Course Name: O Level (2nd Sem B1, B2 and B3 Batch) **Subject:** C Language
Topic: Structure in C Contd.. **Date:** 02-June-2020

Example 1: **Write a program to define a structure name book and store information of three books and then display (using arrow operator).**

```
#include<stdio.h>
#include<conio.h>
void main()
{
  struct book
  {
   char x[10];
   int page;
  };
struct book *b[3];
int i;
clrscr();
for(i=0;i<3;i++)
{
 fflush(stdin);
 printf("\nEnter name,price and page of %d book\n",i+1);
 scanf("%s%d",&b[i]->x,&b[i]->page);
}
printf("\nBook name\tPage");
for(i=0;i<3;i++)
printf("\n%s\t\t%d",b[i]->x,b[i]->page);
getch();
}
```

Output:

```
Enter name,price and page of 1 book
ITWD
340

Enter name,price and page of 2 book
ICT
255

Enter name,price and page of 3 book
ITBS
367

Book name       Page
ITWD            340
ICT             255
ITBS            367
```

Example 2: **Write a program to define a structure name student and member are the student name and marks of three subjects. Enter the details of such three students name and marks and print total mark and its average (Using dot Operator).**

Condition:-

If total mark T>85 then 'S' *If T>75 and T<=85 then 'A'*
If T>65 and t<=75 then 'B' *If T>55 and T<=65 then 'C'*
If T>50 and T<=55 then 'D' *If T >50 then 'F'*

```
#include<stdio.h>
#include<conio.h>
void main()
{
     struct student
     {
     char x[10];
     int m1,m2,m3;
     };
struct student s[3];
int i,t[3];
float p[3];
char g[3];
clrscr();
printf("Enter the name and marks of three subject of 03 student\n");
for(i=0;i<3;i++)
{
scanf("%s%d%d%d",&s[i].x,&s[i].m1,&s[i].m2,&s[i].m3);
t[i]=s[i].m1+s[i].m2+s[i].m3;
p[i]=t[i]/3;
if(s[i].m1<50||s[i].m2<50||s[i].m3<50)
g[i]='F';
else if(p[i]>85)
g[i]='S';
else if(p[i]>75 && p[i]<=85)
g[i]='A';
else if(p[i]>65 && p[i]<=75)
g[i]='B';
else if(p[i]>55 && p[i]<65)
g[i]='C';
else
g[i]='D';
}
printf("\nName\tTotal Mark\tPercentage\tGrade");
for(i=0;i<3;i++)
printf("\n%s\t%d\t\t%f\t%c",s[i].x,t[i],p[i],g[i]);
getch();
}
```

Output:

```
Enter the name and marks of three subject of 03 student
ANIL
45
67
65
ROHIT
67
78
89
NITIN
90
89
83

Name    Total Mark      Percentage      Grade
ANIL    177             59.000000       F
ROHIT   234             78.000000       A
NITIN   262             87.000000       S
```

Example 3: **Write a program to define a structure name employee. Where the member of the structure are employee name and basic salary. Calculate the grass salary of such three employees where**

HRA = 20 % OF BS, DA = 15% OF BS, TA = 12.5% OF BS, PF = 10% OF BS

```
#include<stdio.h>
#include<conio.h>
void main()
{
    struct emp
    {
     char x[10];
     float bs;
     };
struct emp e[3];
int i;
float hra[3],ta[3],da[3],gs[3],pf[3];
clrscr();
printf("Enter name of employee and his basic salary five employee");
for(i=0;i<3;i++)
{
 scanf("%s%f",&e[i].x,&e[i].bs);
 hra[i]=(e[i].bs*20)/100;
 da[i]=(e[i].bs*15)/100;
 ta[i]=(e[i].bs*12.5)/100;
 pf[i]=(e[i].bs*10)/100;
 gs[i]=(e[i].bs+hra[i]+da[i]+ta[i])-pf[i];
}
printf("\nNAME OF EMPLOYEE\t\tBASICSALARY\tGS ");
for(i=0;i<3;i++)
printf("\n%s\t\t\t%f\t%f ",e[i].x,e[i].bs,gs[i]);
getch();
}
```

Output:

```
Enter name of employee and his basic salary of 03 employee :
mohit
1800
santosh
2400
dilip
2100

NAMEOFEMPLOYEE          BASICSALARY     GS
mohit                   1800.000000     2475.000000
santosh                 2400.000000     3300.000000
dilip                   2100.000000     2887.500000
```

Try Yourself:

1. Rewrite the example 2 with the help of arrow operator.
2. Rewrite the example 3 with the help of arrow operator.