```
package Stack;



import java.util.Scanner;

public class Stack {
    private static final int MAX_SIZE = 10;
    private int[] stackArray;
    private int top;

    public Stack() {
       == coding for intiailizing and top and creating a new array stackArray[]===
    }

    public void push(int value) {
        == check for condition of pushing operation and push the values====
    }

    public int pop() {
           == check for condition of poping operation and pop the values====
    }

    public int peek() {
      == check for condition of peeking  operation and pop the values====
    }

    public void display() {
       checking codition and display all the elements in array
    }

    public boolean isEmpty() {
        returning the true or false
    }

    public boolean isFull() {
       returning the true or false
    }

    public static void main(String[] args) {
        Stack stack = new Stack();
        Scanner scanner = new Scanner(System.in);

        int choice;

        do {
            System.out.println("\nStack Menu:");
            System.out.println("1. Push");
```

```
            System.out.println("2. Pop");
            System.out.println("3. Peek");
            System.out.println("4. Display Stack Contents");
            System.out.println("5. Check if the stack is empty");
            System.out.println("6. Check if the stack is full");
            System.out.println("0. Exit");

            System.out.print("Enter your choice: ");
            choice = scanner.nextInt();

            switch (choice) {
                case 1:
                    System.out.print("Enter the value to push: ");
                    int valueToPush = scanner.nextInt();
                    stack.push(valueToPush);
                    break;
                case 2:
                    stack.pop();
                    break;
                case 3:
                    stack.peek();
                    break;
                case 4:
                    stack.display();
                    break;
                case 5:
                    System.out.println("Is the stack empty? " + stack.isEmpty());
                    break;
                case 6:
                    System.out.println("Is the stack full? " + stack.isFull());
                    break;
                case 0:
                    System.out.println("Exiting the program. Goodbye!");
                    break;
                default:
                    System.out.println("Invalid choice. Please try again.");
            }
        } while (choice != 0);

        scanner.close();
    }
}
```