Divide a string in N equal parts

Difficulty Level: Rookie

Question:
Write a program to print N equal parts of a given string.

Solution:
1) Get the size of the string using string function strlen() (present in string.h)
2) Get size of a part.

```
    part_size = string_length/n
```

3) Loop through the input string. In loop, if index becomes multiple of part_size then put a part separator("\n")

Implementation:

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

/* Function to print n equal parts of str*/
void divideString(char *str, int n)
{
   int str_size = strlen(str);
   int i;
   int part_size;

   /*Check if string can be divided in n equal parts */
   if(str_size%n != 0)
   {
```


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```
      printf("Invalid Input: String size is not divisible by n");
      return;
    }

    /* Calculate the size of parts to find the division points*/
    part_size = str_size/n;
    for(i = 0; i< str_size; i++)
    {
      if(i%part_size == 0)
         printf("\n"); /* newline separator for different parts */
      printf("%c", str[i]);
    }
}

int main()
{
     /*length od string is 28*/
     char *str = "a_simple_divide_string_quest";

     /*Print 4 equal parts of the string */
     divideString(str, 4);

     getchar();
     return 0;
}
```

In above solution, we are simply printing the N equal parts of the string. If we want individual parts to be stored then we need to allocate part_size + 1 memory for all N parts (1 extra for string termination character '\0'), and store the addresses of the parts in an array of character pointers.

Asked by Jason.

Geometric Algorithms

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srinivas • 2 years ago

If (n == 0) return; /* Before: if(str_size%n != 0) */

```
/* Paste your code here (You may delete these lines if not writing c
```

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Sa • 2 years ago

```
void divideString(char *str, int n)
{
   int str_size = strlen(str);
   int i,j=0,k=0;
   int part_size;

   char **strArray = (char **)malloc((sizeof(char *)*n)); // for n str
     part_size = str_size/n;
         if(str_size%n != 0)
   {
     printf("Invalid Input: String size is not divisible by n");
     return;
   }

   for(i=0;i<n;i++)
   {
           strArray[i] = (char *)malloc(sizeof(char)*(part_size + 1))
```

see more

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Nikin Kumar Jain • 2 years ago

```
void divideString(char *str, char **str1)
{
        int n = 3;
        int j = 0;
```

695

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```
        int m = 0;
        for(int i=0;i<27;i++)
        {
                *(*(str1+j)+m) = *(str+i);
                m++;
                if(m==3)
                {
                        j++;
                        m = 0;
                }
        }
        for(int x=0;x<9;x++){
                for(int y=0;y<3;y++)
                        cout<<str1[x][y];
```

see more

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Nikin Kumar Jain • 2 years ago

//Code for Storing the divided strings.

```
void divideString(char *str, char **str1)
{
int n = 3;
int j = 0;
int m = 0;
for(int i=0;i<27;i++)
{
*(*(str1+j)+m) = *(str+i);
m++;
if(m==3)
{
```

```
j++;
m = 0;
}
}
for(int x=0;x<9;x++){
```

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anonymous • 3 years ago

Sorry, but who would ask this dumb question during an interview? Why is this operation except the strlen used to get the length.

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Sandeep anonymous • 3 years ago

@anonymous: Thanks for the inputs. I have added Difficulty level on to by advanced users.

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spandan • 4 years ago

i think testing condn should come afterprintf("%c", str[i]);

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Sandeep spandan • 3 years ago

@spandan: I think you want to modify the code to following. But, if we c output. Please correct me if I am wrong.

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

/* Function to print n equal parts of str*/
void divideString(char *str, int n)
```

```
{
   int str_size = strlen(str);
   int i;
   int part_size;

   /*Check if string can be divided in n equal parts */
   if(str_size%n != 0)
   {
     printf("Invalid Input: String size is not divisible by
     return;
```

see more

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