1 Implement Stack using array.

```
#include<stdio.h>
#define STACK_SIZE 5
int top = -1;
int s[10];
int item;
void push;
{
if (top == STACK_SIZE-1)
{
printf ("Stack overflow\n");
return;
top= top+1;
s[top] = item;
}
int pop()
{
if (top == -1)
return -1;
return s[top--];
}
void display()
{
int i;
int (top == -1)
{
printf ("stack is empty\n");
return;
}
```

```
printf ("contents of the stack \n");
for(i=top; i>=0; i--)
{
printf ("%d \n", s[i]);
}
}
void main()
{
int item_deleted;
int choice;
for(;;)
{
printf ("\n 1. push \n 2. pop \n 3. display \n
        4. exit \n");
printf ("enter the choice");
switch (choice)
{
case 1: printf ("enter the item to be inserted \n");
        scanf ("%d", &choice);
        push();
        break;
case 2 : item_deleted = pop();
        if (item_deleted == -1)
        printf ("stack is empty \n");
        else
        printf ("item deleted is %d \n", item_deleted);
        break;
case 3 : display (top, s);
default exit (0);
}
```

}
}

Output :

1. push
2. pop.
3. display
4. exit

enter the choice
1.
enter the item to be inserted
12.
enter the choice : 1
enter the item to be inserted : 24

Enter the choice : 3
The elements of stack.
24
12
Enter the choice : 4
Exit point.

```
        1.PUSH
        2.POP
        3.DISPLAY
        4.EXIT
Enter the Choice:1
Enter a value to be pushed:12

Enter the Choice:1
Enter a value to be pushed:24

Enter the Choice:1
Enter a value to be pushed:98

Enter the Choice:3

The elements in STACK

98
24
12
 Press Next Choice
 Enter the Choice:2

         The popped elements is 98
 Enter the Choice:3

 The elements in STACK

24
12
 Press Next Choice
 Enter the Choice:4

          EXIT POINT
```