C第8次(第8周)作业（参考答案）

考试形式：开卷　　考试时间：2024-4-28

院系：东吴学院　年级：2023　专业：非计算机专业

学号：　姓名：　分数：

-、选择题（每小题2.0分，共20.0分）

01.A	02.B	03.D	04.C	05.B
06.D	07.C	08.D	09.A	10.C

二、填空题（每空2.0分，共20.0分）

01. 32
02. 50
    60
    20
03. struct STRU *
04. (int *)
05. 1
    3
06. 2
    5

三、编程题（每小题10.0分，共60.0分）

01.(10.0分)答：

```
#define _CRT_SECURE_NO_WARNINGS
#include "stdio.h"
#include "malloc.h"
#include <stdio.h>
#include <stdlib.h>
#include <malloc.h>
int main()
{
    int* a, i = 0, x, k, m, n, t;
    scanf("%d", &x);
    a = (int*)malloc(sizeof(int));
    if (a == NULL)
        return -1;
    a[i] = x;
    i++;
    while (x != -1)
    {
```

```
        a = (int*)realloc(a, (i+1) * sizeof(int));
        if (a == NULL)
            return -1;
        scanf("%d", &x);
        a[i] = x;
        i++;
    }
    for (m = 0; m < i - 2; m++)
        for (n = m + 1; n < i - 1; n++)
            if (a[m] > a[n])
            {
                t = a[m];
                a[m] = a[n];
                a[n] = t;
            }
    for (k = 0; k < i - 1; k++)
        printf("%d ", a[k]);
    free(a);
    return 0;
}
```

02.(10.0分)答：

```
#define _CRT_SECURE_NO_WARNINGS
#include "stdio.h"
#include "stdlib.h"
int main()
{
    int* a=NULL, i, k, n = 0, flag = 1, y;
    scanf("%d", &y);
    for (i = 2; i <= y; i++)
    {
        for (k = 2; k <= i - 1; k++)
            if (i % k == 0)
                break;
        if (k > i - 1)
        {
            if (flag == 1) {
                a = (int*)malloc(sizeof(int));
                flag = 0;
                a[n] = i;
                n++;
            }
            else
            {
```

```
                a = (int*)realloc(a, (n+1) * sizeof(int));
                a[n] = i;
                n++;
            }
        }
    }
    for (i = 0; i < n; i++)
        printf("%d ", a[i]);
    free(a);
    return 0;
}
```

03.(10.0分)答：

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
#include <stdlib.h>
int main()
{
 int n, max1, i, * a;
 scanf("%d", &n);
 a = (int*)malloc(n * sizeof(int));
 for (i = 0; i < n; i++)
  scanf("%d", &a[i]);
 max1 = a[0];
 for (i = 1; i < n; i++)
  if (a[i] > max1)max1 = a[i];
 printf("%d", max1);
 free(a);
 return 0;
}
```

04.(10.0分)答：

```
#define _CRT_SECURE_NO_WARNINGS
#include  "stdio.h"
#include "stdlib.h"
int main()
{
    char* s;
    int i = 0, n, big, small, digit, other;
    big = small = digit = other = 0;
    s = (char*)malloc(sizeof(char));
    while ((s[i] = getchar()) != '\n')
    {
        i++; s = (char*)realloc(s, (i + 1) * sizeof(char));
    }
```

```
//   for (n = 0; s[n] != '\n'; n++)
//       printf("%c", s[n]);
//   printf("\n");
    for (i = 0; s[i] != '\n'; i++)
    {
        if (s[i] >= 'a' && s[i] <= 'z')
            small++;
        else if (s[i] >= 'A' && s[i] <= 'Z')
            big++;
        else if (s[i] >= '0' && s[i] <= '9')
            digit++;
        else
            other++;
    }
    free(s);
    printf("%d %d %d %d\n", big, small, digit, other);
    return 0;
}
```

05.(10.0分)答：

```
#define _CRT_SECURE_NO_WARNINGS
#include <stdio.h>
#include <stdlib.h>
int main()
{
    char* s1, * s2;
    int i = 0, j = 0, k;
    s1 = (char*)malloc(sizeof(char));
    while ((s1[i] = getchar()) != '\n')
    {
        i++;
        s1 = (char*)realloc(s1, (i + 1) * sizeof(char));
    }
    s2 = (char*)malloc(sizeof(char));
    while ((s2[j] = getchar()) != '\n')
    {
        j++;
        s2 = (char*)realloc(s2, (j + 1) * sizeof(char));
    }
    for (j = 0; s2[j] != '\n'; j++)
    {
        s1 = (char*)realloc(s1, (i + 2) * sizeof(char));
        s1[i] = s2[j];
        i++;
```

```
    }
    s1[i] = '\0';
    puts(s1);
    free(s1);
    free(s2);
}
```

06.(10.0分)答：

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
    char* s1, * s2;
    int i = 0, j = 0, k;
    s1 = (char*)malloc(sizeof(char));
    while ((s1[i] = getchar()) != '\n')
    {
        i++;
        s1 = (char*)realloc(s1, (i + 1) * sizeof(char));
    }
    s2 = (char*)malloc(sizeof(char));
    while ((s2[j] = getchar()) != '\n')
    {
        j++;
        s2 = (char*)realloc(s2, (j + 1) * sizeof(char));
    }
    for (j = 0; s2[j] != '\n'; j++)
    {
        s1 = (char*)realloc(s1, (j + 2) * sizeof(char));
        s1[j] = s2[j];
    }
    s1[j] = '\0';
    puts(s1);
    free(s1);
    free(s2);
    return 0;
}
```