Họ tên: Ngô Văn Khải

Mã sinh viên: 191200552

Bài 1:

**1. Mật mã Caesar, Key = 25**

Input: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Ouput: Z A B C D E F G H I J K L M N O P Q R S T U V W X Y

Plain: SAVEFORARAIMYDAY

Cipher: RZUDENQZHMXCZX

**2. Mật mã VIGENERE – Lặp khóa, Key = THETRU**

Key: THETRUTHETRU

Plaintext: WHENINROMEDO

Cipher: POIGZHKVQXUI

**3. Mật mã VINGENERE – AUTO KEY, Key = LIKEPA**

Key: LIKPABARKING

Plaintext: BARKINGDOGSS

Cipher: MIBONNHDFQAF

**4. Mã hóa chữ đơn**

Plaintext: PENNYWISEPOUNDFO

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| K | G | O | X | P | M | U | H | C | A | Y | T | J | Q | W | Z | R | I | V | E | S | F | L | D | N | B |

Cipher: ZPQQNLCVPZWSQXMW

**5. Mật mã ma trận khóa PLAYFAIR, Key = SAVEFORA**

Plaintext: ST IL LW AT ER SR

Key:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S | A | V | E | F |
| O | R | B | C | D |
| G | H | I/J | K | L |
| M | N | P | Q | T |
| U | W | X | Y | Z |

Cipher: FMKGHZFNACAO

**6. Mật mã Hoán vị, Key = 5**

Plaintext: TIMEISMONEYTIMEISM

Key = 5

|  |  |  |  |
| --- | --- | --- | --- |
| T | S | Y | I |
| I | M | T | S |
| M | O | I | M |
| E | N | M |  |
| I | E | E |  |

Cipher: TSYIIMTSMOIMENMIEE

Bài 2:

**Đề số 31:**

**Plain Text : MONEYISAGOODSERVAN**

**1. Mật mã Caesar, Key = 6**

Input: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Ouput: G H I J K L M N O P Q R S T U V W X Y Z A B C D E F

Plain: MONEYISAGOODSERVAN

Cipher: SUTKEOYGMUUJYKXBGT

**2. Mật mã VIGENERE – Lặp khóa, Key = WHENINRO**

Key: WHENINROWHENINROWH

Plaintext: MONEYISAGOODSERVAN

Cipher: IVRRGVJOCVSQARIJWU

**3. Mật mã VINGENERE – AUTO KEY, Key = TIMEISMO**

Key: TIMEISMOMONEYISAGO

Plaintext: MONEYISAGOODSERVAN

Cipher: FWZIGAEOSCBHQMJVGB

**4. Mã hóa chữ đơn**

Plaintext: MONEYISAGOODSERVAN

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| A | W | M | D | P | O | J | G | E | N | U | Y | X | F | R | H | I | Z | K | S | Q | L | T | B | V | C |

Cipher: XRFPVEKAJRRDKPZLAF

**5. Mật mã ma trận khóa PLAYFAIR, Key = TIMEISMO**

Plaintext: MO NE YI SA GO OD SE RV AN

Key:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| T | I/J | M | E | S |
| O | A | B | C | D |
| F | G | H | K | L |
| N | P | Q | R | U |
| V | W | X | Y | Z |

Cipher: TBRTWEIDFAAOTSNYOP

**6. Mật mã Hoán vị, Key = 7**

Plaintext: MONEYISAGOODSERVAN

Key = 7

|  |  |  |
| --- | --- | --- |
| M | A | R |
| O | G | V |
| N | O | A |
| E | O | N |
| Y | D |  |
| I | S |  |
| S | E |  |

Cipher: MAROGVNOAEONYDUSSE