# Contact Keeper

So far, you've been learning the C programing language about two weeks. Now is the right time to think about your assignment. This semester, your task is to write a C program, namely Contact Keeper, to manage your contacts easily and effectively.

One contact should have the following features:

1. First Name
2. Last Name
3. Company
4. Phone Number
5. Email
6. Working Address
7. Home Address
8. Birthday

Data validation should be implemented, for example:

1. Phone Number should be a integer number of 9 or 10 digits
2. Bithday should be in the DD/MM/YYYY format

Your program should have at least six functions:

1. Add new contact
2. Edit contact
3. Delete contact (by name or phone number)
4. Search contact (by name or phone number)
5. List all contacts with birthdays in a given month (sort by date)
6. List all contacts in the table format (sort by name)

The contact information should be permanently stored in a text file so that when the program starts all contacts could be loaded automatically.

contact_keeper.c

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


void print_menu()
{
    system("clear"); // for macos, linux
    // system("cls"); // for windows
    printf("CONTACT KEEPER\n");
    printf("------------------\n");
    printf("1. Add new contact\n");
    printf("2. Edit contact\n");
    printf("3. Delete Contact\n");
    printf("0. Exit\n");
}


int make_choice(int min, int max)
{
    int not_valid = 1, num, scanf_ret;
    char c;

    print_menu();
    fflush(stdin);
    do
    {
        printf("\nEnter your choice: ");
        scanf_ret = scanf("%d%c", &num, &c);
        if(scanf_ret < 2 || c != '\n')
        {
            print_menu();
            printf("\nYour choice is not valid. Please try again!\n");
            fflush(stdin);
        }
        else if(num < min || num > max)
        {
            print_menu();
            printf("\nYour choice is not valid. Please try again!\n");
        }
        else
            not_valid = 0;
    } while(not_valid);

    system("clear");

    return num;
}


void add_contact()
{
    printf("Write your code here to implement the add_contact() function.\n");
}


void edit_contact()
{
    printf("Write your code here to implement the edit_contact() function.\n");
}
```

```
60
61
62  void delete_contact()
63  {
64      printf("Write your code here to implement the delete_contact() function.\n");
65  }
66
67
68  int main(void)
69  {
70      void (*funs[4])(void) = {NULL, &add_contact, &edit_contact, &delete_contact};
71      int choice;
72
73      do
74      {
75          choice = make_choice(0, 3);
76          if(choice)
77          {
78              funs[choice]();
79              printf("\nPress any key to return to the menu.");
80              getchar();
81          }
82      }
83      while(choice);
84
85      return 0;
86  }
```