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https://cse29-iiith.vlabs.ac.in/exp/digital-signatures/simulation.hi 90%

Digital Signatures Scheme

Digitally sign the plaintext with Hashed RSA.

Plaintext (string):

pratik SHA-1

Hash output(hex):

25969fd10cffdec58ea8fc18de76281af086d2cc

Input to RSA(hex):

25969fd10cffdec58ea8fc18de76281af086d2cc Apply RSA

Digital Signature(hex):

a8c2b82779d44bda5e7955789c7698c653b3977354fd9f86d8e721827534c52b12f5367748086ba69fc56bc12e74494fa714e03392fd761783ce902a96959a2874527f0e4b62347e54e57ae3256c6b5c476c482af5f501fba27f952ab4aab458662ef96127cfed70f9976ac4fdd1fa2c857e6d4ea54789546565ce4268d94

Digital Signature(base64):

qWk433nU58Z155VX1cpDgU70Xc1T9uFhtjY3J1NMUfEvU2d0gAsaFwWBLuR3T6cU4D0S/XYXg860gaVnsH0n80S2I0f1LTleuM1bGtcR2xIKvxFuB+6J/1Sq0qr1YZ175Y5FP7XD512rE/dH6LTV+bu61R41UZ0X00mj2Q=

Status:

Time: 5ms

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Digital Signatures Scheme

Input to RSA(hex):

25969fd10cffdec58ea8fc18de76281af086d2cc Apply RSA

Digital Signature(hex):

a8c2b82779d44bda5e7955789c7698c653b3977354fd9f86d8e721827534c52b12f5367748086ba69fc56bc12e74494fa714e03392fd761783ce902a96959a2874527f0e4b62347e54e57ae3256c6b5c476c482af5f501fba27f952ab4aab458662ef96127cfed70f9976ac4fdd1fa2c857e6d4ea54789546565ce4268d94

Digital Signature(base64):

qWk433nU58Z155VX1cpDgU70Xc1T9uFhtjY3J1NMUfEvU2d0gAsaFwWBLuR3T6cU4D0S/XYXg860gaVnsH0n80S2I0f1LTleuM1bGtcR2xIKvxFuB+6J/1Sq0qr1YZ175Y5FP7XD512rE/dH6LTV+bu61R41UZ0X00mj2Q=

Status:

Time: 5ms

RSA public key

Public exponent (hex, F4=0x10001):

10001

Modulus (hex):

a52619399759480b7a58dfffe5ff54e65f0498f9175f5a09288810b6975871e99af3b5d694857b0fc07335f51974445b4f1351696461d0b36cfb192c307727c065168c788771c561a9400fb49175e9e6aa4e23fe11af69e9412d423b0cb6684c4c2429bce139e84ab26d0829073351f4acd36074eaf0836a5eb83359d2a698d3

1024 bit 1024 bit (e=3) 512 bit 512 bit (e=3)

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https://cse29-iitth.vlabs.ac.in/exp/pkcs/simulation.html

Public-Key Cryptosystems (PKCSv1.5)

Plaintext (string):

Pratik

encrypt

Ciphertext (hex):

0837f310a6caf99ccee40d5a37030c57c2bc170ac7328520326c642e4cb6baff
fc97222bcb4be95baef6c775bc743e650a3292e569561e487d9a6ec5443045e1
36330a60f1290a590a30396aa47090b15431855a9c5a92a680f042c44940
2085c07726c9827aa604470e37685249a04137c209fa814058ff8baec54d30f18

decrypt

Decrypted Plaintext (string):

Pratik

Status:

Decryption Time: 29ms

RSA private key

1024 bit 1024 bit (e=3) 512 bit 512 bit (e=3) Generate bits = 512

Modulus (hex):

a526133975940b0755d6f1e5f154e55f0408f9175f509208010b0975077e09
af30c0694057b0f1e07535f597444504fa316944610b030c70132307727c06
5168c788771c561a0400fb49175e9e6aa4e23fe11af69e9412d4230c6684c4
c2429bce139e640ab2608029073351f4acd36074eaf0836a5eb83359d2a69863

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Public-Key Cryptosystems (PKCSv1.5)

Public exponent (hex, F4=0x10001):

10001

Private exponent (hex):

8e9912f6d3645894e8d3bc58c0db81ff516cf4c7e5a14c771eddb1459d2ced
408a293fc97ee6aefb061859c8b6a3d1dfe710463e1f9dc72048c09751971c
4d508a51e0523357b3cc0d631cf0d1d4a165066e9204748f065712116d5cb1
4bc11b6e2d7f1ca559e6d5ac1cd5c94703a22891464fbaz300965086277a161

P (hex):

d090ce58a92c75233a64086cb0a9209bf3583064f540c76f5294bb97d285eed33
aec2200ec14b2417951178ac152ceab6da7099095b470195490b352040f15c7d

Q (hex):

cab575dc6520b66df15a0359609d51d1db184750c00c6690b90ef3465c996551
03e0bf0d54c56aec0c3c4d22592330892a126a0cc49f654a30c2220411e50f

D mod (P-1) (hex):

1a24bca8e273df2f0e47c199bbf678604e7df7215480c77c8db39f490000ce2c
f7500038acff5433b7d582a01f1826e6f4042e1c57f5elfe7f012aab0c59fd25

D mod (Q-1) (hex):

3006982efb0e47339e1f6d36b12160b741d410b0c662f54f7118b7b9a4ec9d
914337eb39841d0666f3034400cf94f5062f11c402fc994fe15a0549315009fd

1/Q mod P (hex):

3a3e731ac0960b7f19eb01a7ff93bd1cfa74cd56987db504594f089c09084
db1734c8143f98b602b981aaa9243ca28deb69b5b280ee8dcee0fd2625e53250