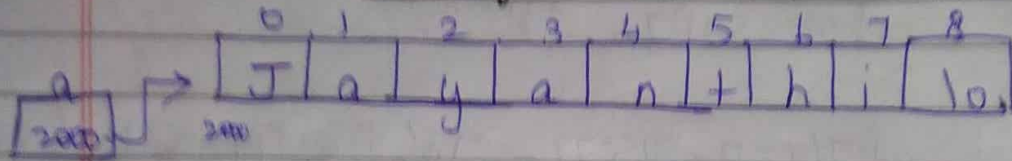
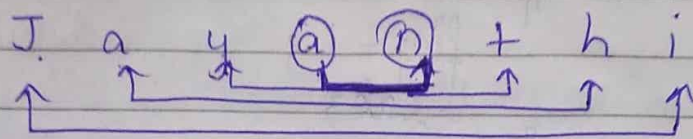


C-69 \Rightarrow C Program to Reverse a string



`length = strlen(a)`

`length = 8`



* `strrev()` is a predefined function which is defined in `string.h` header file.

* `strrev()` function will return a pointer to same string.

* We are going to modify only one string, so one argument.

```
strrev(char *str)
{
}
```

\Rightarrow predefined function.

Program using `strrev()`

```
#include <string.h>
```

```
void main()
```

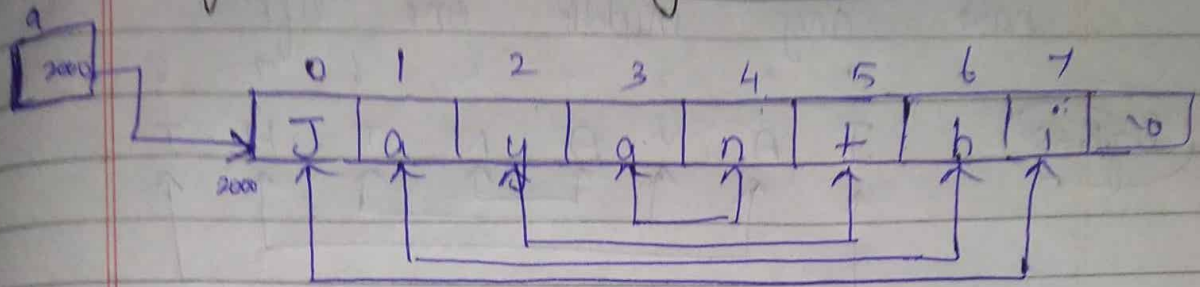
```
{
```

```
char s1[30] = "Jayanthi";
```

```
strrev(s1);
```

```
printf("Reversed string is: %s", s1);
```

Program without using strlen() :-



$$s[0] = s[7]$$

$$s[1] = s[6]$$

$$s[2] = s[5]$$

$$s[3] = s[4]$$

1 2 3 4 5 6 7 8
j a y a n + b i

`length = strlen(a)`

`length = 8`

Loop should run $\frac{\text{length}}{2} \Rightarrow \frac{8}{2} \Rightarrow 4 \text{ times}$
[0-3]

$$a[0] = a[7]$$

$$a[1] = a[6]$$

⋮

$$a[0] = a[7-0] \Rightarrow a[7]$$

$$a[i] = a[(\text{length}-1)-i]$$

$$a[1] = a[7-1] \Rightarrow a[6]$$

$$i=0, a[i] = a[(\text{length}-1)-i]$$

$$a[0] = a[7-0] \Rightarrow a[7]$$

$$i=1, a[i] = a[7-1] \Rightarrow a[6]$$

```
for (i=0; i < length; i++)  
{
```

```
    temp = a[i];
```

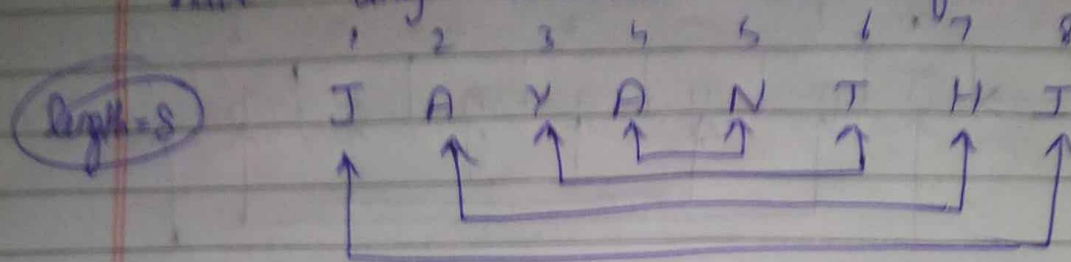
```
    a[i] = a[(length-1)-i];
```

```
    a[(length-1)-i] = temp;
```

