***Assignment No. 4b***

Problem Statement 7.

Create a Database using array of structures and perform following operations on it:

I. Create Database II. Display Database

III. Add record IV. Search record

V. Modify record VI. Delete record

ROLL NO.66

Batch: - S3

#include <stdio.h>

#include <string.h>

#include<stdlib.h>

typedef struct employee

{

int code;

char name[20];

int salary;

}employee;

void read(employee \*st,int n);

void insert(employee \*st,int position,int n);

void Delete(employee \*st,int position,int n);

employee \* search(employee \*st,int code,int n);

void print(employee \*st,int n);

void sort(employee \*st,int n);

void modify(employee \*st,int n);

int main()

{

employee st[30],\*pos;

int n,i,ch,code,position;

do

{

printf("\n1)Create\n2)Insert\n3)Delete\n4)Search");

printf("\n5)Print\n6)Sort\n7)Modify\n8)Quit");

printf("\nEnter Your Choice:");

scanf("%d",&ch);

switch(ch)

{

case 1: printf("\nEnter No. of employees:");

scanf("%d",&n);

read(st,n);

break;

case 2: printf("\n enter the position(no of %d):",n);

scanf("%d",&position);

if(position<=n+1)

{

insert(st,position,n);

n++;

print(st,n);

}

else

printf("\n can not insert");

break;

case 3:printf("\n enter the code : ");

scanf("%d",&code);

pos=search(st,code,n);

if(pos != NULL )

{

Delete(st,pos-st,n);

n--;

print(st,n);

}

else

printf("\n can not delete ");

break;

case 4: printf("\nenter code:");

scanf("%d",&code);

pos=search(st,code,n);

if(pos==NULL)

printf("\nnot found");

else

{ printf("\n found at location=%ld",pos-st+1);

printf("\n %s\t%d\t%d",pos->name,pos->code,pos->salary);

}

break;

case 5: print(st,n);

break;

case 6: sort(st,n);print(st,n);

break;

case 7: modify(st,n);

print(st,n);

break;

case 8:

exit(0);

break;

default:printf("Invalid choice");

break;

}

}while(ch!=8);

}

void insert( employee \*st,int position,int n)

{ int i;

printf("\n enter data(name code salary): ");

for(i=n-1;i>=position-1;i--)

\*(st+i+1)=\*(st+i);

scanf("%s%d%d",(st+position-1)->name,&(st+position-1)->code,&(st+position-1)->salary);

}

void Delete(employee st[],int position,int n)

{ int i;

for(i=position+1;i<n;i++)

\*(st+i-1)=\*(st+i);

}

employee \* search(employee \*st,int code,int n)

{ employee \*p;

for(p=st;p<st+n;p++)

if(code==p->code)

return(p);

return(NULL);

}

void print(employee \*st,int n)

{ employee \*p;

for(p=st;p<st+n;p++)

printf("\n %20s%5d%5d",p->name,p->code,p->salary);

}

void read(employee \*st,int n)

{ employee \*p;

printf("\n enter data(name code salary): ");

for(p=st;p<st+n;p++)

scanf("%s%d%d",p->name,&p->code,&p->salary);

}

void modify(employee \*st, int n)

{

int code;

employee \*pos;

printf("\n Enter the code : ");

scanf("%d",&code);

pos=search(st,code,n);

if(pos==NULL)

printf("\nNo such rollno ");

else

{

printf("\n enter data(name code salary): ");

scanf("%s%d%d",pos->name,&pos->code,&pos->salary);

}

}

void sort(employee \*st,int n)

{ int i,j;

employee temp,\*p;

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

for(p=st;p<st+n-i;p++)

if(p->code > (p+1)->code)

{

temp=\*p;

\*p=\*(p+1);

\*(p+1)=temp;

}

}

-----------OUTPUT-----------

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:1

Enter No. of employees:2

enter data(name code salary): Ashwin 001 50000

Pankaj 002 60000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:2

enter the position(no of 2):1

enter data(name code salary): Sanket 003 32000

Sanket 332000

Ashwin 150000

Pankaj 260000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:3

enter the code : 003

Ashwin 150000

Pankaj 260000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:4

enter code:001

found at location=1

Ashwin 1 50000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:5

Ashwin 150000

Pankaj 260000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:6

Ashwin 150000

Pankaj 260000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:7

Enter the code : 2

enter data(name code salary): Abhishek 004 45000

Ashwin 150000

Abhishek 445000

1)Create

2)Insert

3)Delete

4)Search

5)Print

6)Sort

7)Modify

8)Quit

Enter Your Choice:8