```
#include <io.h>
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
#include <process.h>
#define TRUE 1
typedef struct
        {
        char FirstName[15], SecondName[15], LastName[15];
        unsigned Age;
        char Sex [7];
        } Person;
void InitFile (char* , char* , long );
Person* InitPerson ();
void DisplayFile (char* , char* );
void DisplayPerson (Person* );
void AddToEndFile (char* , char* , long );
void RemoveElementFromFile (char* , char* , long );
int main(void)
{
char FileName[20];
char Key;
long Number;
puts("Enter the name of file: ");
gets(FileName);
//clrscr();
while(TRUE)
{
printf("\n Enter the number - the mode of operations with file:"
"\n 1 - FORMATION OF THE FILE"
"\n 2 - VIEWING OF CONTENTS OF THE FILE"
"\n 3 - ADD AN ELEMENT TO AND OF FILE"
"\n 4 - REMOVE THE ELEMENT IN THE FILE"
"\n 5 - EXIT\n");
fflush(stdin);
scanf("%c",&Key);
//clrscr();
switch (Key)
{
case '1':
while(TRUE)
{
printf("\nEnter the number of persons:");
scanf("%ld",&Number);

if (Number > 0) break;
printf("\n Number is incorrect!Try again!!!\n");
}
InitFile (FileName,"wb",Number);
printf("\n\nPress any key to return in the menu...");
getch();
//clrscr();
```

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break;
case '2':
DisplayFile(FileName,"rb");
printf("\n\nPress any key to return in the menu...");
getch();
//clrscr();
break;
case '3':
while(TRUE)
{
printf("\nEnter the number of persons to addition:");
scanf("%ld",&Number);
if (Number > 0) break;
printf("\n Number is incorrect! Try again!!!\n");
}
AddToEndFile(FileName,"ab",Number);
printf("\n\nPress any key to return in the menu...");
getch();
//clrscr();
break;
case '4':
printf("\nEnter number of element from removing :");
scanf("%ld",&Number);
RemoveElementFromFile(FileName, "r+b",
Number);
printf("\n\nPress any key to return in the menu...");
getch();
//clrscr();
break;
case '5': return 0;
default:
printf("\nIncorrect input! Try again!!!");
printf("\n\nPress any key to return in the menu...");
getch();
//clrscr();
break;
}
}
}
void InitFile(char* String, char* Mode, long n)
{
long i;
int BufSize = sizeof(Person);
Person* Man;
FILE* FileStruct = fopen(String, Mode);
if (FileStruct == NULL)
{
printf("Can't open file to write.");
getch();
abort();
}
for( i = 1; i <= n; i++)
```

```
{
printf("\nEnter information for the person number %ld \n", i);
Man = InitPerson();
fwrite(Man, BufSize, 1, FileStruct);
}
free(Man);
fclose(FileStruct);
}
void AddToEndFile(char* String, char* Mode, long n)
{
long i;

int BufSize = sizeof(Person);
Person* Man;
FILE* FileStruct = fopen(String, Mode);
if (FileStruct == NULL)
{
printf("Can't open file to write.");
getch();
abort();
}
for( i = 1; i <= n; i++)
{
printf("\nEnter information for the persom number %ld \n", i);
Man = InitPerson();
fwrite(Man, BufSize,1, FileStruct);
}
free(Man);
fclose(FileStruct);
}
void RemoveElementFromFile(char* String, char* Mode,
long Position)
{
FILE* FileStruct = fopen(String, Mode);
int DescriptorFile = fileno(FileStruct);
long LengthFile = filelength(DescriptorFile);
int BufSize = sizeof(Person);
Person* Man = (Person*)malloc(BufSize);
long NewLength = LengthFile - BufSize;
if (FileStruct == NULL)
{
printf("Can't open file to write.");
getch();
abort();
}
fseek(FileStruct,Position * BufSize,SEEK_SET);
while(fread(Man, BufSize,1, FileStruct) != 0)
{
fseek(FileStruct, -2 * (long)BufSize ,SEEK_CUR);

fwrite(Man,BufSize,1, FileStruct);
fseek(FileStruct, (long) BufSize,SEEK_CUR);
```

```
}
DescriptorFile = chsize(DescriptorFile, NewLength);
free(Man);
fclose(FileStruct);
}
Person* InitPerson()
{
Person* Man = (Person*)malloc(sizeof(Person));
printf("\nEnter first name:");
scanf("%s", Man ->FirstName);
printf("\nEnter second name:");
scanf("%s", Man ->SecondName);
printf("\nEnter last name:");
scanf("%s", Man ->LastName);
printf("\nEnter age:");
scanf("%d",& Man ->Age);
printf("\nEnter pol:");
scanf("%s", Man ->Sex);
return Man;
}
void DisplayFile(char* String, char* Mode)
{
int BufSize = sizeof(Person);
Person* Man = (Person*)malloc(BufSize);
FILE* FileStruct = fopen(String, Mode);
if ( FileStruct == NULL)
{
printf("Can't open file to read.");
getch();
abort();
}
while(fread(Man,BufSize,1, FileStruct) != 0)
{
DisplayPerson(Man);
}
free(Man);
fclose(FileStruct);
}

void DisplayPerson (Person* Man)
{
printf("\n%s %s %s, %d year, %s ", Man->FirstName,
Man->SecondName, Man->LastName, Man->Age,
Man->Sex);
}
```