How to create a Linked List from Users Input.

Code: part 1

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


#define LINE_SIZE 200


typedef struct Persons {

    int id;

    char familyName[50];

    char firstName[50];

    int age;

    struct Persons  * next;


} Person;


int main()
{

    int i,nPersons;

    char buffer[LINE_SIZE], fileName[]="myPersonsList";

    Person * onePerson, * nextPerson, * headList;

    FILE *myFile;


    // Number of Persons in the list (length of the list )

    printf("How long is your list (number of Persons )?\n");

    scanf("%d",&nPersons);

    fgets(buffer,LINE_SIZE,stdin);
```

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Code: Part 2

```
//Allocate memory for one Person
      nextPerson = (Person *) malloc (sizeof(Person));

      headList = nextPerson;


    //Read the values from the user input

    for (i=0; i<nPersons; i++)

    {

      //The new element to fill

      onePerson = nextPerson;

      printf("Person Number %d \n",i+1);
      // Id
      onePerson->id= i;

      // First Name
      printf("\tFirst Name :");
      fgets(onePerson->firstName,LINE_SIZE,stdin);
      strtok(onePerson->firstName,"\n");


      // Family Name
      printf("\tFamily Name :");

      fgets(onePerson->familyName,LINE_SIZE,stdin);
      strtok(onePerson->familyName,"\n");

      // Age
      printf("\tAge :");
      scanf("%d",&onePerson->age);
      fgets(buffer,LINE_SIZE,stdin);

      //Allocate memory for one Person
       nextPerson = (Person *) malloc (sizeof(Person));


      //Link to the next element
      onePerson->next = nextPerson;
   }
```

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Code: Part 3

```
// The last node of the list
   onePerson->next = NULL;

    // Traverse and save the List

        // The head of the list
    printf("Traversing The List:\n--------------------\n");
    onePerson = headList;

         // create a new file to save the list
    myFile = fopen(fileName,"wb");
    if (myFile == NULL )
     {
          printf ("Couldn't create the file \n");
          return -1;
     }
         // Travese and save the list
    while (onePerson !=NULL)
    {
         printf("Person number %d:\n",onePerson->id +1);
         printf("\tID :%d\n",onePerson->id);
         printf("\tFirst Name :%s\n", onePerson->firstName);
         printf("\tFamily Name :%s\n",onePerson->familyName);
         printf("\tAge :%d\n",onePerson->age);

         fwrite(onePerson,sizeof(Person),1,myFile);
         onePerson = onePerson->next;

    }

        // Close the file
    fclose(myFile);

}
```