Task 3: Proxy

Create a proxy class for accessing a sensitive object that contains a secret key. The proxy should only allow access to the secret key if a correct password is provided.

```java
public class SecretObject {
    private String secretKey = "mySuperSecretKey123";
    public String getSecretKey() {
        return secretKey;
    }
}
public class SecretObjectProxy {

    private SecretObject secretObject;
    private String password;

    public SecretObjectProxy(String password) {
        this.password = password;
    }

    public String getSecretKey() {
        if (authenticate()) {
            return secretObject.getSecretKey();
        } else {
            throw new SecurityException("Incorrect password. Access denied.");
        }
    }
    private boolean authenticate() {
        // Simulate password validation (replace with your actual validation logic)
        return "correctPassword".equals(password);
    }
}
public class Main {
    public static void main(String[] args) {
        SecretObjectProxy proxy=new SecretObjectProxy("correctPassword");
        try {
            String secretKey = proxy.getSecretKey();
            System.out.println("Secret Key: " + secretKey);
        } catch (SecurityException e) {
            System.out.println("Error: " + e.getMessage());
        }
        SecretObjectProxy invalidProxy = new SecretObjectProxy("incorrectPassword");
        try {
            String secretKey = invalidProxy.getSecretKey();
            System.out.println("Secret Key: " + secretKey);
        } catch (SecurityException e) {
            System.out.println("Error: " + e.getMessage());
        }
```

```
    }
}
```