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Lab 01: 1) WAP to simulate the working of stack using an array with
a) Push
b) Pop
c) Display

```
#include <stdio.h>
#include <stdlib.h>
#define STACK_SIZE 3
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; if (top == -1) {
printf("stack empty \n");
return; }
```

```
printf("Contents of Stack \n");
for (i=0; i<=top; i++)
{ printf("%d \n", q[i]);
}}
void main()
{ int item, deleted;
  int choice;
  for (;;)
  { printf("\n 1. Push \n 2. Pop \n 3. Display \n 4. Exit");
    printf("Enter the choice \n");
    scanf("%d", &choice);
switch (choice)
{
 case 1: printf("Enter the item to be inserted \n");
         scanf("%d", &item);
         push(); break;
         [illegible]
 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();
        break;
default: exit(0);
}
}
}
```