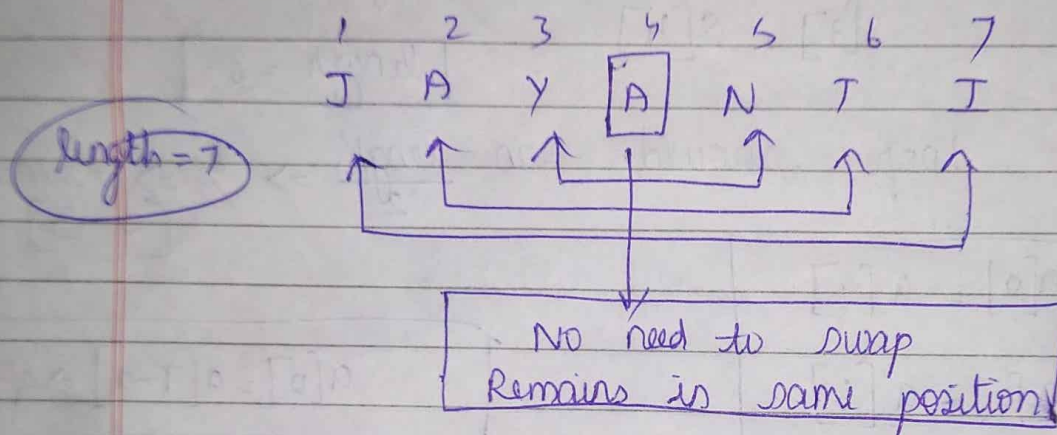
```
    printf("%s", a);
```

We change
Same string;
So when
we swap;
we put
one extra
variable in
temp
variable

* If length is even; then we won't have any middle one left



* If length is odd, then in middle we have one left whose position is same



Same program using two variables i, j without using length.

```
for (i = 0, j = l - 1; i < j; i++, j--)
```

```

{
    temp = s[i];
    s[i] = s[j];
    s[j] = temp;
}

```

```

}

printf ("%s", s);

```

CODE 1:

```
1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <string.h>
4  /** STRING REVERSE WITHOUT USING strrev() function **/
5  int main()
6  {
7      char a[30],temp;
8      int i,length;
9      printf("Enter string:");
10     gets(a);
11     length=strlen(a);
12     for(i=0;i<(length/2);i++)
13     {
14         temp=a[i];
15         a[i]=a[(length-1)-i];
16         a[(length-1)-i]=temp;
17     }
18     printf("String is reversed:%s",a);
19     getch();
20 }
21
```

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```
Enter string:jayanthi
String is reversed:ihtnayaj
```

```

1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <string.h>
4  /** STRING REVERSE WITHOUT USING strrev() function **/
5  int main()
6  {
7      char a[30], temp;
8      int i, j, length;
9      printf("Enter string:");
10     gets(a);
11     length=strlen(a);
12     /** for(i=0;i<(length/2);i++)
13     {
14         temp=a[i];
15         a[i]=a[(length-1)-i];
16         a[(length-1)-i]=temp;
17     } **/
18     for(i=0, j=length-1; i<(length/2); i++, j--)
19     {
20         temp=a[i];
21         a[i]=a[j];
22         a[j]=temp;
23     }
24     printf("String is reversed:%s", a);
25     getch();
26 }
27

```

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```

Enter string:madam
String is reversed:madam_


```

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```

Enter string:level
String is reversed:level


```

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```
Enter string:rain
String is reversed:niar
```

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```
Enter string:net
String is reversed:ten
```

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```
Enter string:Hello World
String is reversed:dlroW olleH
```

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```
Enter string:RAC E CAR
String is reversed:RAC E CAR
```

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```
Enter string:RACECAR
String is reversed:RACECAR_
```

CODE 2:

```

1  #include <stdio.h>
2  #include <stdlib.h>
3  #include <string.h>
4  /** STRING REVERSE USING strrev() function **/
5  int main()
6  {
7      char a[30];
8      printf("Enter string:\n");
9      gets(a);
10     strrev(a);
11     printf("String is reversed:\n");
12     puts(a);
13     getch();
14 }
15

```

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```

Enter string:
jayanthi
String is reversed:
ihtnayaj

```

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```

Enter string:
RAC E CAR
String is reversed:
RAC E CAR

```