Programming homework

For the following specification, write code in both Java and .Net (C# or Visual Basic).

Write a program that (i) Authenticates a user using user name/Password (ii) Allows the user to type a text on the screen (in the GUI) (iii) Generates a key based on user’s password (iv) Uses the key to encrypt the message (v) Generates a hash of the message (vi) Generates a digital signature on the message (vii) A function to decrypt the message (viii) A function to verify the hash (ix) A function to verify the digital signature.

You could implement it in two ways: (1) Implement as a sender-receiver model where one program sends using message passing or e-mail (with steps (i)-(vi) and the other process receives and does steps (vii)-(ix)

Or (2) The same program implements both

In any case, there should be clear evidence (say in terms of print outs) that the functions are working.