

```

/*
 *      A program which checks whether the number entered is automorphic.
 *
 *      A number is automorphic if it is contained in the last digits of its square.
 *
 *      Example :
 *          25 * 25 = 625    --->    6 2 5
 *                                   ^---^ = 25    --->    Automorphic!
 */

import java.util.Scanner;

class Automorphic {
    public static void main (String[] args) {
        System.out.print("Enter a number : ");
        int number = (new Scanner(System.in)).nextInt();
        int square = number * number;
        int mask = (int) Math.pow(10, numberOfDigits(number));
        System.out.println((number == (square % mask))
            ? "Automorphic number!" : "Not an Automorphic number!");
    }
    public static int numberOfDigits (int n) {
        return (n < 10) ? 1 : numberOfDigits(n / 10) + 1;
    }
}

/*
 *      Variable Description :
 *
 *      -----
 *      Serial no. | Variable name | Data type | Purpose
 *      ~~~~~
 *      1          | number       | int       | Stores the number
 *              |              |           | entered
 *      -----+-----+-----+-----
 *      2          | square      | int       | Stores the square of
 *              |              |           | the number entered
 *      -----+-----+-----+-----
 *      3          | mask        | int       | Stores the mask ;
 *              |              |           | divding a number by
 *              |              |           | this gives its last
 *              |              |           | few digits
 *      ~~~~~
 */

```