Algorithms

## Encryption:

**BEGIN** Encrypt(file, password)

Passarray = character array version of password

Keyarray = CharConverter(passarray)

Keypos = 0

**FOR** i = 0 **TO** file.Length

File[i] += keyarray[keypos]

Keypos++

**IF** keypos = keyarray.Length - 1 **THEN**

Keypos = 0

**END IF**

**END FOR**

**RETURN** file

**END**

## 

## 

## Character to Byte Converter:

**BEGIN** CharConverter(passarray)

**FOR** i = 0 **TO** passarray.Length

**IF** passarray[i] = ‘a’ **THEN**

Keyarray[i] = 6

**ELSE IF** passarray[i] = ‘b’ **THEN**

Keyarray[i] = 12

**ELSE IF** passarray[i] = ‘c’ **THEN**

Keyarray[i] = 18

**ELSE IF** passarray[i] = ‘d’ **THEN**

Keyarray[i] = 14

**ELSE IF** passarray[i] = ‘e’ **THEN**

Keyarray[i] = 9

**ELSE IF** passarray[i] = ‘f’ **THEN**

Keyarray[i] = 11

**ELSE IF** passarray[i] = ‘g’ **THEN**

Keyarray[i] = 13

**ELSE IF** passarray[i] = ‘h’ **THEN**

Keyarray[i] = 10

**ELSE IF** passarray[i] = ‘i’ **THEN**

Keyarray[i] = 8

**ELSE IF** passarray[i] = ‘j’ **THEN**

Keyarray[i] = 17

**ELSE IF** passarray[i] = ‘k’ **THEN**

Keyarray[i] = 15

**ELSE IF** passarray[i] = ‘l’ **THEN**

Keyarray[i] = 16

**ELSE IF** passarray[i] = ‘m’ **THEN**

Keyarray[i] = 20

**ELSE IF** passarray[i] = ‘n’ **THEN**

Keyarray[i] = 21

**ELSE IF** passarray[i] = ‘o’ **THEN**

Keyarray[i] = 22

**ELSE IF** passarray[i] = ‘p’ **THEN**

Keyarray[i] = 27

**ELSE IF** passarray[i] = ‘q’ **THEN**

Keyarray[i] = 28

**ELSE IF** passarray[i] = ‘r’ **THEN**

Keyarray[i] = 30

**ELSE IF** passarray[i] = ‘s’ **THEN**

Keyarray[i] = 29

**ELSE IF** passarray[i] = ‘t’ **THEN**

Keyarray[i] = 35

**ELSE IF** passarray[i] = ‘u’ **THEN**

Keyarray[i] = 2

**ELSE IF** passarray[i] = ‘v’ **THEN**

Keyarray[i] = 3

**ELSE IF** passarray[i] = ‘w’ **THEN**

Keyarray[i] = 42

**ELSE IF** passarray[i] = ‘x’ **THEN**

Keyarray[i] = 41

**ELSE IF** passarray[i] = ‘y’ **THEN**

Keyarray[i] = 40

**ELSE IF** passarray[i] = ‘z’ **THEN**

Keyarray[i] = 1

**ELSE IF** passarray[i] = ‘0’ **THEN**

Keyarray[i] = 55

**ELSE IF** passarray[i] = ‘1’ **THEN**

Keyarray[i] = 54

**ELSE IF** passarray[i] = ‘2’ **THEN**

Keyarray[i] = 53

**ELSE IF** passarray[i] = ‘3’ **THEN**

Keyarray[i] = 46

**ELSE IF** passarray[i] = ‘4’ **THEN**

Keyarray[i] = 60

**ELSE IF** passarray[i] = ‘5’ **THEN**

Keyarray[i] = 4

**ELSE IF** passarray[i] = ‘6’ **THEN**

Keyarray[i] = 69

**ELSE IF** passarray[i] = ‘7’ **THEN**

Keyarray[i] = 68

**ELSE IF** passarray[i] = ‘8’ **THEN**

Keyarray[i] = 67

**ELSE IF** passarray[i] = ‘9’ **THEN**

Keyarray[i] = 66

**END IF**

**END FOR**

**RETURN** keyarray

**END**

## Anti-Brute Force Algorithm:

**BEGIN** Anti-BruteForce(file, key)

Remainder = file.Length % 2

Keychar = character array version of key;

**FOR** int i = 0 **TO** keychar2.Length

Keychar1[i] = keychar[i];

Keychar2[i] = keyhar[i];

**END FOR**

**FOR** int i = 0 **TO** remainder

keychar1[keychar2.Length + i] = keychar[keychar2.Length + i];

**END FOR**

Keystring1 = the string version of keychar1;

Keystring2 = the string version of keychar2;

**IF** keystring2 = “” **THEN**

Keystring2 = “0”;

**END IF**

Key1 = integer version of keystring1;

Key2 = integer version of keystring2;

ByteCreator.NextByte(bfile1);

ByteCreator.NextByte(bfile2);

**FOR** int i = 0 **TO** key1

Bfile[i] = bfile1[i];

**END FOR**

**FOR** int i = 0 **TO** file.Length

Bfile[key1 + i] = file[i];

**END FOR**

**FOR** int i = 0 **TO** key2

Bfile[key1 + file.Length + i] = bfile2[i];

**END FOR**

**RETURN** bfile;

**END**