

Practical – 10

Aim: Write a program to implement LZSS algorithm.

```
#include<iostream>
using namespace std;
int main(){
    int w=0,sb=0,lab=0,x=0,o=0,i=0,j=0,y=0,q=0;
    cout<<"Enter the size of window: ";
    cin>>w;
    cout<<endl<<"Enter the size of search buffer: ";
    cin>>sb;
    lab=w-sb;
    cout<<endl<<"Enter the total char in sequence: ";
    cin>>x;
    char ch[x+1],W[w+1]="";
    cout<<"Enter the char in sequence:\n";
    for(i=1;i<=x;i++)
        cin>>ch[i];
    }
    for(i=sb+1,j=1;i<=w;i++,j++)
        W[i]=ch[j];
    }
    int con=0,len=0,pos=0;
    char *p;
    for(i=1;i<=x;i++){
        con=0,len=0,pos=0;
        for(o=sb;o>0;o--){
            if(W[o]==W[sb+1]) {
                p=&W[sb+1];
                con=1;
                p++;
                for( y=o+1;y<=w;y++){
                    if(W[y]==*p) {
                        con++;
                        p++;
                    }
                    else
                        break;
                }
                if(len<con) {
                    len=con;
                    pos=o;
                }
            }
        }
        if(con==0){
            cout<<"0"<<"\t"<<"<c("<<W[sb+1]<<">\n";
            for( q=1;q<w;q++){
                W[q]=W[q+1];
```

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        }
        W[q]=ch[j];
        j++;
    }
    else{
        for(int q=1;q<=w;q++){
            if(q+len+1<=x)
                W[q]=ch[q+len+1];
            }
            else
                W[q]='\0';
        }
        cout<<"1"<<"\t"<<pos<<","<<len<<","<<"c("<<W[sb]<<")>\n";
    }
    if(W[sb+1]=='\0')
        break;
}
return 0;
}

```

Output:

```

Enter the size of window: 5
Enter the size of search buffer: 2
Enter the total char in sequence: 6
Enter the char in sequence:
a
c
a
b
c
a
0      <c(a)>
0      <c(c)>
1      <1,1,c(b)>
0      <c(c)>
0      <c(a)>

Process returned 0 (0x0)   execution time : 20.326 s
Press any key to continue.

```