

1. TIME COMPARISION

```
ayushmaan@ASJ:~/Music/5$ time ./substring.sh

Extracting the substring from index 0 upto index 10: Hi welcom

Extracting the substring from index -3 upto index 4: Hi welcome to miet

Extracting the substring from index 10 upto index 24:  to miet

Length of the string: 18

real    0m0.030s
user    0m0.007s
sys     0m0.014s

ayushmaan@ASJ:~/Music/5$ time ./length
Length of the string = 18

real    0m0.001s
user    0m0.001s
sys     0m0.000s
```

2. FOR EXTRACTING THE SUBSTRING

```
str="Hi welcome to miet"
substr="${str:0:9}"
substr2="${str:-3:3}"
substr3="${str:10:12}"
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"

echo "Length of the string: ${#str}"
```

```

#include <stdio.h>
int main()
{
    char str[50]="Hi welcome to miet";

    // 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;
    }
}

```

3. FOR LENGTH OF THE STRING

```

#include <stdio.h>
#include<string.h>
int main()
{
    char a[100]="Hi welcome to miet";
    int length;

    length = strlen(a);

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

    return 0;
}

```

```

str="Hi welcome to miet"
substr="${str:0:9}"
substr2="${str:-3:3}"
substr3="${str:10:12}"
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"
echo "Length of the string: ${#str}"

```