#include<stdio.h>

int main()

{

int a[50];

int \*ptr=a;

int n,i;

scanf("%d",&n);

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

{

scanf("%d",ptr+i);

}

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

{

printf("%d is stored at %u\n",\*(ptr+i),ptr+i);

}

return 0;

}

Method 2

#include<stdio.h>

int main()

{

int a[50];

int \*ptr=a;

int n,i;

scanf("%d",&n);

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

{

scanf("%d",ptr);

ptr++;

}

ptr=a;

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

{

printf("%d is stored at %u\n",\*(ptr+i),ptr+i);

}

return 0;

}

#include<stdio.h>

int main()

{

int a[50];

int \*ptr=a;

int n,i;

scanf("%d",&n);

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

{

scanf("%d",a+i);

ptr++;

}

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

{

printf("%d is stored at %u\n",\*(a+i),a+i);

}

return 0;

}

#include<stdio.h>

#include<string.h>

int main()

{

int i;

char a[50];

gets (a);

char \*ch;

ch=a;

for(i=0;i<strlen(a);i++)

{

printf("%c",\*(ch+i));

}

return 0;

}

#include<stdio.h>

#include<string.h>

int main()

{

int i;

char a[50];

gets (a);

char \*ch;

ch=&a[0];

for(i=0;i<strlen(a);i++)

{

printf("%u ",ch+i);

printf("%c\n",\*(ch+i));

}

return 0;

}

Call by value

#include<stdio.h>

void swap(int a,int b);

int main()

{

int a=10,b=20;

swap(a,b);

printf("%d ",a);

printf("%d",b);

return 0;

}

void swap(int a,int b)

{

int temp;

temp=a;

a=b;

b=temp;

printf("%d ",a);

printf("%d\n",b);

}

Call by address

#include<stdio.h>

void swap(int \*p,int \*q)

{

int temp;

temp=\*p;

\*p=\*q;

\*q=temp;

printf("%d ",\*p);

printf("%d\n",\*q);

}

int main()

{

int a=10,b=20;

swap(&a,&b);

printf("%d ",a);

printf("%d",b);

return 0;

}

#include<stdio.h>

int main()

{

int z[2]={1,2};

int \*ip=z;//or \*ip=&z[0]

printf("%d\n",\*ip);

printf("%u\n",ip);

printf("%d\n",++\*ip);

printf("%d\n",\*(++ip));

return 0;

}

Special pointers

Void pointer

#include<stdio.h>

int main()

{

int a=25;

void \*p;

p=&a;

printf("%d",\*(int\*)p);

return 0;

}

structures

#include<stdio.h>

struct student

{

int roll\_no;

char name[25];

float marks;

char gender;

};

int main()

{

struct student st1={23,"Amrita",34.5,'f'},st2={24,"Aparna",50,'f'};

printf("%d",sizeof(st1));

printf("\n%d %s %.1f %c",st1.roll\_no,st1.name,st1.marks,st1.gender);

printf("\n%d %s %.1f %c",st2.roll\_no,st2.name,st2.marks,st2.gender);

}

#include<stdio.h>

struct student

{

int roll\_no;

char name[25];

float marks;

char gender;

};

int main()

{

struct student st1,st2;

//st1={23,"Amrita",34.5,'f'},st2={24,"Aparna",50,'f'};

st1.roll\_no=12;

strcpy(st1.name,"amrita");

printf("%d",sizeof(st1));

printf("\n%d %s %.1f %c",st1.roll\_no,st1.name,st1.marks,st1.gender);

//printf("\n%d %s %.1f %c",st2.roll\_no,st2.name,st2.marks,st2.gender);

}

#include<stdio.h>

struct student

{

int roll\_no;

char name[25];

float marks;

char gender;

}st1={12,"aparna",30,'f'};

int main()

{

struct student;

//st1={23,"Amrita",34.5,'f'},st2={24,"Aparna",50,'f'};

//st1.roll\_no=12;

//strcpy(st1.name,"amrita");

printf("%d",sizeof(st1));

printf("\n%d %s %.1f %c",st1.roll\_no,st1.name,st1.marks,st1.gender);

//printf("\n%d %s %.1f %c",st2.roll\_no,st2.name,st2.marks,st2.gender);

}

#include<stdio.h>

struct student

{

int roll\_no;

char name[25];

float marks;

char gender;

};

int main()

{

struct student st1;

printf("Enter the student details\n");

scanf("%d %s %f %c",&st1.roll\_no,st1.name,&st1.marks,&st1.gender);

printf("\n%d %s %f %c",st1.roll\_no,st1.name,st1.marks,st1.gender);

//printf("\n%d %s %.1f %c",st2.roll\_no,st2.name,st2.marks,st2.gender);

}

Highest salary

#include <stdio.h>

struct employee

{

char name[50];

int id;

float hra,ta,bp;

};

int main()

