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| **KING SAUD UNIVERSITY**  **COLLEGE OF COMPUTER AND INFORMATION SCIENCES**  **COMPUTER SCIENCE DEPARTMENT** | | |
| **CSC215** | **Lab7**  **C Basics** | **2nd Semester 1436-1437** |

* Write a program that does the following:
  + Define a constant variable MAX and make it equal to 4.
  + Define a struct called Employee with the following data member:
    - Name: a string of maximum 40 characters.
    - Salary: a floating point number.
  + Declare an array of MAX Employees.
  + Read the names and salaries of all MAX employees.
  + Use MaxSalary to print the name and salary of the employee with the maximum salary.
  + Use Raise to give the first employee a 10% raise in his/her salary.
  + When you print a floating point number, print only 2 digits after the floating point.
* Write the following functions:
  + Write the function ***MaxSalary*** that takes an array of struct employee. The functions should search the array for the maximum salary. Then prints that employee’s name and salary.
    - voidMaxSalary(struct Employee AllEmps[])
  + Write the function ***Raise*** that takes a pointer to a struct employee and a raise percentage. Then calculate the new salary after the raise.
    - void Raise(structemployee \*emp, float percent)

*Hint: to print %. Write %%.*

Sample runs:

|  |
| --- |
| $ **./lab8**  ============================  Enter Employees1 name: **Marwan**  ============================  Enter Marwan's salary: **10000**  ============================  Enter Employees2 name: **Ahmad**  ============================  Enter Ahmad's salary: **9000**  ============================  Enter Employees3 name: **Ali**  ============================  Enter Ali's salary: **3000**  ============================  Enter Employees4 name: **Hassan**  ============================  Enter Hassan's salary: **15000**  ============================  The employee Hassan has the maximum salary 15000.00  ============================  Employees Marwan's salary before the 10% raise: 10000.00  ============================  Employees Marwan's salary after the 10% raise: 11000.00  ============================ |

Name your file using the following naming convention:

* “Lab7\_YourFirstName\_YourLastName.c"
* Don’t forget to move to your own directory
* Compile your code and execute it.
* Show the program to your lab instructor before you leave.

#include<stdio.h>

#define MAX 4

struct employee{

char name[40];

float salary;

};

void MaxSalary(struct employee AllEmployees[])

{

int i;

struct employee max = AllEmployees[0];

for(i = 1; i < MAX; i++)

{

if(max.salary < AllEmployees[i].salary)

max = AllEmployees[i];

}

printf("The employee %s has the maximum salary %.2f\n",max.name,max.salary);

/\*

OR

int i, index = 0;

for(i = 1; i < MAX; i++)

{

if(AllEmployees[index].salary < AllEmployees[i].salary)

index = i;

}

printf("The employee %s has the maximum salary %.2f\n",AllEmployees[index].name, AllEmployees[index].salary);

\*/

}

void Raise(struct employee \*emp, float precent)

{

emp->salary \*= (1+(precent/100));

}

main()

{

struct employee Employees[MAX];

int i;

printf("============================\n");

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

{

printf("Enter Employees%i name: ", i+1);

scanf("%s",Employees[i].name);

printf("============================\n");

printf("Enter %s's salary: ", Employees[i].name);

scanf("%f",&Employees[i].salary);

printf("============================\n");

}

MaxSalary(Employees);

printf("============================\n");

printf("Employees %s's salary before the 10%% raise: %.2f\n", Employees[0].name, Employees[0].salary);

printf("============================\n");

Raise(&Employees[0], 10);

printf("Employees %s's salary after the 10%% raise: %.2f\n", Employees[0].name, Employees[0].salary);

printf("============================\n");

}