

```
#include <stdio.h>
#include <stdlib.h>
```

```
void printChar( const char *str){
    while( *str != '\0') {
        putchar(*str);
        ++str;
    }
    putchar('\n');
}
```

```
size_t stringLength( const char *str){

    size_t i = 0;
    while( str[i] != '\0') {
        ++i;
    }
    return i;
}
```

```
size_t stringLength2( const char *str){

    size_t i = 0;
    while( *str != '\0') {
        ++i;
        ++str;
    }
    return i;
}
```

```
size_t stringLength3( const char *str) {
    // version 3
    const char *ptr = str ;
    while(*ptr != '\0') {
        ++ ptr ;
    }
    return( size_t)( ptr - str );
}
```

```
int stringCompare( const char *str1 , const char *str2 ) {
    size_t i = 0;
    while( str1[i] != '\0' && str1[i] == str2[i]) {
        ++i;
    }
    return str1[i] - str2[i];
}
```

```
int stringCompare2 ( const char *str1 , const char *str2 ) {
    while(*str1 != '\0' && *str1 == *str2 ) {
        ++str1 ;
        ++str2 ;
    }
    return *str1 - *str2 ;
}
```

```

const char *findFirst ( const char *str , char c ) {
    while(*str != '\0') {
        if(*str == c) {
            return str ;
        }
        ++str ;
    }
    return NULL ;
}

```

```

char toLowerCase (char c) {
    if (c >= 'A' && c <= 'Z') {
        c = (char)(c - 'A' + 'a');
    }
    return c;
}

```

```

int startWith( const char *str , const char *start , int csensitive ) {
    while (*start != '\0') {
        if ( ( csensitive && *start != *str ) || ( !csensitive && toLowerCase(*start) != toLowerCase(*str) )
        )
        {
            return 0;
        }
        ++str ;
        ++start ;
    }
    return 1;
}

```

```

const char *searchString( const char *haystack, const char *needle, int csensitive )
{
    while (*haystack != '\0') {
        if ( startWith( haystack , needle , csensitive ) ) {
            return haystack ;
        }
        ++haystack;
    }
    return NULL ;
}

```

```

int main(){
    char mystr[]="Bonjour";
    char mystr2[]="Bonjour";

    printf("Chaine = %s\n", mystr);
    printChar(mystr2);
    printf("Longueur = %lu \n",stringLength(mystr));
    printf("Comparaison = %d \n",stringCompare(mystr,mystr2));
    printf("Comparaison2 = %d \n",stringCompare2(mystr,mystr2));
    printf("FinFirst = %s \n",findFirst(mystr,'n'));
    printf("SearchString = %s \n",searchString(mystr,"nJ",0));
    printf("FIN\n");
    return EXIT_SUCCESS;
}

```