

//Stack using Array (Static Implementation)

Stack Implementation Using Array

```
#include <stdio.h>

#define SIZE 5
int stack[SIZE];
int top = -1;

void push(int parcel) {
    if (top == SIZE - 1) {
        printf("Stack is FULL!\n");
    } else {
        top++;
        stack[top] = parcel;
        printf("Parcel %d added.\n", parcel);
    }
}

void pop() {
    if (top == -1) {
        printf("Stack is EMPTY!\n");
    } else {
        printf("Parcel %d removed.\n", stack[top]);
        top--;
    }
}

void display() {
    if (top == -1) {
        printf("Stack is EMPTY!\n");
    } else {
        printf("Parcels in stack: ");
        for (int i = top; i >= 0; i--) {
            printf("%d ", stack[i]);
        }
        printf("\n");
    }
}

int main() {
    int choice, parcel;

    while (1) {
        printf("\n--- Parcel Handling System (Stack) ---\n");
        printf("1. Add Parcel (Push)\n");
        printf("2. Remove Parcel (Pop)\n");
        printf("3. Display Parcels\n");
        printf("4. Exit\n");
        printf("Enter choice: ");
        scanf("%d", &choice);
```

```
if (choice == 1) {  
    printf("Enter parcel number: ");  
    scanf("%d", &parcel);  
    push(parcel);  
}  
else if (choice == 2) {  
    pop();  
}  
else if (choice == 3) {  
    display();  
}  
else if (choice == 4) {  
    break; // exit program  
}  
else {  
    printf("Invalid choice!\n");  
}  
}  
return 0;  
}
```