

CSE310 Online: Pyramid Pattern Validator

Time: 40 minutes

Objective

In this assignment, you are required to create a new .l file to validate a pyramid pattern that follows specific rules.

Pyramid Pattern Description

A valid pyramid consists of lines with stars (*) and plus signs (+) arranged in the following way:

- The first line has equal number of stars on both sides of a single plus.
- Each subsequent line has one less star on each side, and two more pluses than the previous line.
- The final line contains only plus signs (no stars).

Expected Input and Output

Example

```
*****  
*****  
*****  
+++++++
```

Expected Output:

```
Pattern matched successfully!
```

Example

```
*****
```

Expected Output:

```
Error at line 1: Stars on left and right not equal
```

Example

```
*****  
*****  
*****  
+++++++
```

Expected Output:

```
Error at line 1: Number of pluses incorrect
```

Example

```
*****  
*****
```

Expected Output:

```
Error at line 2: Unexpected end of file; incomplete pyramid
```

Example

```
***  
+++
```

Expected Output:

```
Pattern matched successfully!
```

Example

```
*****  
*****  
*****  
*****  
+++++++
```

Expected Output:

```
Pattern matched successfully!
```

Example

```
*****  
*****  
*****  
+++++++
```

Expected Output:

```
Error at line 2: Number of pluses incorrect
```

Example

```
*****  
*****  
*****  
*****
```

Expected Output:

```
Error at line 4: Last line must have no stars
```

Example

```
*****  
*****  
***a***  
+++++++
```

Expected Output:

```
Error at line 3: Invalid character or format
```

Submission

- Submit only your lex file 2105XXX.1