

```
#include<stdio.h>
struct abc{
    int a;
    char b;
    float c;
};
int main()
{
    struct abc *ptr[2];
    ptr[0] = malloc(sizeof(struct abc));
    ptr[1] = malloc(sizeof(struct abc));
    ptr[0]->a = 4;
    ptr[0]->b = 'd';
    ptr[0]->c = 5.5;
    ptr[1]->a = 5;
    ptr[1]->b = 'f';
    ptr[1]->c = 8.2;
    printf("[0]a=%d,[0]b=%c,[0]c=%f\n",ptr[0]->a,ptr[0]->b,ptr[0]->c);
    printf("[1]a=%d,[1]b=%c,[1]c=%f\n",ptr[1]->a,ptr[1]->b,ptr[1]->c);
    return 0;
}
```

```
#include<stdio.h>
struct abc{
    int a;
    char b;
    float c;
};
int main()
{
    struct abc obj[2];
    obj[0].a = 4;
    obj[0].b = 'd';
    obj[0].c = 5.5;
    obj[1].a = 5;
    obj[1].b = 'f';
    obj[1].c = 8.2;
    printf("[0]a=%d,[0]b=%c,[0]c=%f\n",obj[0].a,obj[0].b,obj[0].c);
    printf("[1]a=%d,[1]b=%c,[1]c=%f\n",obj[1].a,obj[1].b,obj[1].c);
    return 0;
}
```

## Dynamic array of structs

```
#include<stdio.h>

int main()

{

typedef struct

    {

        Char *firstName;

        Char *lastName;

        int rollNumber;

    } STUDENT;


    int numStudents=2;

    int x;

    STUDENT *students;

    students = (STUDENT *) malloc(numStudents * sizeof(STUDENT));

    for (x = 0; x < numStudents; x++)

    {

        students[x].firstName=(char*)malloc(sizeof(char*));

        printf("Enter first name :");

        scanf("%s",students[x].firstName);
```

```
        students[x].lastName=(char*)malloc(sizeof(char*));

        printf("Enter last name :");

        scanf("%s",students[x].lastName);

        printf("Enter roll number  :");

        scanf("%d",&students[x].rollNumber);

    }

    for (x = 0; x < numStudents; x++)

        printf("First Name: %s, Last Name: %s, Roll number: %d\n",students[x].firstName,students[x].lastName,students[x].rollNumber);

    return (0);

}
```

# Array of Function Pointers

```
#include <stdio.h>
int sum(int num1, int num2);
int sub(int num1, int num2);
int mult(int num1, int num2);
int div(int num1, int num2);

int main()
{   int x, y, choice, result;
    int (*ope[4])(int, int);
    ope[0] = sum;
    ope[1] = sub;
    ope[2] = mult;
    ope[3] = div;
    printf("Enter two integer numbers: ");
    scanf("%d%d", &x, &y);
    printf("Enter 0 to sum, 1 to subtract, 2 to multiply, or 3 to divide: ");
    scanf("%d", &choice);
    result = ope[choice](x, y);
    printf("%d", result);
    return 0;}

int sum(int x, int y) {return(x + y);}
int sub(int x, int y) {return(x - y);}
int mult(int x, int y) {return(x * y);}
int div(int x, int y) {if (y != 0) return (x / y); else return 0;}
Enter two integer numbers: 13 48
Enter 0 to sum, 1 to subtract, 2 to multiply, or 3 to divide: 2
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```