

```

1  /*#####*/
2  /* HW09_HASAN_MEN_131044009_part1.c */
3  /* HAZIRLAYAN : HASAN MEN - 131044009 */
4  /* TARİH: 27.4.15 */
5  /* */
6  /* TANIM: Dosyadan alınan kişilerin yeni ücretlerini hesaplayıp yeni */
7  /* ücretler ile birlikte binary file a yazan program */
8  /*#####*/
9
10 #include <stdio.h>
11 #include <string.h>
12 #define MAX_STR 20 /* maximum string karakter sayısı */
13 #define MAX_LINE 100 /* fgets ile okunacak satır elemanı sayısı */
14 #define TEXT_FILE "input1.txt"
15 #define BIN_FILE "input1.bin"
16
17 /* Instructer bilgieri için structimiz */
18 typedef struct{
19
20     char name[MAX_STR]; /* isim*/
21     char surname[MAX_STR]; /*soyisim*/
22     char department[MAX_STR]; /*bolum*/
23     double salary; /* maas */
24     char class1[MAX_STR]; /* verdigi 1.ders */
25     char class2[MAX_STR]; /* verdigi 2.ders */
26 }type_I;
27
28 /* Employee bilgileri için structimiz */
29 typedef struct{
30
31     char name[MAX_STR]; /* isim */
32     char surname[MAX_STR]; /* soyisim */
33     double salary; /* maas */
34     char degree; /* rutbe*/
35 /* a->rektor , b-> bolum sekreteri , c->genel servisler */
36
37 }type_E;
38
39 /* bi kisi sadece 1 rutbeye sahip olabilir.Bunu belirtmek için struct */
40 typedef union{
41
42     type_E empl;
43     type_I inst;
44 }person_u;
45
46 /* asıl structimiz , tüm bilgilerimiz buradan dallanır. */
47 typedef struct{
48
49     char character;
50     person_u human;
51
52 }combine_type;
53
54 /* Text filedan bilgileri alıp, combine_type turunde bir takım işlemler yaparak
55 yeni ücretler ile binary file'a yazan fonksiyon */
56 int read_inf(FILE *text_file,FILE *bin_file);
57
58 /* Önceden verilen bilgilere göre yeni ücretleri hesaplayıp return eder */
59 combine_type salary_rise(combine_type person_info);
60
61
62 int main()
63 {
64
65     int total; /* okunan toplam değer sayısı */
66
67     FILE *textp=fopen(TEXT_FILE,"r"); /* text dosyası read modunda */
68     FILE *binp=fopen(BIN_FILE,"wb"); /* write-binary olarak dosyasını aç*/
69
70     if(textp==NULL || binp==NULL ) /* dosyalar açılmaz ise uyarı ver ve çık */
71         printf("File couldn'T opened...\n");
72     else {

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73     total = read_inf(textp,binp);
74     /* isleme sokulan kisi sayisini terminale yazdirip bitir */
75     printf("=====\\n");
76     printf("%d Records readed and new salaries updated ...\\n",total);
77     printf("=====\\n");
78 }
79     return 0;
80 }
81
82 /* input = person_info -> kisinn type'i ve maasi okunacak */
83 /* output= bilgilere gore yeni maas bilgisi ayni tur oluğ return edilecek */
84 combine_type salary_rise(combine_type person_info)
85 {
86     double new_slr; /* yeni maas icin degisken */
87     combine_type temp=person_info; /* degisiklerin yapilacagi yer */
88     if(temp.character=='I') /* egitimci ise hesaplayip dondur */
89     {
90         new_slr = temp.human.inst.salary;
91         new_slr += ((new_slr/2.0)*5)/100.0 + ((new_slr/2.0)*5.3)/100;
92         temp.human.inst.salary=new_slr;
93     }
94     else if(temp.character=='E') /* isci ise hesaplayip dondur */
95     {
96         switch(temp.human.empl.degree)
97         {
98             case 'a':
99             {
100                 new_slr = temp.human.empl.salary;
101                 new_slr += (new_slr*17.5)/100.0;
102                 temp.human.empl.salary=new_slr;
103             } break;
104             case 'b':
105             {
106                 new_slr = temp.human.empl.salary;
107                 new_slr += (new_slr*12.0)/100.0;
108                 temp.human.empl.salary=new_slr;
109             } break;
110             case 'c':
111             {
112                 new_slr = temp.human.empl.salary;
113                 new_slr += (new_slr*9.0)/100.0;
114                 temp.human.empl.salary=new_slr;
115             } break;
116             default : printf("Wrong degree!!!\\n"); /* yanlis rutbe */
