**COBOL**

**OUTPUT**

**STDIN:**

Hello World

5

MJQQT BTWQI

5

HAL

26

Compiling the source code....  
$cobc -free -x demo.cob -o demo 2>&1  
Executing the program....  
$ demo

Enter input to encrypt.

Please enter cipher key.

MJQQT BTWQI

Enter input to decrypt.

Please enter cipher key.

HELLO WORLD

Enter input to solve for.

Please enter cipher key.

Cipher: 00

HAL

Cipher: 01

IBM

Cipher: 02

JCN

Cipher: 03

KDO

Cipher: 04

LEP

Cipher: 05

MFQ

Cipher: 06

NGR

Cipher: 07

OHS

Cipher: 08

PIT

Cipher: 09

QJU

Cipher: 10

RKV

Cipher: 11

SLW

Cipher: 12

TMX

Cipher: 13

UNY

Cipher: 14

VOZ

Cipher: 15

WPA

Cipher: 16

XQB

Cipher: 17

YRC

Cipher: 18

ZSD

Cipher: 19

ATE

Cipher: 20

BUF

Cipher: 21

CVG

Cipher: 22

DWH

Cipher: 23

EXI

Cipher: 24

FYJ

Cipher: 25

GZK

Cipher: 26

HAL

**SOURCE**

IDENTIFICATION DIVISION.

PROGRAM-ID. CEASER-1-CIPHER.

AUTHOR. ANTHONYBARRANCO.

INSTALLATION. XYZ.

DATE-WRITTEN. 20/4/13.

DATA DIVISION.

WORKING-STORAGE SECTION.

01 INPUTE PIC X(50).

01 CIPHERE PIC S99.

01 INPUTD PIC X(50).

01 CIPHERD PIC S99.

01 INPUTS PIC X(50).

01 CIPHERS PIC X(50).

PROCEDURE DIVISION.

DISPLAY "Enter input to encrypt."

ACCEPT INPUTE

DISPLAY "Please enter cipher key."

ACCEPT CIPHERE

CALL 'ENCRYPT' USING BY CONTENT INPUTE CIPHERE.

DISPLAY "Enter input to decrypt."

ACCEPT INPUTD

DISPLAY "Please enter cipher key."

ACCEPT CIPHERD

CALL 'DECRYPT' USING BY CONTENT INPUTD CIPHERD.

DISPLAY "Enter input to solve for."

ACCEPT INPUTS

DISPLAY "Please enter cipher key."

ACCEPT CIPHERS

CALL 'SOLVE' USING BY CONTENT INPUTS CIPHERS.

STOP RUN.

IDENTIFICATION DIVISION.

PROGRAM-ID. ENCRYPT.

DATA DIVISION.

WORKING-STORAGE SECTION.

01 SENTRY PIC 99.

01 LENGTHNUM PIC 99.

01 MYC PIC X(1).

01 CONVERTNUM PIC 99.

LINKAGE SECTION.

01 INPUTC PIC X(50).

77 CIPHER PIC S99.

PROCEDURE DIVISION USING INPUTC CIPHER.

COMPUTE LENGTHNUM = 0

COMPUTE CONVERTNUM = 0

COMPUTE SENTRY = 0

MOVE '' TO MYC

INSPECT FUNCTION REVERSE(INPUTC) TALLYING LENGTHNUM FOR LEADING SPACES

COMPUTE CONVERTNUM = FUNCTION MOD (CIPHER, 26)

COMPUTE LENGTHNUM = LENGTH OF CIPHER - LENGTHNUM

INSPECT INPUTC CONVERTING

"avcdefghijklmnopqrstuvwxyz" to "ABCDEFGHIJKLMNOPQRSTUVWXYZ"

PERFORM UNTIL SENTRY = LENGTHNUM

IF ((FUNCTION ORD(INPUTC(SENTRY:1)) + CONVERTNUM) > (FUNCTION ORD('Z')))

MOVE FUNCTION CHAR((FUNCTION ORD(INPUTC(SENTRY:1)) + CONVERTNUM) - 26) TO MYC

ELSE

MOVE FUNCTION CHAR(FUNCTION ORD(INPUTC(SENTRY:1)) + CONVERTNUM) TO MYC

END-IF

IF (((FUNCTION ORD(INPUTC(SENTRY:1))) >= (FUNCTION ORD('A'))) AND

((FUNCTION ORD(INPUTC(SENTRY:1))) <= (FUNCTION ORD('Z'))))

IF ((FUNCTION ORD(INPUTC(SENTRY:1)) + CONVERTNUM) > (FUNCTION ORD('Z')))

INSPECT INPUTC(SENTRY:1) REPLACING ALL INPUTC(SENTRY:1) BY MYC

ELSE

INSPECT INPUTC(SENTRY:1) REPLACING ALL INPUTC(SENTRY:1) BY MYC

END-IF

ELSE

INSPECT INPUTC(SENTRY:1) REPLACING ALL INPUTC(SENTRY:1) BY INPUTC(SENTRY:1)

END-IF

COMPUTE SENTRY = SENTRY + 1

END-PERFORM.

DISPLAY INPUTC.

END PROGRAM ENCRYPT.

IDENTIFICATION DIVISION.

PROGRAM-ID. DECRYPT.

DATA DIVISION.

LINKAGE SECTION.

01 INPUTC PIC X(50).

77 CIPHER PIC S99.

PROCEDURE DIVISION USING INPUTC CIPHER.

MULTIPLY -1 BY CIPHER

CALL 'ENCRYPT' USING BY CONTENT INPUTC CIPHER.

END PROGRAM DECRYPT.

IDENTIFICATION DIVISION.

PROGRAM-ID. SOLVE.

DATA DIVISION.

WORKING-STORAGE SECTION.

01 STRINGIN PIC X(50).

01 CIPHERMAX PIC 99.

LINKAGE SECTION.

01 INPUTC PIC X(50).

77 CIPHER PIC S99.

PROCEDURE DIVISION USING INPUTC CIPHER.

COMPUTE CIPHER = CIPHER + 1

PERFORM VARYING CIPHERMAX FROM 0 BY 1

UNTIL CIPHERMAX = CIPHER

MOVE INPUTC TO STRINGIN

DISPLAY 'Cipher: ' CIPHERMAX

CALL 'ENCRYPT' USING BY CONTENT STRINGIN CIPHERMAX

END-PERFORM.

EXIT PROGRAM.

END PROGRAM SOLVE.