

1 . 2. Write a program to get the output

Input: a1b10

Output: abbbbbbbbbb

Input: b3c6d15

Output: bbbccccccddddddddddddddd

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

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

```
void printString(char inputString[50],char prev_alp,int num)
```

```
{  
    int i,j;  
    for(i = 0; i<strlen(inputString) ; i++)  
    {  
        if((inputString[i] >= 65 && inputString[i]<=90) || (inputString[i] >= 97 && inputString[i]<=122))  
        {  
            if(prev_alp != 0)  
            {  
                for(j = 0;j<num;j++)  
                {  
                    printf("%c",prev_alp);  
                }  
                num = 0;  
            }  
            prev_alp = inputString[i];  
        }  
        else if(inputString[i] >= 48 && inputString[i]<=57)  
        {  
            num = num*10+inputString[i]-48;  
        }  
        if(inputString[i+1] == '\0')  
        {  
            for(j = 0;j<num;j++)
```

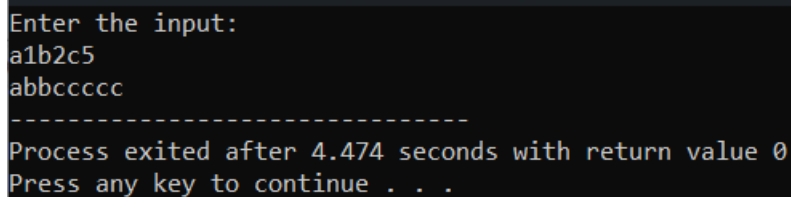
```

        {
            printf("%c",prev_alp);
        }
    }
}

}

int main()
{
    char inputString[50];
    char prev_alp = 0;
    int num = 0;
    printf("Enter the string:");
    scanf("%s",&inputString);
    printString(inputString,prev_alp,num);
    return 0;
}

```



Enter the input:
a1b2c5
abbccccc

Process exited after 4.474 seconds with return value 0
Press any key to continue . . .

2 . Get the values from the user and store it in 3*3 matrix. Display the matrix

```

#include<stdio.h>

void displayMatrix(int row,int column,int arr[row][column])
{
    int i,j;
    for(i=0;i<row;i++)
    {
        for(j=0;j<column;j++)
        {
            printf("%d ",arr[i][j]);
        }
    }
}

```

```

        printf("\n");
    }
}

int main()
{
    int row,column,i,j;
    printf("Enter the no of rows:");
    scanf("%d",&row);
    printf("Enter the no of column:");
    scanf("%d",&column);
    int arr[row][column];
    for(i=0;i<row;i++)
    {
        for(j=0;j<column;j++)
        {
            printf("Enter the value for arr[%d][%d]:",i,j);
            scanf("%d",&arr[i][j]);
        }
    }
    displayMatrix(row,column,arr);
    return 0;
}

```

```

Enter the no of rows:3
Enter the no of column:3
Enter the value for arr[0][0]:1
Enter the value for arr[0][1]:2
Enter the value for arr[0][2]:3
Enter the value for arr[1][0]:4
Enter the value for arr[1][1]:5
Enter the value for arr[1][2]:6
Enter the value for arr[2][0]:7
Enter the value for arr[2][1]:8
Enter the value for arr[2][2]:9
1 2 3
4 5 6
7 8 9

```

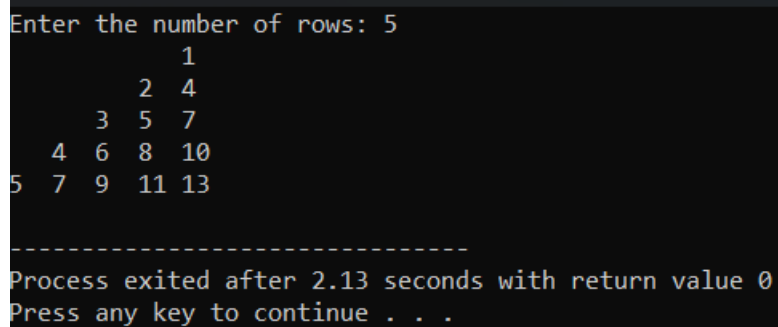
3 . Without using array Print the pattern

```
#include <stdio.h>

int main() {
    int rows, i, j, num;
    printf("Enter the number of rows: ");
    scanf("%d", &rows);
    for (i = 1; i <= rows; i++) {

        for (j = 1; j <= rows - i; j++) {
            printf(" ");
        }

        num = i ;
        for (j = 1; j <= i; j++) {
            printf("%-3d", num);
            num += 2;
        }
        printf("\n");
    }
    return 0;
}
```



```
Enter the number of rows: 5
      1
     2 4
    3 5 7
   4 6 8 10
  5 7 9 11 13

-----
Process exited after 2.13 seconds with return value 0
Press any key to continue . . .
```