```c
#include <stdio.h>
#include <conio.h>
// bài 2 vo ghi
main (){
    int n,i;
    FILE *f;
    f= fopen("ltnc.txt", "r");
    fscanf (f,"%d", &n);
    int a[100], tong = 0;
    for (int i =1; i<=n; i++) fscanf (f,"%d", &a[i]);
    fclose (f);
    printf (" so phan tu là %d ",n);
    for ( i =1; i<=n; i++) printf (" \n%d", a[i]);
    for (int i =1; i<=n; i++)   tong += a[i];
    f = fopen ("output.txt","w");
    fprintf (f, " %d", tong);
    fclose(f);
    int max = a[1];
    for (int i =1; i<=n; i++)   if (a[i] > max) max = a[i];
    f = fopen ("output1.txt","w");
    fprintf (f, " %d", max);
    fclose (f);}
```

```c
#include <stdio.h>
#include <conio.h>
// bài 2 vo ghi
// so thuc
main (){
    int n,i;
    FILE *f;
    f= fopen("ltnc.txt", "r");
    fscanf (f,"%d", &n);
    float a[100], tong = 0;
    for (int i =1; i<=n; i++) fscanf (f,"%f", &a[i]);
    fclose (f);
    printf (" so phan tu là %d ",n);
    for ( i =1; i<=n; i++) printf (" \n%.3f", a[i]);
    for (int i =1; i<=n; i++)   tong += a[i];
    f = fopen ("output.txt","w");
    fprintf (f, " %.3f", tong);
    fclose(f);
    float max = a[1];
    for (int i =1; i<=n; i++)   if (a[i] > max) max = a[i];
    f = fopen ("output1.txt","w");
    fprintf (f, " %.3f", max);
    fclose (f);}
```

```c
#include <stdio.h>
// bài 4 vo ghi
// ma tran
main (){
    int m,n,i,j;
    FILE *f;
    f= fopen("matran.txt", "r");
    fscanf (f,"%d%d", &m,&n);
    int a[50][50];
    for ( i =1; i<=m; i++) {
        for ( j =1; j<=n; j++) {
            fscanf (f,"%d", &a[i][j]);
        }
    }
    fclose (f);
    printf (" cap ma tran là %dx%d \n",m,n);

    for ( i =1; i<=m; i++) {
        for ( j =1; j<=n; j++) { printf ("%d ", a[i][j]);
        } printf ("\n");
    }
    int t = 1;
    for ( i =1; i<=m; i++) {
        for ( j =1; j<=n; j++) {
            if ( i > j && m == n && a[i][j] != 0) t = 0;
        }
    }
    f = fopen ("output.txt","w");
    fprintf (f, "%d",t);
    fclose(f);
}
```

```c
#include <stdio.h>
#include <conio.h>
 main()
{
    FILE *fp;
    char ch;
    printf("Nhap cac ki tu : ");
    fp=fopen("D:\\textfile.txt","wt");

    while ((ch=getchar())!=EOF)
        putc(ch,fp);
    fclose(fp);
    getch();
  }

```

```c
#include <stdio.h>
#include <conio.h>
#include <math.h>
void nhap(char *tenFile, int *a, int n);
void xuat(char *tenFile, int *a, int n);

main()
{   int n; int a[100];
    int i;
    FILE *f;
    nhap ( "input.txt",a,n);
    // in ra man hinh de kiem tra
    for (int i = 1; i <= n; i++) printf("%d ", a[i]);
    printf("\n");
    getch();
    // xuat ra file
    xuat("output.txt", a, n);
}
```

```c
void nhap(char *tenFile, int *a, int n){

    // mo file de doc
    FILE* f = fopen("input.txt", "r");
    if (f == NULL) printf("Khong mo duoc tap tin!");

    fscanf(f, "%d", &n);

    for (int i = 1; i <= n; i++) fscanf(f, "%d", &a[i]);

    //dong file
    fclose(f);
}
void xuat(char *tenFile, int *a, int n){
    //mo file de ghi
    FILE* f = fopen("output.txt", "wt"); // wt = write (ghi) + text (dang van ban)
    //ghi du lieu ra file
    for (int i = 1; i <=n; i++)
        fprintf(f, "%d ", a[i]);
    // dong file
    fclose(f);
}
```

```c
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
 #include<string.h>
 // bai 2 trang 129 laptrinhnangcao
struct hanghoa {
    char tenhang[30];
    int soluong;
    char loaihang[30];
};

typedef hanghoa HH;
void nhap(HH a[], int n){
   for(int i = 1; i<= n; ++i){
    printf("\nNhap HH thu %d:", i);
    printf("\nNhap ten hang : "); fflush(stdin); gets(a[i].tenhang);
