#include<stdio.h>

int stack[100],choice,n,top,x,i;

void push(void);

void pop(void);

void display(void);

void peek();

int main()

{

//clrscr();

top=-1;

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

scanf("%d",&n);

printf("\n\t STACK OPERATIONS USING ARRAY");

printf("\n\t--------------------------------");

printf("\n\t 1.PUSH\n\t 2.POP\n\t 3.DISPLAY\n\t4.PEEK\n\t 5.EXIT");

do

{

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

scanf("%d",&choice);

switch(choice)

{

case 1:

{

push();

break;

}

case 2:

{

pop();

break;

}

case 3:

{

display();

break;

}

case 4:

{

peek();

break;

}

case 5:

{

printf("\n\t EXIT POINT ");

break;

}

default:

{

printf ("\n\t Please Enter a Valid Choice(1 to 4))");

}

}

}

while(choice!=5);

return 0;

}

void push()

{

if(top>=n-1)

{

printf("\n\tSTACK overflow");

}

else

{

printf(" Enter a value to be pushed:");

scanf("%d",&x);

top++;

stack[top]=x;

}

}

void pop()

{

if(top<=-1)

{

printf("\n\t Stack underflow");

}

else

{

printf("\n\t The popped elements is %d",stack[top]);

top--;

}

}

void display()

{

if(top>=0)

{

printf("\n The elements in STACK \n");

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

printf("\n%d",stack[i]);

}

else

{

printf("\n The STACK is empty");

}

}

void peek()

{

printf("\ntop=%d",stack[top]);

}

