WebClient received stock price update: ?520.0
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\observer_pattern>
```

Exercise 8: Implementing the Strategy Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\strategy_pattern> java Main.java
Paid ?2500.0 using Credit Card: 1234-5678-9012-3456
Paid ?1800.0 using Google Pay: 9876543210
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\strategy_pattern>
```

Exercise 9: Implementing the Command Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\command_pattern> java Main.java
? Light is ON
? Light is OFF
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\command_pattern>
```

`Exercise 10: Implementing the MVC Pattern

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\mvc_pattern> java Main.java
Student Details:
Name: Alice
ID: S101
Grade: A
Student Details:
Name: Alicia
ID: S101
Grade: A+
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\mvc_pattern>
```

Exercise 11: Implementing Dependency Injection

```
PROBLEMS 6    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS                                    powershell -

PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\dependency_injection> java Main.java
Fetched from repository: Customer[id=C101, name=John Doe]
PS C:\Users\Abishek p\Desktop\practice\week 1\Design_Patterns_Principles\COM\dependency_injection>
```