    printf("Nhap loai hang: "); gets(a[i].loaihang);
    printf("Nhap so luong hang: "); scanf("%d", &a[i].soluong);}
    }
void xuat(char *tenFile,HH a[], int n){
    FILE* f = fopen("hanghoa.txt", "wt");
    for(int i = 1;i <= n;i++){
        struct hanghoa HH = a[i];
        fprintf(f,"\nNhap HH thu %d:", i);
        fprintf(f,"\nten hang : %s", a[i].tenhang);fflush(stdin);
        fprintf(f,"\nloai hang : %s", a[i].loaihang);
        fprintf(f,"\nso luong hang : %d", a[i].soluong);
    }fclose (f);
}

```

```c
void xuatN( HH a[], int n){
    for(int i = 1;i <= n;i++){
        printf("\nhang hoa thu %d:", i);
        printf("\nten hang : %s", a[i].tenhang);fflush(stdin);
        printf("\nloai hang : %s", a[i].loaihang);
        printf("\nso luong hang : %d", a[i].soluong);;
    }
}
void timhanghoa(char *ten,HH a[], int n){
    int found = 0;
    printf (" ten hang hoa can tim la ");
    fflush(stdin); gets(ten);
    for(int i=1; i<=n; ++i){
        if(strcmp(a[i].tenhang,ten)==0) {
           xuatN(a,n);
           found = 1;
        }

        if ( found == 0) printf ( " khong tim thay hang hoa");}
}
int main (){
    int n; char ten[30];
    do{
        printf("\nNhap n : "); scanf("%d", &n);
    }while(n <= 0);
    HH a[n];
    nhap(a,  n);
    xuatN( a, n);
    xuat("hanghoa.txt",a, n);
    fflush(stdin); gets(ten);
    timhanghoa("n",a, n);
}
```

```c
#include <stdio.h>
#include <stdlib.h>
// bài 3 sbt tr 129
// ma tran
void nhap( float *a ,int n, int m,int N){
    for(int i=0 ; i<n ; i++){
        for( int j=0 ; j<m ; j++){
            printf("a[%d][%d]=  ",i,j);
            scanf("%f ",a + i*N + j);
        }
    }
}
void xuat(float *a ,int n, int m, int N){
    printf ("%d x %d\n",n,m);
    for(int i=1 ; i<=n ; i++){
        for(int j=1 ; j<=m ; j++){
            printf("%f ", *(a + i*N + j));
        }
        printf("\n");
    }
}
void nhapfile(char *tenfile,float *a ,int n, int m, int N){
    FILE*f= fopen("matran.txt", "r");
    fscanf (f,"%d %d", &n,&m);
    for ( int i =1; i<=n; i++) {
        for ( int j =1; j<=m; j++) {
            fscanf (f,"%f ", *(a + i*N + j));
        }
    }
    fclose (f);}
void xuatfile(char *tenfile,float *a ,int n, int m, int N){
    FILE*f= fopen("matran1.txt", "wt");
    fprintf (f,"%d %d",n,m);
    for ( int i =1; i<=n; i++) {
        for ( int j =1; j<=m; j++) {
            fprintf (f,"%f ", *(a + i*N + j));
```

```
        }
    }
    fclose (f);}
void ghinhiphan (char *tenfile,float *a ,int n, int m){
    FILE *fp;
    if ((fp = fopen("matran2.txt","wb"))== NULL) printf(" khong mo dc file \n"); exit(1);
    for ( int i =1; i<=n; i++) {
        for ( int j =1; j<=m; j++) {
            fwrite (&a, sizeof(float),1,fp);
        }
    }fclose (fp);
}
void docnhiphan (char *tenfile,float *a ,int n, int m){
    FILE *fp;
    if ((fp = fopen("matran3.txt","wb"))== NULL) printf(" khong mo dc file \n"); exit(1);
    for ( int i =1; i<=n; i++) {
        for ( int j =1; j<=m; j++) {
            fread (&a, sizeof(float),1,fp);
        }
    }fclose (fp);
}
int main (){
    FILE *f; FILE *fp;
    int m,n,i,j;
    scanf ("%d%d", &n,&m);
    float a[50][50];
    //nhap((float*)a , n ,m, 50);
    //xuat((float*)a ,n, m,50);
    nhapfile("matran.txt",(float*)a ,n, m,50);
    //xuatfile("matran1.txt",(float*)a ,n, m,50);
    xuat((float*)a ,n, m,50);
    xuatfile("matran1.txt",(float*)a ,n, m,50);
    xuat((float*)a ,n, m,50);
    ghinhiphan ("matran2.txt",(float*)a ,n, m);
    docnhiphan ("matran3.txt",(float*)a ,n, m);
    }
```