{

struct employee e1,e2;

printf("Enter the details of employee1 ");

scanf("%s %d %f %f %f",e1.name,&e1.id,&e1.hra,&e1.ta,&e1.bp);

printf("\nEnter the details of employee2 ");

scanf("%s %d %f %f %f",e2.name,&e2.id,&e2.hra,&e2.ta,&e2.bp);

float t1=e1.hra+e1.ta+e1.bp;

float t2=e2.hra+e2.ta+e2.bp;

printf("\nThe employee with highest is");

if(t1>t2)

printf("\n%s %d %.1f %.1f %.1f",e1.name,e1.id,e1.hra,e1.ta,e1.bp);

else

printf("\n%s %d %.1f %.1f %.1f",e2.name,e2.id,e2.hra,e2.ta,e2.bp);

}

Complex number printing

struct complex

{

int real;

int img;

};

int main()

{

struct complex c1={2,3},c2={4,5},c3={0,0};

c3.real=c1.real+c2.real;

c3.img=c1.img+c2.img;

printf("the result is %d+i%d",c3.real,c3.img);

}

#include <stdio.h>

struct student

{

int rollno;

int mark[3];

char name[50];

};

int main()

{

int i;

struct student s={303,{20,30,35},"Anna"};

printf("%d ",s.rollno);

for(i=0;i<3;i++)

{

printf("%d ",s.mark[i]);

}

printf("%s",s.name);

}

#include <stdio.h>

struct student

{

int rollno;

char name[30];

};

int main()

{

int i,n;

scanf("%d",&n);

struct student s[n];

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

{

scanf("%d %s\n",&s[i].rollno, s[i].name);

}

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

{

printf("%d %s\n",s[i].rollno, s[i].name);

}

}

Nested structure

#include<stdio.h>

struct dob

{

int d;

int m;

int y;

};

struct student

{

char name[50];

int rollno;

struct dob d1;

};

int main()

{

struct student s1; //s[5], then s[1].d1 to get month

printf("%d\n",sizeof(s1.d1));

printf("%d\n",sizeof(s1.name));

printf("%d\n",sizeof(s1.rollno));

printf("%d",sizeof(s1.d1.m));

printf("%d",sizeof(s1));//o/p--44

}



Structure in function

#include<stdio.h>

struct dob

{

int d;

int m;

int y;

char k;

};

struct student

{

char name[21];

int rollno;

struct dob d1;

};

int main()

{

struct student s;

scanf("%s",s.name);

scanf("%d",&s.rollno);

scanf("%d%d%d",&s.d1.d,&s.d1.m,&s.d1.y);

display(s);

}

void display(struct student t)

{

printf("%s\n",t.name);

printf("%d\n",t.rollno);

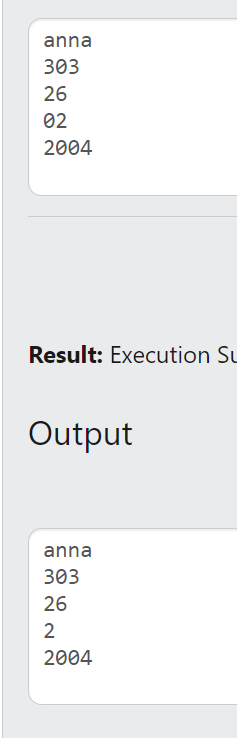
printf("%d\n",t.d1.d);

printf("%d\n",t.d1.m);

printf("%d",t.d1.y);

return 0;

}



Structure array

#include<stdio.h>

struct dob

{

int d;

int m;

int y;

char k;

};

struct student

{

char name[21];

int rollno;

struct dob d1;

};

void display(struct student t[],int n);

int main()

{

int i,n;

scanf("%d",&n);

struct student s[n];

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

{

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

scanf("%d",&s[i].rollno);

scanf("%d%d%d",&s[i].d1.d,&s[i].d1.m,&s[i].d1.y);

}

display(s,n);

return 0;

}

void display(struct student t[],int n)

{

int i;

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

{

printf("%s ",t[i].name);

printf("%d ",t[i].rollno);

printf("%d ",t[i].d1.d);

printf("%d ",t[i].d1.m);

printf("%d\n",t[i].d1.y);

}

}

#include<stdio.h>

struct student{

char name[20];

int id;

float mark;

};

int main()

{

struct student s={"Amrita",11,23.5};

struct student t=s;

t=s;

printf("%s %d %.2f",t.name,t.id,t.mark);

}

Pointer to structure

#include<stdio.h>

struct student{

char name[20];

int id;

float mark;

};

int main()

{

struct student s;

struct student \*p=&s;

scanf("%s",p->name);

scanf("%d",&p->id);

scanf("%.2f",&p->mark);

printf("%s ",p->name);

printf("%d ",p->id);

printf("%.2f",p->mark);

}

#include<stdio.h>

struct student{

char name[20];

int id;

float mark;

};

int main()

{

struct student s;

struct student \*p=&s;

scanf("%s",(\*p).name);

scanf("%d",&(\*p).id);

scanf("%.2f",&(\*p).mark);

printf("%s ",(\*p).name);

printf("%d ",(\*p).id);

printf("%f",(\*p).mark);

}