

物联网信息安全实验报告

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一 DES加密

1. 实验目标

实现DES加密算法并加密自己的"班级和姓名"

2. 实验结果

明文:

西安交通大学物联网001班朱志鑫2204214950

=====第1次=====

秘钥0为:LHBqzWbb

密文:

E ǝh | Z0 `w(c q w } 頤d | -z7 , i [_

解密后的明文:

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=====第2次=====

秘钥1为:mt5foX0f

密文:

i
>l g\$ o , . UG 2 =s&& qR * . Z kŠ

解密后的明文:

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=====第3次=====

秘钥2为:c2CXKccn

密文:

i말 n5 EA | < ; h ; z N* W > 4 M = ! -) - ^ 1

解密后的明文:

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=====第4次=====

秘钥3为:6UcU0bbk

密文:

8 -o

解密后的明文:

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=====第5次=====

秘钥4为:Z85Jnzi6

密文:

B & l o2 , RVa n , > _ & . ' s8 @0] + 6 p

解密后的明文:

西安交通大学物联网001班朱志鑫2204214950

3. 实验代码

代码开源在[这里](这是一个链接 [菜鸟教程](#))

二 RSA加密

1. 实验目标

实现RSA加密算法并加密自己的"班级+姓名"

2. 实验结果

私钥对为: (113780059969, 39189483521)

秘钥对为: (113780059969, 65537)

明文为: 物联网001朱志鑫

密文为:

MTIyNDE3MDU5ODExMTI2NDAwODg2MTIxMDEyMDE1OTI0MTg1NTYwNTQ0ODY3NDU1NjA1NDQ4Njc0MjYyODg5NTg1MzE4MDg0MTYzNjM0MzIxNzQ2MjEyMjM2MTEzMjY2MjM1MjY3

3. 实验代码

代码开源在[这里](#)

三 防火墙配置实验

四 k-匿名算法

1. 实验目标

采用k-匿名技术实现数据库隐私保护算法

2. 实验结果

,age,workclass,education,marital-status,race,sex,native-country
34,21, Private, Some-college, Never-married, White, Male, United-States
95,20, Private, Some-college, Never-married, White, Female, United-States
117,20, Private, Some-college, Never-married, White, Female, United-States
128,20, Private, Some-college, Never-married, White, Male, United-States
166,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
196,37, Private, HS-grad, Married-civ-spouse, White, Male, United-States
242,17, Private, 11th, Never-married, White, Male, United-States
272,21, Private, Some-college, Never-married, White, Male, United-States
324,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
326,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
344,17, Private, 11th, Never-married, White, Male, United-States
371,20, Private, Some-college, Never-married, White, Male, United-States
391,17, Private, 11th, Never-married, White, Male, United-States
413,20, Private, Some-college, Never-married, White, Male, United-States
458,20, Private, Some-college, Never-married, White, Male, United-States
527,17, Private, 11th, Never-married, White, Male, United-States
587,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
592,21, Private, Some-college, Never-married, White, Male, United-States
599,20, Private, Some-college, Never-married, White, Male, United-States
612,20, Private, Some-college, Never-married, White, Female, United-States
619,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
638,20, Private, Some-college, Never-married, White, Male, United-States
646,21, Private, Some-college, Never-married, White, Male, United-States
669,20, Private, Some-college, Never-married, White, Female, United-States
741,33, Private, Bachelors, Married-civ-spouse, White, Male, United-States
771,17, Private, 11th, Never-married, White, Male, United-States
798,17, Private, 11th, Never-married, White, Male, United-States

泛化总运行时长为:

721.0785667896271

total_loss=1257.8116317702634

total_loss_2=1507.0000000000043

precision_1=0.8203126240328196

precision_2=0.784714285714285

3. 实验代码

代码开源在[这里](#)