Data Types:

1)Create a record book and having the elements name,price and pages.

#include<stdio.h>

#include<string.h>

struct book

{

char name[100];

int pages;

float price;

};

int main()

{

struct book b;

strcpy(b.name,"compiler design");

b.pages=1000;

b.price=456;

printf("\nBOOK DETAILS ARE\n");

printf("\nNAME IS:%s",b.name);

printf("\nNO OF PAGES :%d",b.pages);

printf("\nPRICE :%8.2f",b.price);

return 0;

}

2)Create a record student and data members are name,rno,fee and address(note read the data member values from keyboard).

#include<stdio.h>

struct student

{

char name[100];

int rno;

float fee;

char address[1000];

}s;

int main()

{

printf("enter the name,rno,fee and address of student");

scanf("%s%d%f%s",s.name,&s.rno,&s.fee,s.address);

printf("\nSTUDENT DETAILS ARE\n");

printf("\nNAME IS:%s",s.name);

printf("\nRNO:%d",s.rno);

printf("\nFEE:%8.2f",s.fee);

printf("\nADDRESS:%s",s.address);

return 0;

}

3)Create a record employee with typedef and take at least 3 data members.

#include<stdio.h>

#include<string.h>

typedef struct

{

char name[100];

int id;

float sal;

}emp;

int main()

{

emp e;

strcpy(e.name,"ram");

e.id=1947;

e.sal=100000;

printf("\nEMP DETAILS ARE\n");

printf("\nNAME :%s",e.name);

printf("\nID:%d",e.id);

printf("\nSAL:%8.2f",e.sal);

return 0;

}

4)Program to add two complex numbers using structure.

#include<stdio.h>

struct complex

{

float r1;

float img;

}c1,c2;

int main()

{

float rc,imgc;

printf("enter real and imaginary part of first complex no");

scanf("%f%f",&c1.r1,&c1.img);

printf("enter real and imaginary part of second complex no");

scanf("%f%f",&c2.r1,&c2.img);

rc=c1.r1+c2.r1;

imgc=c1.img+c2.img;

printf("first no is=%.f+i%.f\n",c1.r1,c1.img);

printf("second no is=%.f+i%.f\n",c2.r1,c2.img);

printf("result is=%.f+i%.f\n",rc,imgc);

return 0;

}

5)Create a nested structure having members title,pages,price and date of publishing of the book.

#include<stdio.h>

#include<string.h>

struct book

{

char title[100];

int pages;

float price;

struct dop

{

int dd;

int mm;

int yyyy;

}d;

}b;

int main()

{

strcpy(b.title,"candds buy forozen");

b.pages=1200;

b.price=2500;

printf("enter the date of publishing");

scanf("%d%d%d",&b.d.dd,&b.d.mm,&b.d.yyyy);

printf("\nBOOK DETAILS ARE");

printf("\n TITLE:%s",b.title);

printf("\n PAGES:%d",b.pages);

printf("\n PRICE:%f",b.price);

printf("\n DATE:%d-%d-%d",b.d.dd,b.d.mm,b.d.yyyy);

return 0;

}

6)Read the 3 records data of the book and display the data of the books.

#include<stdio.h>

struct book

{

char title[100];

int pages;

float price;

}b[3];

int main()

{

int i;

for(i=1;i<=3;i++)

{

printf("enter book %d data",i);

scanf("%s%d%f",b[i].title,&b[i].pages,&b[i].price);

}

for(i=1;i<=3;i++)

{

printf("\n BOOK %d data",i);

printf("NAME:%s\n",b[i].title);

printf("NO OF PAGES:%d\n",b[i].pages);

printf("NAME:%6.2f\n",b[i].price);

}

return 0;

}

7)Create a record account using union.

#include<stdio.h>

#include<string.h>

union account

{

char name[100];

int accno;

float bal;

}a;

int main()

{

printf("\nBANK ACCOUNT DETAILS\n");

//printf("%d",sizeof(a));

strcpy(a.name,"Samyukta");

printf("NAME:%s\n",a.name);

a.accno=23456;

printf("ACCNO:%d\n",a.accno);

a.bal=56000;

printf("BALANCE:%6.2f\n",a.bal);

return 0;

}

8)input:gitamcollegehyd

output:GitamCollegeHyd

#include<stdio.h>

int main()

{

char str[100];

int i;

scanf("%[^\n]s",str);

for(i=0;str[i]!='\0';i++)

{

if(i==0)

str[i]=str[i]-32;

else if(str[i]==' ')

str[i+1]=str[i+1]-32;

}

printf("%s",str);

return 0;

}

9)input:gitamhyd

Output:g

gi

git

gita

gitam

gitamh

gitamhy

gitamhyd

#include<stdio.h>

int main()

{

char str[100];

int i,j;

scanf("%[^\n]s",str);

for(i=0;str[i]!='\0';i++)

{

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

{

printf("%c",str[j]);

}

printf("\n");

}

printf("%s",str);

return 0;

}

Pointers:

1)#include<stdio.h>

int main()

{

int a=100;

int \*ptr;

ptr=&a;

printf("\n a=%d",a);

printf("\n &a=%d",&a);

printf("\n \*&a=%d",\*&a);

printf("\n ptr=%d",ptr);

printf("\n value of a using ptr:%d",\*ptr);

\*ptr=\*ptr+200;

printf("\n after modification a is:%d",a);

return 0;

}

2)#include <stdio.h>

int main()

{

int a=10;

char b='$';

float c=12.56;

void \*vptr;

vptr=&a;

printf("\n address of a is:%p",vptr);

printf("\n value of a is:%d",\*((int \*)vptr));

vptr=&b;

printf("\n address of b is:%p",vptr);

printf("\n value of b is:%c",\*((char \*)vptr));

vptr=&c;

printf("\n address of c is:%p",vptr);

printf("\n value of c is:%d",\*((int \*)vptr));

return 0;

}

3)#include <stdio.h>

int main()

{

int a=10;

char b='$';

float c=12.56;

void \*vptr;

vptr=&a;

printf("\n address of a is:%p",vptr);

printf("\n value of a is:%d",\*((int \*)vptr));

vptr=&b;

printf("\n address of b is:%p",vptr);

printf("\n value of b is:%c",\*((char \*)vptr));

vptr=&c;

printf("\n address of c is:%p",vptr);

printf("\n value of c is:%d",\*((int \*)vptr));

return 0;

}