

Assignment No.14

**Q1. Create a structure Book with data members as bname, id, author, price.
Accept the values of all these members from user and display them.**

-:Code :-

```
// Create a structure Book with data members as bname, id, author, price. Accept  
the values of all these members from user and display them.  
#include<stdio.h>  
typedef struct Name{  
    char fname[10];  
    char mname[10];  
    char lname[10];  
}Name;  
typedef struct Book{  
    char bname[30];  
    int id;  
    Name author;  
    float price;  
}Book;  
void main(){  
    int i,num;  
    printf("How many Book You want to resister Now :");  
    scanf("%d",&num);  
    Book barr[num];  
    for(i=0;i<num;i++){  
        printf("\n _____\n");  
        printf("Enter the Name of Book :");  
        scanf("%s",barr[i].bname);  
        printf("Enter the Id of Book :");  
        scanf("%d",&barr[i].id);  
        printf("Enter the Name of Author \n");  
        printf("    Enter the First Name :");  
        scanf("%s",barr[i].author.fname);  
        printf("    Enter the Middle Name :");  
        scanf("%s",barr[i].author.mname);  
        printf("    Enter the Last Name :");  
        scanf("%s",barr[i].author.lname);  
        printf("Enter the Price of Book :");
```

```
    scanf("%f",&barr[i].price);
printf("\n_____________________________________\n");
}
for(i=0;i<num;i++){
printf("\n_____________________________________\n");
    printf("\n Name of Book : %s ",barr[i].bname);
    printf("\n Id of Book : %d ",barr[i].id);
    printf("\n Name of
Author : %s %s %s",barr[i].author.fname,barr[i].author.mname,barr[i].author.l
name);
    printf("\n Price of Book : %.2f",barr[i].price);

printf("\n_____________________________________\n");
}
}
```

Q2. Create a structure Time with data members as hrs, min, sec. Accept the values of all these members from user and display them. Also perform addition of two time variables and display the result. If sec goes beyond 60, carry it to min etc. Add a method to convert the given time into sec.

-:Code :-

// Create a structure Time with data members as hrs, min, sec. Accept the values of all these members from user and display them. Also perform addition of two time variables and display the result. If sec goes beyond 60, carry it to min etc. Add a method to convert the given time into sec.

```
#include<stdio.h>
typedef struct Time{
    int hr;
    int min;
    int sec;
}Time;
void main(){
    Time time1,time;
    printf("Enter the time First :");
    printf("\n-----\n");
    printf("Enter the Hour :");
    scanf("%d",&time1.hr);
    printf("Enter the Minute :");
    scanf("%d",&time1.min);
    printf("Enter the Second :");
    scanf("%d",&time1.sec);
    printf("\n-----\n");

    printf("Now Enter the time You want to add in it :");
    printf("\n-----\n");
    printf("Enter the Hour :");
    scanf("%d",&time.hr);
    printf("Enter the Minute :");
    scanf("%d",&time.min);
    printf("Enter the Second :");
    scanf("%d",&time.sec);
    printf("\n-----\n");
    time1.sec=time1.sec+time.sec;
    if((time1.sec)>60){
```

```
time1.sec=time1.sec-60;
time1.min++;
}
time1.min=time1.min+time.min;
if((time1.min)>60){
    time1.min=time1.min-60;
    time1.hr++;
}
time1.hr=time1.hr+time.hr;
printf("Calculated Time is :");
printf("\n_____");
printf("\n Enter the Hour :%d",time1.hr);
printf("\n Enter the Minute :%d",time1.min);
printf("\n Enter the Second :%d",time1.sec);
printf("\n_____");
}
} 
```

Q3. Write a program to create an array for 10 players. For each player store name, no. of matches played, runs, wickets takes.

- a. Create function to Accept the information of each player.
- b. Create function to display the information of all the players
- c. Display the information of player who made maximum runs and the one who took maximum number of wickets.

-:Code :-

```
#include<stdio.h>
int count;
typedef struct Player{
    char pname[40];
    int jnum;
    int match;
    int run;
    int wicket;
}Player;
void displaylist(Player* );
void addnewplayer(Player* );
void searchPlayerrun(Player* );
void searchPlayerwicket(Player* );
void main(){
    Player
p[200]={{"virat_kohali",18,415,23564,4}, {"Rohit_Sharma",45,384,22123,0}, {"Steve_Smith",49,344,20346,27}, {"Kane_Willianson",22,304,18455,10}, {"AB_de_Villiers",17,283,20014,7}};
    count=5;
    int ch;
    do{
        printf("\n_____ \n");
        ch=0;
        printf("See Prasent Player information :1\n");
        printf("Add New Player :2 \n");
        printf("Search Player Who has highest runs :3 \n");
        printf("Update Player data :4 \n");
        printf("Exit :0 \n");
        printf("Enter Your Choise :");
        scanf("%d",&ch);
        printf("\n_____ \n");
        switch(ch){
```

```

case 0:
    if(ch==0){
        break;
    }
case 1:
    if(ch==1){
        printf("\n\n Prasent Player information \n\n");
        displaylist(p);
        break;
    }
case 2:
    if(ch==2){
        printf("\n\n Add New Player \n\n");
        addnewplayer(p);
        break;
    }
case 3:
    if(ch==3){
        printf("Search Player Who make highest runs.\n");
        searchPlayerrun(p);
        break;
    }
case 4:
    if(ch==4){
        printf("Search Player Who take highest Wicket.\n");
        searchPlayerwicket(p);
        break;
    }
default:
    printf("Enter a Valid Choise \n");
}
}while(ch!=0);
printf("\n \t Thank You.... ");
}

void displaylist(Player* p){
    int i;
    for(i=0;i<count;i++){
        printf("Name of Player :%s",p[i].pname);
        printf("Jersey Number :%d \n",p[i].jnum);
        printf("Match Played :%d \n",p[i].match);
        printf("Runs :%d \n",p[i].run);
    }
}

