Write a C/C++ application (one single source code file) using OpenSSL library to:

1. **(3p)** Sign each SHA-256 message digests extracted from the file ***Accounts.txt*** as binary representation. The RSA private key ***RSAPrivateKey.pem*** is the same for all SHA-256 messages. Save signatures into one single file called as ***AllSigns.sig*** where one line corresponds to one single RSA signature.

2. **(3p)** Generate the signatures for both files ***Accounts.txt*** and ***AllSigns.sig***. The message digest algorithm is SHA-256 and the RSA private key is stored by ***RSAPrivateKey.pem***. Save both signatures into two separate files as ***Sign1.sig*** and ***Sign2.sig***.

3. **(3p)** Use the key stored by ***pass.key*** to encrypt both files ***Accounts.txt*** and ***AllSigns.sig*** according to AES-ECB. Save the results into two separate files as ***aes1.enc*** and ***aes2.enc***.

All the solutions will be cross-checked with MOSS from Stanford. Solutions with a similarity of more than 50% will be canceled.