

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

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

```
#define MAX 100
```

```
// Stack structure
```

```
struct Stack {
```

```
    int items[MAX];
```

```
    int top;
```

```
};
```

```
// Function to initialize stack
```

```
void initStack(struct Stack* stack) {
```

```
    stack->top = -1;
```

```
}
```

```
// Function to check if stack is full
```

```
int isFull(struct Stack* stack) {
```

```
    return stack->top == MAX - 1;
```

```
}
```

```
// Function to check if stack is empty
```

```
int isEmpty(struct Stack* stack) {
```

```
    return stack->top == -1;
```

```
}
```

```
// Function to push item to stack
```

```
void push(struct Stack* stack, int value) {
```

```
    if (isFull(stack)) {
```

```
        printf("Stack overflow\n");
```

```
        return;
```

```
    }  
    stack->items[++stack->top] = value;  
}
```

// Function to pop item from stack

```
int pop(struct Stack* stack) {  
    if (isEmpty(stack)) {  
        printf("Stack underflow\n");  
        exit(1);  
    }  
    return stack->items[stack->top--];  
}
```

// Function to reverse an array using stack

```
void reverseArray(int arr[], int size) {  
    struct Stack stack;  
    initStack(&stack);
```

// Push all elements to the stack

```
for (int i = 0; i < size; i++) {  
    push(&stack, arr[i]);  
}
```

// Pop all elements back into the array (in reverse)

```
for (int i = 0; i < size; i++) {  
    arr[i] = pop(&stack);  
}  
}
```

// Main function

```
int main() {
```

```
int arr[] = {1, 2, 3, 4, 5};

int size = sizeof(arr) / sizeof(arr[0]);


printf("Original Array: ");
for (int i = 0; i < size; i++) {
    printf("%d ", arr[i]);
}


reverseArray(arr, size);


printf("\nReversed Array: ");
for (int i = 0; i < size; i++) {
    printf("%d ", arr[i]);
}


return 0;
}
```