1.

2.

Here is our System Diagram. We develop plugin for JCrypTool. We implemented algorithms for SHA3 candidates, and designed a new dialog box and visualized Blake. And users can use our implementation in JCrypTool.

3.

4.

5.

In the algorithms, there is a variable called “databitlength”, which in the reference code is set to constant 8. But due to different input, the length should change, so just change the variable into the length of input array would solve the problem.

Then came the second problem, Unless we change the length of the input, the output will be the same for most cases. After we check the code, we found the C reference code count the length as the length of bits, but in out Java code we handle input as byte array. So the length in Java code should be the length in C code divided by 8.

6.

Visualization cannot jump automatically when clicking at the button.

At first we check the code and make everything works well, but it still cannot jump automatically. Then we found that due to the requirements of Blake algorithm, salt needs to be a hexadecimal, and Java code cannot output correct data if input is not a hexadecimal.

So the problem is solved by input a hexadecimal in salt.