11) Write a C program to implement Stack operations such as PUSH,

POP and PEEK

#include <stdio.h>

#include <stdlib.h>

#define MAX\_SIZE 100

int stack[MAX\_SIZE];

int top = -1;

int i;

void push(int x) {

if (top == MAX\_SIZE - 1) {

printf("Error: Stack overflow\n");

return;

}

top++;

stack[top] = x;

}

void pop() {

if (top == -1) {

printf("Error: Stack underflow\n");

return;

}

top--;

}

int peek() {

if (top == -1) {

printf("Error: Stack is empty\n");

return -1;

}

return stack[top];

}

void display() {

printf("Stack: ");

for (i = 0; i <= top; i++) {

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

}

printf("\n");

}

int main() {

push(1);

push(2);

push(3);

display();

pop();

display();

printf("Top element: %d\n", peek());

return 0;

}

A screenshot of a computer

Description automatically generated