

```
import java.security.SecureRandom; // Import SecureRandom for secure random number generation
```

```
public class PasswordGenerator { // Define the class
```

```
    private int length; // Attribute to store the password length
```

```
    // Constructor to initialize the password length
```

```
    public PasswordGenerator(int length) {
```

```
        this.length = length; // Set the length attribute
```

```
    }
```

```
    // Method to generate the password
```

```
    public String generatePassword() {
```

```
        // Define the character set
```

```
        String characters =
```

```
"ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789!@#$%^&*()";
```

```
        SecureRandom random = new SecureRandom(); // Create a SecureRandom instance
```

```
        StringBuilder password = new StringBuilder(); // Use StringBuilder for efficient string manipulation
```

```
        // Generate the password by picking random characters from the set
```

```
        for (int i = 0; i < length; i++) {
```

```
            int randomIndex = random.nextInt(characters.length()); // Get a random index
```

```
            password.append(characters.charAt(randomIndex)); // Append the character at the random index
```

```
        }
```

```
        return password.toString(); // Return the generated password as a string
    }

    // Main method to test the PasswordGenerator class
    public static void main(String[] args) {
        PasswordGenerator passwordGenerator = new PasswordGenerator(10); // Create an
instance with length 10

        String password = passwordGenerator.generatePassword(); // Generate the password
        System.out.println("Generated Password: " + password); // Print the password
    }
}
```