

**UNIVERSIDAD LA SALLE**  
**INGENIERÍA DE SOFTWARE**  
**COMPILADORES**



**Tema:** Analizador Léxico

**Alumno:**

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## 1. Enlace al repositorio

1. Repositorio de GitHub  
<https://github.com/JosueRamosS/ULASALLE/tree/main/Compiladores/AnalizadorL%C3%A9xico>
2. Ejecución del código en YouTube  
<https://www.youtube.com/watch?v=AzK8CG41E18>

## 2. Especificación Léxica

Tabla 1: Especificación Léxica

| Componente Léxico | Expresión Regular               |
|-------------------|---------------------------------|
| MAIN              | zhǔyàode                        |
| FUNCTION          | gōngnéng                        |
| FOR               | pàn                             |
| IF                | rúguǒ                           |
| ELSE              | biéde                           |
| DTSTRING          | liàn                            |
| DTINTEGER         | zhěngshù                        |
| DTFLOAT           | fúliú                           |
| BOOL              | bùér                            |
| PRINT             | dǎyìn                           |
| RETURN            | fǎnhuí                          |
| VTRUE             | duì                             |
| VFALSE            | cuò                             |
| MLCOMM            | / * [^"] * \ * /                |
| ILCOMM            | (/.*)                           |
| VSTRING           | "[^"]*"                         |
| IDENTIFIER        | $([a-z][A-Z])([a-z][A-Z][0-9])$ |
| VINTEGER          | $[0-9]^+$                       |
| VFLOAT            | $[0-9]^+ \cdot [0-9]^+$         |
| EQUAL             | =                               |
| INEQUAL           | ≠                               |
| PLUS              | +                               |
| MINUS             | -                               |
| MULT              | *                               |
| DIV               | \                               |
| GREATERTH         | >                               |
| LESSTH            | <                               |
| OPENKEY           | {                               |
| CLOSEKEY          | }                               |
| OPENPAR           | (                               |
| CLOSEPAR          | )                               |
| PRINTOP           | ->                              |
| ENDST             | ;                               |
| COMMA             | ,                               |

### 3. Ejemplos de código en PīnyīnScript

**//Fibonacci numbers in PīnyīnScript**

```
gōngnéng fibonacci(n) {  
  rúguǒ (n <= 1) {  
    fānhuǐ n;  
  } biéde {  
    fānhuǐ fibonacci(n - 1) + fibonacci(n - 2);  
  }  
}  
  
zhǔyàode {  
  zhèngshù f = fibonacci(10);  
  dǎyìn -> "The first ten numbers of Fibonacci are: ";  
  dǎyìn -> f;  
}
```

**//Print numbers backwards in PīnyīnScript**

```
gōngnéng printReverse(n) {  
  rúguǒ (n >= 1) {  
    dǎyìn -> n  
    printReverse(n - 1);  
  }  
}  
  
zhǔyàode {  
  printReverse(100);  
}
```