```

```

        printf("Wickets      :%d \n",p[i].wicket);
        printf("\n-----\n");
    }
}

void addnewplayer(Player* p){
    int i=count,j,k;
    printf("\n How many Player you Enterd now :");
    scanf("%d",&j);
    count=count+j;
    for(;i<count;i++){
        printf("Enter the PLayer Name :");
        fflush(stdin);
        fgets(p[i].pname,40,stdin);
        printf("Enter the PLayer Jersey Number :");
        scanf("%d",&p[i].jnum);
        for(k=0;k<count-j;k++){
            if((p[i].jnum==p[k].jnum)){
                printf("\n Use another jersey number,it is already have in dataset...");
                printf("\n Enter the PLayer Jersey Number :");
                scanf("%d",&p[i].jnum);
            }
            printf("Enter the Number of Matches he Played:");
            scanf("%d",&p[i].match);
            printf("Enter the Number Runs:");
            scanf("%d",&p[i].run);
            printf("Enter the Number Wicket he takes :");
            scanf("%d",&p[i].wicket);
        }
        printf("\n Add Players Successfully.....\n");
    }
}

void searchPlayerrun(Player* p){
    printf("_____\n\n");
    int i,jnum=p[0].run;
    for(i=0;i<count;i++){
        if(p[i].run>jnum){
            jnum=p[i].run;
        }
    }
    printf("\nHigest Run's Player\n");
    for(i=0;i<count;i++){
        if(p[i].run==jnum){

```

```

        printf("Name of Player :%s",p[i].pname);
        printf("Jersey Number :%d \n",p[i].jnum);
        printf("Match Played :%d \n",p[i].match);
        printf("Runs      :%d \n",p[i].run);
        printf("Wickets   :%d \n",p[i].wicket);
        printf("\n-----\n");
    }
}

void searchPlayerwicket(Player* p){
    printf("_____ \n\n");
    int i,jnum=p[0].wicket;
    for(i=0;i<count;i++){
        if(p[i].wicket>jnum){
            jnum=p[i].wicket;
        }
    }
    printf("\nHigest Wicket's Player\n");
    for(i=0;i<count;i++){
        if(p[i].wicket==jnum){
            printf("Name of Player :%s",p[i].pname);
            printf("Jersey Number :%d \n",p[i].jnum);
            printf("Match Played :%d \n",p[i].match);
            printf("Runs      :%d \n",p[i].run);
            printf("Wickets   :%d \n",p[i].wicket);
            printf("\n-----\n");
        }
    }
}

```

Q4. Point of Sale System: Build a simple point of sale system using structures to represent products with attributes like name, price, and quantity. Allow users to add items to a cart and calculate the total cost

-:Code :-

```
//Point of Sale System: Build a simple point of sale system using structures to  
//represent products with attributes like name, price, and quantity. Allow users  
//to add items to a cart and calculate the total cost
```

```
#include<stdio.h>  
int count;  
typedef struct Sale{  
    char name[30];  
    double price;  
    int quantity;  
  
}Sale;  
void addproduct(Sale*);  
void displayproducts(Sale*);  
void main(){  
    Sale  
    s[50]={{ {"Soap",180,4}, {"Shampu",45,4}, {"Shirts",744,7}, {"Maggie",12,10}, {"biscuit",27,7} } };  
    count=5;  
    int ch;  
    do{  
        ch=0;  
        printf("\n Add product to Cart : 1");  
        printf("\n Display product list : 2");  
        printf("\n Exit : 0");  
        printf("\n Enter your choise :");  
        scanf("%d",&ch);  
        switch(ch){  
            case 1:  
                if(ch==1){  
                    printf("\n-----\n");  
                    printf("\n Add product to Cart...");  
                    addproduct(s);  
                    break;  
                }  
        }  
    }  
}
```

```

case 2:
    if(ch==2){
        printf("\n-----\n");
        printf("\n Display product list of Cart..."); 
        displayproducts(s);
        break;
    }
    default:
        printf("\n invalid choise..."); 
        break;
    }
}

void addproduct(Sale* s){
    printf("\n Enter product name :");
    fflush(stdin);
    fgets(s[count].name,count,stdin);
    printf("Enter the Quantity of product :");
    scanf("%d",&s[count].quantity);
    printf("Enter the price of product :");
    scanf("%lf",&s[count].price);
    count=count+1;
}

void displayproducts(Sale* s){
    int i;
    double sum=0;
    for(i=0;i<count;i++){
        printf("\n\n Peiduct Name : %s",s[i].name);
        printf("\n Price      : %.2lf",s[i].price);
        printf("\n Quantity   : %d",s[i].quantity);
        printf("\n Total Price : %.2lf",s[i].price*s[i].quantity);
        sum=(s[i].price*s[i].quantity)+sum;
    }
    printf("\n\n\n Total Price of All product : %.2lf \n\n ",sum);
}

