```
 * Class: NumberChecker

import java.awt.*;

public class NumberChecker extends GBFrame
{
    // Instance Variables (the window components)
    private Label inputFieldLabel;
    private Label inputFieldLabel2;
    private IntegerField inputField2;
    private IntegerField inputField;
    private Button isPrimeButton;
    private static TextArea outputArea;
    private TextArea primeArea;
    private Button primeButton;
    private IntegerField primeField;
    private Label primeLabel;
    private Button gcfButton;
    private Button lcmButton;
    public Button listButton;

    public NumberChecker()
    {
        inputFieldLabel = addLabel("Number to Check",1,1,1,1);
        inputField = addIntegerField(0,1,2,1,1);
        inputFieldLabel2 = addLabel("Number to Check 2",2,1,1,1);
        inputField2 = addIntegerField(0,2,2,1,1);
        isPrimeButton = addButton("Is Prime?",3,1,1,1);
        outputArea = addTextArea("",4,1,3,3);
        primeButton = addButton("Factor",3,2,1,1);
        gcfButton = addButton("GCF",3,3,1,1);
        lcmButton = addButton("LCM",3,4,1,1);
        listButton = addButton("List",3,5,1,1);
    }

    public void buttonClicked(Button buttonObj)
    {
        if(buttonObj == isPrimeButton)
        {
            int n = inputField.getNumber();
            if(isPrime(n) == true)
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        {
            outputArea.append(n + " Is Prime" + "\n");
        }
        else if(isPrime(n) == false)
        {
            outputArea.append(n + " is not Prime" + "\n");
        }

    }
    if(buttonObj == primeButton)
    {
        int n = inputField.getNumber();

        outputArea.append(n + " = ");

        while (n % 2 == 0)
        {
                outputArea.append("(2)");
                n = n / 2;
        }

        int i = 3;
        while (!isPrime(n))
        {
            while (n % i == 0 && !isPrime(n))
            {
                    outputArea.append("(" + i + ")");
                    n = n / i;
            }
            i = i + 2;
        }
        outputArea.append("(" + n + ")"+ "\n");




        if(isPrime(n) == true)
        {
            outputArea.append(n + " Is the Factorization" + "\n");
        }
    }
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                if(buttonObj==gcfButton)
                {
                    int a = inputField.getNumber();

                    int b = inputField2.getNumber();

                    int common = gcf(a,b);

                    outputArea.append(common + " is the Greatest Common
Factor" + "\n");
                }

                if(buttonObj==lcmButton)
                {
                    int a = inputField.getNumber();

                    int b = inputField2.getNumber();

                    int common = lcm(a,b);

                    outputArea.append(common + " is the Least Common
Multiple" + "\n");
                }

                if(buttonObj == listButton)
                {
                    int a = inputField.getNumber();

                    int b = inputField2.getNumber();

                    int numberlist = list(a,b);

                    int c = inputField.getNumber();

                    if(inputField.getNumber() <
inputField2.getNumber())
                    {
                        c = inputField2.getNumber();
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                    }

                    outputArea.append(numberlist + " " + c + " is the
list of factors");
                }


    }
    public static int gcf( int a, int b)
    {

            int n = a;

            if(b<a);

            n = b;

            int i = 1;

            while(!(a%(n/i)==0 && b%(n/i) == 0))
            {
                    i = i + 1;

            }

                    return n/i;
    }

    public static int lcm( int a, int b)
    {


        int n = a;

        if(b>a);

        n = b;


        while(!(n % a == 0 && n % b == 0))
        {
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        n++;
    }


    return n;


}

public static int list(int a, int b)
{
    int larger = a;

    int smaller = b;

    if(b > a)
    {
        larger = b;
        smaller = a;
    }

    for(int i = 2; i <= larger/2; i++)
    {
        if(larger%i == 0 || smaller%i == 0)
        {

            outputArea.append(i +" ");

        }
    }
    return smaller;
}


public boolean isPrime(int n)
{
    if(n < 2)
    {
        return false;
    }
    if( n == 2)
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```
        {
            return true;
        }
        System.out.println(n);
        if (n % 2 == 0)
        {
            return false;
        }
        for(int i = 3; i*i<=n;i = i + 2)
        {
            if(n%i==0)
                return false;
        }
        return true;
    }

    public static void main(String[] args)
    {
        NumberChecker frm = new NumberChecker();
        frm.setSize(500,350);
        frm.setVisible(true);
    }
}



/*
 * Sample Output:
 *
 * 17 Is Prime
 *
 * 36 = (2)(2)(3)(3)
 *
 * 5 is the Greatest Common Factor
 *
 * 10 is the Least Common Multiple
 *
 * 2 3 5 10 15 is the list of factors
 *
 * */
```