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SECTION: BSCS-6B

ROLL NO: 20P-0147

Assignmnet #2

.Lex extension Code

```
%{
    #include<stdio.h>
    #include<stdlib.h>
    #include<string.h>
    #include<ctype.h>
}%

ID [a-zA-Z][a-zA-Z0-9]*
DIGIT [0-9]+
OP [-+*<>/=]
comment "/*".*

%%
"if"      {printf("<KEYWORD, %s>\n", yytext);}
"then"    {printf("<KEYWORD, %s>\n", yytext);}
```

```

"else"      {printf("<KEYWORD, %s>\n", yytext);}
"for"       {printf("<KEYWORD, %s>\n", yytext);}
"while"     {printf("<KEYWORD, %s>\n", yytext);}
"int"       {printf("<KEYWORD, %s>\n", yytext);}
"float"     {printf("<KEYWORD, %s>\n", yytext);}
{ID}        {printf("<IDENTIFIER, %s>\n", yytext);}
{DIGIT}     {printf("<NUMERIC, %s>\n", yytext);}
{OP}        {printf("<OPERATOR, %s>\n", yytext);}
{comment}   {}
[ \t\n]     {}
.           {printf("<SPECIAL CHARACTER, %s>\n", yytext);}
%%

```

```

int yywrap()

```

```

{
    return 1;
}

```

```

int main()

```

```

{
    yyin = fopen("input.txt", "r");
    yylex();
    return 0;
}

```

```

/*INPUT FILE

```

```

int a = 5;
int b = 10;
a = b //comment 1
val = a < b
//this is last comment
*/

```

```

/*

```

```

OUTPUT

```

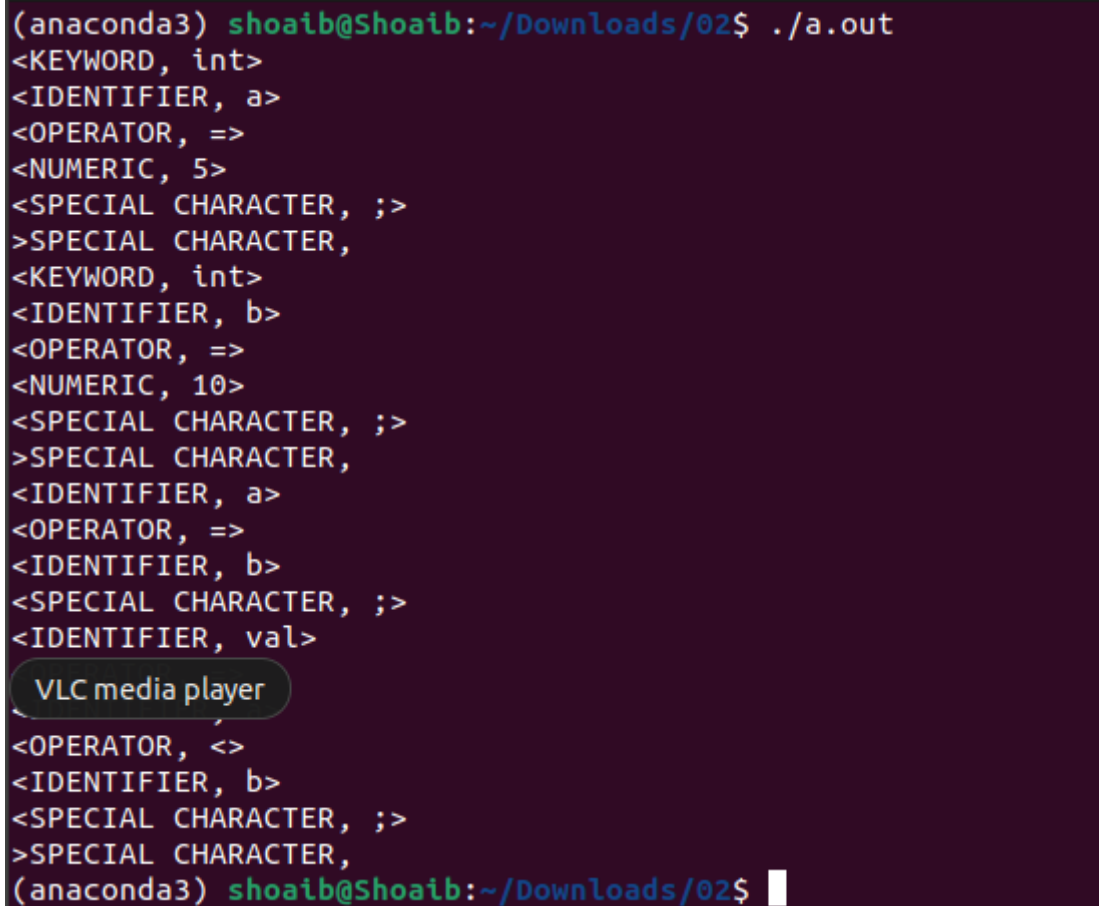
```

<KEYWORD, int>
<IDENTIFIER, a>
<OPERATOR, =>
<NUMERIC, 5>
<;>
<KEYWORD, int>
<IDENTIFIER, b>
<OPERATOR, =>
<NUMERIC, 10>
<;>
<IDENTIFIER, a>
<OPERATOR, =>
<IDENTIFIER, b>
*/

```

INPUT.TEXT

```
int a = 5;  
int b = 10;  
a = b; //comment 1  
val = a < b;  
//this is last comment
```



```
(anaconda3) shoaib@Shoaib:~/Downloads/02$ ./a.out  
<KEYWORD, int>  
<IDENTIFIER, a>  
<OPERATOR, =>  
<NUMERIC, 5>  
<SPECIAL CHARACTER, ;>  
>SPECIAL CHARACTER,  
<KEYWORD, int>  
<IDENTIFIER, b>  
<OPERATOR, =>  
<NUMERIC, 10>  
<SPECIAL CHARACTER, ;>  
>SPECIAL CHARACTER,  
<IDENTIFIER, a>  
<OPERATOR, =>  
<IDENTIFIER, b>  
<SPECIAL CHARACTER, ;>  
<IDENTIFIER, val>  
<OPERATOR, <>  
<IDENTIFIER, b>  
<SPECIAL CHARACTER, ;>  
>SPECIAL CHARACTER,  
(anaconda3) shoaib@Shoaib:~/Downloads/02$
```

Image generated through JFLAP

