

1.

```
1  #include<stdio.h>
2  #include<string.h>
3  int main(){
4      int n;
5      char str1[100],str2[100];
6      printf("Enter a string:");
7      scanf("%s",str1);
8      printf("Enter the number of left rotations:");
9      scanf("%d",&n);
10     for(int i=0;i<strlen(str1);i++){
11         int j=i+n;
12         if(j>=strlen(str1))
13             j-=strlen(str1);
14         str2[i]=str1[j];
15     }
16     printf("The string after rotating:%s",str2);
17     return 0;
18 }
```

```
● sunkai@sunkaideMacBook-Pro T % cd "/v
tempCodeRunnerFile && "/var/folders/
Enter a string:ABCDEFGH
Enter the number of left rotations:3
The string after rotating:DEFGABC
```

2.

```
1  #include<stdio.h>
2  #include<string.h>
3  int main(){
4      int a,b;
5      /*初始化数组我就不截全了*/
6      /*个位*/char str1[10][100]={"","one","two","three","four",
7      /*十位*/char str2[10][100]={"","","twenty","thirty","four",
8      /*十几*/char str3[10][100]={"ten","eleven","twelve","thirteen",
9      /*最终输出*/char final[100]="You entered the number ";
10     printf("Enter a two-digit number:");
11     scanf("%1d%1d",&a,&b);
12     if(a==1){
13         strcat(final,str3[b]);
14     }
15     else{
16         strcat(final,str2[a]);
17         strcat(final,"-");
18         strcat(final,str1[b]);
19     }
20     printf("%s",final);
21     return 0;
22 }
```

- sunkai@sunkaideMacBook-Pro T % cd ",
tempCodeRunnerFile && "/var/folder:
Enter a two-digit number:45
You entered the number forty-five%
- sunkai@sunkaideMacBook-Pro T %

3.

```
1  #include<stdio.h>
2  #include<string.h>
3  int main(){
4      char a[100];
5      int cnt=0;
6      printf("Enter a string:");
7      scanf("%s",a);
8      for(int i=0;i<strlen(a)/2;i++)
9          if(a[i]!=a[strlen(a)-1-i])
10             cnt++;
11     if(cnt==0)
12         printf("This is a palindrome string");
13     else
14         printf("This is not a palindrome string");
15     return 0;
16 }
```

- sunkai@sunkaideMacBook-Pro T % cd rss80000gn/T/"tempCodeRunnerFile
Enter a string:abdcba
This is a palindrome string%
- sunkai@sunkaideMacBook-Pro T % cd rss80000gn/T/"tempCodeRunnerFile
Enter a string:ahsdkhjk
This is not a palindrome string%

4. (优化需要的存储空间, 没有包含多个字符串包含相同最多个数特定字母的情况)

```
1  #include<stdio.h>
2  #include<string.h>
3  #include<ctype.h>
4  int main(){
5      char a[100]/*缓存区*/,maxs[100],p;
6      int n,max=0/*最大次数*/;
7      printf("Enter the number of strings:");
8      scanf("%d",&n);
9      printf("Enter the specific character:");
10     getchar(); //读掉换行符
11     p=getchar();
12     getchar();
13     for(int i=0;i<n;i++){
14         int cnt=0;
15         printf("Enter the string %d:",i+1);
16         gets(a);
17         for(int j=0;j<strlen(a);j++)//数特定字母个数
18             if(tolower(a[j])==p)
19                 cnt++;
20         if(cnt>max){//存储最多重复次数字符串
21             strcpy(maxs,a);
22             max=cnt;
23         }
24     }
25     if(max==0)
26         printf("No specific character");
27     else{
28         printf("The string with the most specific character is:%s\n",maxs);
29         printf("Specific counts:%d",max);
30     }
31     return 0;
32 }
```

```
● sunkal@sunkal-macbook-pro ~ % cd - /var/folders/bm/zgg2yp0d5rv5tkc4bm2prss
tempCodeRunnerFile && "/var/folders/bm/zgg2yp0d5rv5tkc4bm2prss
Enter the number of strings:3
Enter the specific character:a
warning: this program uses gets(), which is unsafe.
Enter the string 1:I have a pen
Enter the string 2:I have an apple
Enter the string 3:Pen-Pineapple-Apple-pen
The string with the most specific character is:I have an apple
Specific counts:3%
```


