

Character Per Line Assignment

Assignment Overview

Objective: Design and implement a Java application that reads a string from the user and prints each character on a separate line.

Topics: String Manipulation, Loops, Character Access

Problem Statement

Write a Java program that:

1. **Prompts the user** to enter a word
 2. **Reads the input** as a string
 3. **Prints each character** on its own line
 4. **Handles any length** of input string
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Requirements

Step 1: User Input

- Prompt the user with: "Enter a word: "
- Use **Scanner** to read the entire string
- Store the input in a String variable

Step 2: Character Processing

- **Use a loop** to iterate through each character
- **Access each character** using some sort of String method
- **Print each character** on a separate line

Step 3: Loop Structure

- **Start at index 0**
 - **Continue until** you reach the end of the string
 - **Increment index** by 1 each iteration
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Examples & Test Cases

Example 1: Input = "hello"

```
Enter a word: hello
h
```

```
e  
l  
l  
o
```

Example 2: Input = "java"

```
Enter a word: java  
j  
a  
v  
a
```

Example 3: Input = "a"

```
Enter a word: a  
a
```

Example 4: Input = "programming"

```
Enter a word: programming  
p  
r  
o  
g  
r  
a  
m  
m  
i  
n  
g
```

Example 5: Input = "computer"

```
Enter a word: computer  
c  
o  
m  
p  
u  
t
```

e
r