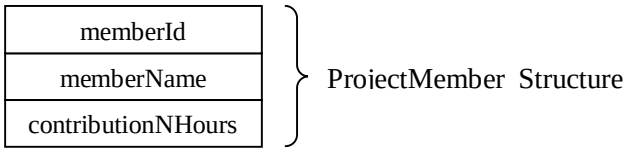
Kadir Has University
Department of Computer Engineering
CE 241 – Programming Languages
Fall 2008 - Ahmet Ardal
Homework #7

1. Create an array of integers by using dynamic memory allocation techniques(namely "`new`", "`delete`" and "`delete[]`" operators...). Size of the array should be provided by the user at run-time. Initialize the array with random values. Then, write a function that takes the array and its size as input and prints the contents of the array.
Note that, proper deallocation of dynamically allocated memory blocks is of crucial importance for avoiding memory leaks and obscure bugs in our programs.
Function prototype:

```
void printArrayInt(const int *pArray, int size);
```

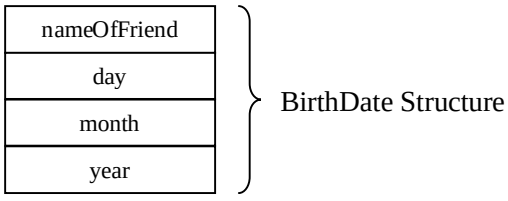
2. Create a string by using dynamic memory allocation techniques(namely "`new`", "`delete`" and "`delete[]`" operators...). Size of the string should be provided by the user at run-time. Initialize the string you created by copying another string to it. Then, print the string.
Note that, proper deallocation of dynamically allocated memory blocks is of crucial importance for avoiding memory leaks and obscure bugs in our programs.

3. Declare a struct that represents the information about the members of a project team. Declare an array of that struct type of size 4, and calculate the total project completion time in hours by summing each member's contribution to the project.




```
struct ProjectMember
{
    // members...
};
```

4. Declare a struct that represents the date of birth of your friends with members: name, day, month and year. Write a function that takes an array of that struct type, size of the array and a string as input, searchs for that string in BirthDate objects' "nameOfFriend" field and returns the index of the BirthDate struct found in the array. If it is not found the function should return -1.




```
struct BirthDate
{
    // members...
};
int findBirthDateByName(const BirthDate *pBirthDates, int size, const char *name);
int main()
{
    BirthDate birthDates[5] = { /* initialization... */ };
    int idx = findBirthDateByName(birthDates, 5, "aliveli");
```

```
    if (idx == -1)
    {
        cout << "not found...";
    }
    else
    {
        cout << "found at index: " << idx;
    }
    ...
}
```