```
# include <stdio.h>

  int Maxsize = 8;
  int stack [8];
  int top = -1;
  int is empty (),
{
  if (top == -1)
   return 1;
  else
  return 0;
}

  int is full() {
  if (top == maxsize)
   return 1;
  else
  return 0;
}
  int peek ()
{
  return stack [top];
}
   int pop ()
{
  int data;
```

```
 if (! is empty ())
 {
 data = stack [top] ;
 top = top -1 ;
 return data;
} else
{
 printf (" could not retrive the data, Stack is empty. \n");
 }
}
int push (int data)
 {
  if (! is full ())
{
  top = top + 1
 stack [top ] = data;
} else
{
printf ("could not inseret data, stack is full. \n");
 }
}
int main () {
push (3);
push (5);
```

```
push (9);
push (1);
push (12);
push (16);
printf ("Element at top of the stack: %d \n", peek());
printf ("Elements: \n");
while (!isempty()).
{
  int data = pop();
  printf ("%d \n", data);
}
printf ("stack full: %s \n", isfull()? "true": "false");
printf ("stack empty: %s \n", isempty()? "true":
                                "false");
return 0;
}
```