117         }
118     }
119     else printf("Wrong combine_type !!!\\n"); /* yanlis personal */
120     return temp;
121 }
122
123 int read_inf(FILE *text_file,FILE *bin_file)
124 {
125
126     /* strtok fonksiyonu http://www.cplusplus.com/reference/cstring/strtok/
127     'dan yardım aldim */
128     char counter=0; /* okunan kisi/satir sayisi */
129     char line[MAX_LINE]; /* fgets'in okudugunu atacagi yer */
130     char *pch; /* string parcalarini tutmak icin kullandim */
131     combine_type readed_person; /* parcalarin atilacagi yer */
132
133     printf("=====\\n");
134
135     while(fgets(line,MAX_LINE,text_file)!=NULL) /* null olana kadar okuma yapar */
136     {
137         counter++;
138         if(strlen(line)-1=='\\n') /* satir sonundaki newline i sil */
139             line[strlen(line)-1]='\\0';
140
141
142         pch = strtok (line," ,"); /* virgul ve spaceleri kullanarak parcala */
143         if(strcmp(pch,"Instructor")==0)
144             while (pch != NULL) /* parcalama bitene kadar devam */

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145     {
146         readed_person.character='I';
147         pch = strtok (NULL, " ,");
148         strcpy(readed_person.human.inst.name,pch);
149
150         pch = strtok (NULL, " ,");
151         strcpy(readed_person.human.inst.surname,pch);
152
153         pch = strtok (NULL, ","); /* sadece virgul varsa parcala */
154         strcpy(readed_person.human.inst.department,pch);
155
156         pch = strtok (NULL, " ,");
157         strcpy(readed_person.human.inst.class1,pch);
158
159         pch = strtok (NULL, " ,");
160         strcpy(readed_person.human.inst.class2,pch);
161
162         /* maasi float olarak kaydet */
163         pch = strtok(NULL, " ,");
164         sscanf(pch, " %lf",&(readed_person.human.inst.salary));
165
166         pch = strtok(NULL, " ,");
167
168         /* Kontorl amacli kisileri ekrana yaz */
169         printf("%s ",readed_person.human.inst.name);
170         printf("%s ",readed_person.human.inst.surname);
171         printf("%s ",readed_person.human.inst.department);
172         printf("%s ",readed_person.human.inst.class1);
173         printf("%s ",readed_person.human.inst.class2);
174         printf("0_Salary=%.1f ",readed_person.human.inst.salary);
175
176         /*yeni ucreti hesaplayip eskininin uzerine yazmak */
177         (readed_person)=salary_rise(readed_person);
178         printf("N_salary=%.2f\n",readed_person.human.inst.salary);
179     }else if(strcmp(pch,"Employee")==0) /* icsi ise devam et */
180     while (pch != NULL)
181     {
182         readed_person.character='E';
183         pch = strtok (NULL, " ,");
184         strcpy(readed_person.human.empl.name,pch);
185
186         pch = strtok (NULL, " ,");
187         strcpy(readed_person.human.empl.surname,pch);
188
189         /* maasi float olarak kaydet */
190         pch = strtok(NULL, " ,");
191         sscanf(pch, " %lf",&(readed_person.human.empl.salary));
192
193
194         pch = strtok(NULL, " ,");
195         readed_person.human.empl.degree=pch[0];
196
197
198         pch = strtok(NULL, " ,"); /* parcalama biter */
199
200         /* kontrol amacli ekrana bilgiler basilir */
201         printf("%s ",readed_person.human.empl.name);
202         printf("%s ",readed_person.human.empl.surname);
203         printf("%c ",readed_person.human.empl.degree);
204         printf("Salary=%.1f ",readed_person.human.empl.salary);
205
206         /* yeni ucret hesaplanip atamasi yapilir */
207         readed_person=salary_rise(readed_person);
208         printf("New salary = %.2f\n",readed_person.human.empl.salary);
209     }
210     /* yeni ucretler ile kisiler binary olarak yazilir */
211     fwrite(&(readed_person),sizeof(combine_type),1,bin_file);
212 }
213 printf("=====\n");
214 return counter;
215 }
216 /* HW09_HASAN_MEN_131044009_part1.c SONU */

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