//19BEIT30030

//Vaghasiya jayraj

#include<stdio.h>

struct stack

{

int top;

int a[10];

}s;

int main()

{

int choice,val,index,data;

initialize(&s);

do

{

printf("1)Push\n2)Pop\n3)Change\n4)Peep\n5)Display\n6)Break the program\n");

printf("Enter your choice:");

scanf("%d",&choice);

switch(choice)

{

case 1:

{

printf("Enter value you want to push:");

scanf("%d",&val);

push(&s,val);

break;

}

case 2:

{

pop(&s);

break;

}

case 3:

{

printf("Enter index:");

scanf("%d",&index);

printf("Enter data:");

scanf("%d",&data);

Change(&s,index,data);

break;

}

case 4:

{

printf("Enter index:");

scanf("%d",&index);

Peep(&s,index);

break;

}

case 5:

{

display(&s);

break;

}

case 6:

{

break;

}

}

}while(choice!=4);

}

int initialize(struct stack \*p)

{

p->top=-1;

}

int push(struct stack \*p,int data)

{

if(p->top==9)

{

printf("\nStack overflaw...");

}

else

{

p->top++;

p->a[p->top]=data;

printf("%d is pushed in stack\n",p->a[p->top]);

}

}

int pop(struct stack \*p)

{

if(p->top==0)

{

printf("\nStack underflaw...");

}

else

{

int temp=p->a[p->top];

p->top--;

printf("%d is poped out of stack\n",temp);

}

}

int Change(struct stack \*p,int index,int data)

{

if((p->top-index+1)<0)

{

printf("invalid index...");

}

else

{

p->a[p->top-index+1]=data;

printf("Element of index %d is changed to %d\n",index,data);

}

}

int Peep(struct stack \*p,int index)

{

if((p->top-index+1)<0)

{

printf("invalid index...");

}

else

{

printf("Data %d is at %d\n",p->a[p->top-index+1],index);

}

}

int display(struct stack \*p)

{

int i;

for(i=p->top;i>=0;i--)

{

printf("%d\n",p->a[i]);

}

}