```
#include <stdio.h>
#include <stdlib.h>

#define SIZE 4
int top = -1, inp_array[SIZE];
void push();
void pop();
void show();

int main()
{
   int choice;
   while (1)
   {
      printf("\nPerform operations on the stack:");
      printf("\n1.Push the element\n2.Pop the element\n3.Show\n4.End");
      printf("\n\nEnter the choice: ");
      scanf("%d", &choice);
      switch (choice)
      {
      case 1:
         push();
         break;
      case 2:
         pop();
         break;
      case 3:
         show();
         break;
      case 4:
         exit(0);
```

```
        default:
            printf("\nInvalid choice!!");
        }
    }
}
void push()
{
    int x;
    if (top == SIZE - 1)
    {
        printf("\nOverflow!!");
    }
    else
    {
        printf("\nEnter the element to be added onto the stack: ");
        scanf("%d", &x);
        top = top + 1;
        inp_array[top] = x;
    }
}
void pop()
{
    if (top == -1)
    {
        printf("\nUnderflow!!");
    }
    else
    {
        printf("\nPopped element: %d", inp_array[top]);
        top = top - 1;
    }
```

```
}
void show()
{
   if (top == -1)
   {
      printf("\nUnderflow!!");
   }
   else
   {
      printf("\nElements present in the stack: \n");
      for (int i = top; i >= 0; --i)
         printf("%d\n", inp_array[i]);
  }
}
```

```
Perform operations on the stack:
1.Push the element
2.Pop the element
3.Show
4.End

Enter the choice: 1

Enter the element to be added onto the stack: 3

Perform operations on the stack:
1.Push the element
2.Pop the element
3.Show
4.End

Enter the choice: 2

Popped element: 3
Perform operations on the stack:
1.Push the element
2.Pop the element
3.Show
4.End

Enter the choice: 3

Underflow!!
Perform operations on the stack:
```