1.funtion to count number of characters in a string

#include <stdio.h>

int countChars(char \*str) {

int count = 0;

while (\*str != '\0') {

count++;

str++;

}

return count;

}

int main() {

char str[] = "Hello, world!";

int count = countChars(str);

printf("The string \"%s\" has %d characters.\n", str, count);

return 0;

}

2.

#include <stdio.h>

#include <stdlib.h>

void sieveOfEratosthenes(int n) {

// create a boolean array "prime[0..n]" and initialize

// all entries as true. A value in prime[i] will

// finally be false if i is Not a prime, else true.

int prime[n+1];

for(int i=0; i<=n; i++) {

prime[i] = 1; // initialize all numbers as prime

}

// start with the first prime number 2

for(int p=2; p\*p<=n; p++) {

// if prime[p] is not changed, then it is a prime

if(prime[p]) {

// update all multiples of p

for(int i=p\*p; i<=n; i += p) {

prime[i] = 0;

}

}

}

// print all prime numbers

printf("The prime numbers up to %d are: ", n);

for(int p=2; p<=n; p++) {

if(prime[p]) {

printf("%d ", p);

}

}

printf("\n");

}

int main() {

int n = 150;

sieveOfEratosthenes(n);

return 0;

}