```java
import java.util.Scanner;

public class TheCache {

        //Properties
        public static final short MAIN_MEMORY = 2048;
        public static final short MAX_BYTE = 0xff;
        public final short SIZE = 16;
        public temp[] node = new temp[SIZE];

        private String input;
        private short slot,tag = -1;
        private boolean valid = false;
        private short[] memory = new short[MAIN_MEMORY];
        private short[] data = new short[SIZE];



        //Constructors
        public TheCache(){

        }


        //Program
        public static void main(String args[]) {

                //get out of static land
                TheCache me = new TheCache();
                me.initializeCache();
                me.doIt();

        }


        //The Program
        public void doIt() {

                //Initialize input, ask for command
                Scanner keyboard = new Scanner(System.in);
                System.out.println( "\nWhat would you like to do? \n(R)ead, (W)rite, or (D)isplay Cache" );

                input = keyboard.next();

                //Recognize command
                if (input.equalsIgnoreCase("r")) {

                        System.out.println( "What address would you like to read?" );
                        short value = (short) keyboard.nextShort(16);
                        read(value);
                        doIt();

                } else if (input.equalsIgnoreCase("w")) {
                        System.out.println( "What address would you like to write?" );
                        short address = keyboard.nextShort(16);
                        System.out.println( "What data would you like to write at that address?" );
                        short data = keyboard.nextShort(16);
                        write(address, data);
                        doIt();

                } else if (input.equalsIgnoreCase("d")) {

                        display();
                        doIt();

                } else {

                        System.out.println( "Wrong input..Try again" );
```