

```
7// For KAY
// Comment

// Kay is a case-sensitive language (True and False are uppercased)
// You do not need to write programs you can just write tests to test the
// scanner

// keywords
bool
else
if
integer
main
while

// separators
(
)
{
}
;
,
// comma

// operators
||
!
&&
!=
==
>=
<=
<
>
```

```
/  
*  
-  
+  
:= // A comment
```

```
// identifiers  
a  
aa  
x  
counter  
a3  
do // identifier  
void // identifier in key  
true // identifier in key  
false // identifier in key  
X3 // 38  
TRUE // identifier
```

```
// literals  
True  
False  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
100  
256  
6594  
54932  
543922  
5838323  
85403345  
393920582  
4894309432  
58834324234  
342894252085  
5823943294892  
48329483248322

```
595686866830384  
4823980580280508  
44820105839845032  
432205294320580285
```

```
// lexical errors  
= // Other - not recognized  
3aaa2!=44444 // lexical error for 3aaa2  
@ // lexical error Other  
& // lexical error  
| // lexical error  
1!==3 // literal(1) operator (!=) other(=) literal (3)
```

```
// Things to test!
```

```
1!2 // literal operator literal  
1!=2 // literal operator (!=) literal  
1! == 3 // literal operator (!) operator (==) literal  
1==>4 // literal operator (==) operator (>) literal  
** // operator operator  
True && False // literal operator literal
```

```
// Missing tests
```

```
// Lexical errors  
2.5 // we do not understand .  
:  
=  
\  
[  
]
```

```
// Identifier
```

Xy1 // Capital first letter

```
// tests influenced from other languages  
1,000,000 // Literal separator literal separator literal  
/* test */ // operator operator identifier operator operator
```

```
// Negative numbers  
!5 // operator literal
```

```
!== // operator(!=) other(=)
```

```
// This is not a Kay program but it is good for testing purposes  
void main(){  
int i;  
i = 7;  
}
```

```
// void identifier  
// main keyword  
// ( separator  
// ) separator  
// { separator  
// int identifier  
// i identifier  
// ; separator  
// i identifier  
// = other  
// 7 literal  
// ; separator  
// } separator
```

This is what we put in the file to test:

```
bool  
else  
if  
integer  
main  
while
```

```
(  
)  
{  
}  
;  
,
```

```
||  
!  
&&  
!=  
==  
>=  
<=  
<  
>  
/  
*  
-  
+  
:=
```

```
a  
aa  
x  
counter  
a3  
do  
void  
true  
false  
X3  
TRUE
```

```
True  
False  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

```
=  
3aaa2!=44444  
@  
&  
|  
1==3
```

```
1!2  
1!=2  
1! == 3  
1==>4  
**
```

True && False

```
void main(){  
int i;  
i = 7;  
}
```