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GNU nano 6.2                                     substring.sh
echo "String: We Welcome You In The Operating System Lab."
str="We Welcome You In The Operating System Lab."
substr="${str:0:10}"
substr2="${str:-3:4}"
substr3="${str:10:24}"
echo -e "\nExtracting the substring from index 0 upto index 10: $substr\n"
echo -e "\nExtracting the substring from index -3 upto index 4: $substr2\n"
echo -e "\nExtracting the substring from index 10 upto index 24: $substr3\n"

ankush@ar:~/Desktop$ nano substring.sh
ankush@ar:~/Desktop$ ./substring.sh
String: We Welcome You In The Operating System Lab.

Extracting the substring from index 0 upto index 10: We Welcome

Extracting the substring from index -3 upto index 4: We Welcome You In The Operating System Lab.

Extracting the substring from index 10 upto index 24: You In The Operating Sy

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GNU nano 6.2                                     extract.c *
#include <stdio.h>
int main()
{
    char str[50]="Welcome to Operating System Lab";

    // character extraction
    printf("Extracting the substring from index 0 up to index 10:-");{
        for (int i = 0; i<=10; i++) {
            if (str[i] != ' ') {

                printf("%c", str[i]);

            }
        }
        printf("\n\n");
        printf("Extracting the substring from index -3 up to index 4:-");{
            for (int i = -3; i<=4; i++) {
                if (str[i] != ' ') {
                    printf("%c", str[i]);

                }
            }
            printf("\n\n");
            printf("Extracting the substring from index 10 up to index 20:-");{
                for (int i = 10; i<=20; i++){
                    if (str[i] != ' ') {
                        printf("%c", str[i]);

                    }
                }
                printf("\n\n");
                return 0;
            }
        }
    }
}

```

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GNU nano 6.2                                     string_length.c *
#include <stdio.h>
int main()

char a[100]="Welcome to Operating System Lab";
int length;

length = strlen(a);

printf("Length of the string = %d\n", length);

return 0;

```

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ankush@ar:~/Desktop$ time ./substring.sh
String: We Welcome You In The Operating System Lab.

Extracting the substring from index 0 upto index 10: We Welcome

Extracting the substring from index -3 upto index 4: We Welcome You In The Operating System Lab.

Extracting the substring from index 10 upto index 24: You In The Operating Sy

real    0m0.003s
user    0m0.000s
sys     0m0.003s
ankush@ar:~/Desktop$

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ankush@ar:~/Desktop$ time ./new1
Extracting the substring from index 0 up to index 10:-welcometo
Extracting the substring from index -3 up to index 4:-welco
Extracting the substring from index 10 up to index 20:-Operating

```