```

Q5. Movie Database: Create a program that uses structures to manage a movie database with details like title, director, release year, and genre. Allow users to add, search for, and update movie records.

-:Code :-

```
// Movie Database: Create a program that uses structures to manage a movie
//database with details like title, director, release year, and genre. Allow users
//to add, search for, and update movie records.
#include<stdio.h>
int count;
typedef struct Movie{
    char tname[40];
    char dname[40];
    int day;
    int month;
    int year;
    char genre[30];
}Movie;
void displaylist(Movie* );
void addnewMovie(Movie* );
void removeMovie(Movie* );
void searchMovie(Movie* );
void main(){
    Movie m[200]={{ {"The Lord Of Rings", "Peter
Jackson", 17, 12, 2003, "Fantacy, Adventure"}, {"Inception", "Christopher
Nolan", 16, 7, 2010, "Drama"}, {"Pulp Fiction", "Quentin
Tarantino", 14, 10, 1994, "Crime, Thriller"}, {"Jawan", "Atlee", 7, 7, 2024, "Action
Thriller"}, {"Indian 2", "S. Shankar", 12, 7, 2024, "Action Thriller"} }};
    count=5;
    int ch;
    do{
        printf("\n _____ \n");
        ch=0;
        printf("Add Movie :1 \n");
        printf("Remove Movie :2 \n");
        printf("Search Movie :3 \n");
        printf("See the List of Movies :4 \n");
        printf("Exit :0 \n");
        printf("Enter Your Choise :");
    }
```

```

scanf("%d",&ch);

printf("\n_____\n");
switch(ch){
    case 0:
        if(ch==0){
            break;
        }
    case 1:
        if(ch==1){
            printf("\n\n Add Movies is List \n\n");
            addnewMovie(m);
            break;
        }
    case 2:
        if(ch==2){
            printf("\n\n Remove the movie \n\n");
            removeMovie(m);
            break;
        }
    case 3:
        if(ch==3){
            printf("Search A Movie\n");
            searchMovie(m);
            break;
        }
    case 4:
        if(ch==4){
            printf("See the list of movies.\n");
            displaylist(m);
            break;
        }
    default:
        printf("Enter a Valid Choise \n");
}
}while(ch!=0);
printf("\n \t Thank You.... ");
}

void displaylist(Movie* m){
    int i;
    for(i=0;i<count;i++){

```

```

        printf("Name of Movie :%s \n",m[i].pname);
        printf("Director Name :%s \n",m[i].dname);
        printf("Release Date :%d-%d-%d \n", m[i].day, m[i].month,
m[i].year );
        printf("Genre      :%s \n",m[i].genre);
        printf("\n-----\n");
    }
}

void addnewMovie(Movie* m){
    int i=count,j,k;
    printf("\n How many Movie you add now :");
    scanf("%d",&j);
    count=count+j;
    for(;i<count;i++){
        printf("Enter the Movie title :");
        fflush(stdin);
        fgets(m[i].pname,40,stdin);
        printf("Enter the Director Name :");
        fflush(stdin);
        fgets(m[i].dname,40,stdin);
        printf("Enter the Relear day of Movie:");
        scanf("%d",&m[i].day);
        printf("Enter the Relear Month of Movie:");
        scanf("%d",&m[i].month);
        printf("Enter the Relear Year of Movie :");
        scanf("%d",&m[i].year);
    }
    printf("\n Add Players Successfully.....\n");
}

void removeMovie(Movie* m){
    char nm[40];
    int i,flag=0;
    if(count==0){
        printf(" No any Movie Prasent in List to remove...");
        return;
    }
    else{
        printf("Enter the Movie Name :");
        scanf("%s",nm);
        for(i=0;i<count;i++){
            if((strcmp(m[i].pname,nm)==0)) {

```

```

        flag=1;
    }
    m[i]=m[i+flag];
}
count--;
}
}

void searchMovie(Movie* m){
    printf("-----\n\n");
    int i;
    char nm[40];
    printf("\n Enter the Movie Name :");
    scanf("%s",nm);
    for(i=0;i<count;i++){
        if(strcmp((m[i].tname,nm))==0){
            printf("Name of Movie  :%s \n",m[i].tname);
            printf("Director Name  :%s \n",m[i].dname);
            printf("Release Date  :%d-%d-%d
\n",m[i].day,m[i].month,m[i].year);
            printf("Genre      :%s \n",m[i].genre);
            printf("\n-----\n");
        }
    }
}

```

