Code

```
#include <stdio.h>
#define SIZE 100

int q1[SIZE], q2[SIZE];
int front1 = -1, rear1 = -1;
int front2 = -1, rear2 = -1;

void enqueue1(int data) {
    if (rear1 == SIZE - 1)
        printf("Queue1 is Full\n");
    else {
        if (front1 == -1)
            front1 = 0;
        q1[++rear1] = data;
    }
}

int dequeue1() {
    if (front1 == -1)
        return -1;
    int data = q1[front1++];
    if (front1 > rear1)
        front1 = rear1 = -1;
    return data;
}

void enqueue2(int data) {
    if (rear2 == SIZE - 1)
        printf("Queue2 is Full\n");
```

```
    else {
        if (front2 == -1)
            front2 = 0;
        q2[++rear2] = data;
    }
}

int dequeue2() {
    if (front2 == -1)
        return -1;
    int data = q2[front2++];
    if (front2 > rear2)
        front2 = rear2 = -1;
    return data;
}

void push(int data) {
    enqueue2(data);
    while (front1 != -1) {
        enqueue2(dequeue1());
    }

    // Swap queues
    int tempF = front1, tempR = rear1;
    front1 = front2; rear1 = rear2;
    front2 = tempF; rear2 = tempR;
}

void pop() {
    if (front1 == -1)
```

```
        printf("Stack is Empty\n");
    else {
        printf("Popped Element: %d\n", dequeue1());
    }
}

void display() {
    if (front1 == -1)
        printf("Stack is Empty\n");
    else {
        printf("Stack Elements: ");
        for (int i = front1; i <= rear1; i++)
            printf("%d ", q1[i]);
        printf("\n");
    }
}

int main() {
    int choice, value;
    while (1) {
        printf("\n1. Push\n2. Pop\n3. Display\n4. Exit\nEnter your choice: ");
        scanf("%d", &choice);
        switch (choice) {
            case 1:
                printf("Enter value to push: ");
                scanf("%d", &value);
                push(value);
                break;
            case 2:
                pop();
```

```
            break;
        case 3:
            display();
            break;
        case 4:
            return 0;
        default:
            printf("Invalid Choice\n");
    }
  }
}
```

Output

```
1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 1
Enter value to push: 10

1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 2
Popped Element: 0

1. Push
2. Pop
3. Display
4. Exit
```

```
4. Exit
Enter your choice: 2
Stack is Empty

1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 3
Stack is Empty

1. Push
2. Pop
3. Display
4. Exit
Enter your choice: 4
```