

Desafio

Este programa tem como objetivo registrar um usuário. Ele deve receber e validar os dados do usuário, e registrar em

arquivo indexado. Este é um programa online, que recebe as seguintes informações do usuário:

. Email PIC X(100)
. Nome PIC X(100)
. Password PIC X(8)
. Phone PIC 9(12)

Fluxo:

O usuário acessa a interface, preenche os dados citados. O programa realiza as seguintes validações:

1. E-mail é válido (ter pelo menos 10 caracteres, ter pelo menos um caractere antes do @ e pertencer aos domínios "capgemini.com" ou "bradesco.com")

2. Nome com pelo menos 2 palavras

3. Senha com pelo menos oito caracteres, um número, uma letra maiúscula, uma letra minúscula e um caractere especial.

4. telefone com no mínimo 11 caracteres. Ex: (999999999999).

Caso algum dos campos esteja inválido, o programa deve apresentar um erro e uma sugestão de correção ao usuário. Em caso de sucesso, o programa chama

o modo de geração de ID e registra o usuário, indexado pelo id gerado.

Ex:

ID	nome	mail	phone	password
0001	carlos	carlos@capgemini.com	756666666666	Carlos@34

APCOB106.cbl

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APCOB106.cbl
*****
* Author: WALDIR NASCIMENTO COSTA
* Date: 03/03/2024
* Purpose: Desafio - Registrar um usuario - PROGRAMA COMPLETO
*****
IDENTIFICATION DIVISION.
PROGRAM-ID. APCOB106.
*
ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SPECIAL-NAMES.
    DECIMAL-POINT IS COMMA.
INPUT-OUTPUT SECTION.
FILE-CONTROL.
    SELECT USUARIOS ASSIGN TO
        'C:\Users\LENOVO\Desktop\COBOLPRG\USUARIOS.DAT'
    ORGANISATION IS INDEXED
    ACCESS MODE IS RANDOM
    RECORD KEY IS ID-USUARIO
    FILE STATUS IS WS-FS.
*
DATA DIVISION.
FILE SECTION.
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FD USUARIOS.
  COPY FDCOBM58.

*
WORKING-STORAGE SECTION.
01 WS-REGISTRO                                PIC X(69) VALUE SPACES.
01 FILLER REDEFINES WS-REGISTRO.
    03 WS-ID-USUARIO                          PIC 9(02).
    03 WS-NOME-USUARIO                        PIC X(22).
    03 WS-EMAIL-USUARIO                      PIC X(22).
    03 WS-PHONE-USUARIO                      PIC X(13).
    03 WS-PASSWORD-USUARIO                  PIC X(10).
77 WS-FS                                      PIC 99.
    88 FS-OK                                  VALUE 0.
77 WS-EOF                                      PIC X.
    88 EOF-OK                                  VALUE 'S' FALSE 'N'.
77 WS-EXIT                                    PIC X.
    88 EXIT-OK                                  VALUE 'F' FALSE 'N'.

*
77 WS-EMAIL-COMPLETO                          PIC X(22) VALUE SPACES.
01 WS-EMAIL.
    03 WS-PRIM-PARTE                          PIC X(8) VALUE SPACES.
    03 WS-SEG-PARTE                          PIC X(13) VALUE SPACES.
    03 WS-TER-PARTE                          PIC X(1) VALUE SPACES.
01 WS-COUNT.
    03 WS-PONTEIRO1                          PIC 9(02) VALUE ZEROS.
    03 WS-TOT-CAMPOS1                        PIC 9(02) VALUE ZEROS.
    03 WS-TM-1                              PIC 9(02) VALUE ZEROS.
    03 WS-TM-2                              PIC 9(02) VALUE ZEROS.
    03 WS-TM-3                              PIC 9(02) VALUE ZEROS.

*
77 WS-NOME-COMPLETO                          PIC X(22) VALUE SPACES.
01 WS-NOME.
    03 WS-PRIM-NOME                          PIC X(8) VALUE SPACES.
    03 WS-NOME-MEIO                          PIC X(8) VALUE SPACES.
    03 WS-ULTI-MOME                          PIC X(6) VALUE SPACES.
01 WS-COUNTN.
    03 WS-PONTEIRO2                          PIC 9(02) VALUE ZEROS.
    03 WS-T-CAMPOS                          PIC 9(02) VALUE ZEROS.
    03 WS-T-1                              PIC 9(02) VALUE ZEROS.
    03 WS-T-2                              PIC 9(02) VALUE ZEROS.
    03 WS-T-3                              PIC 9(02) VALUE ZEROS.

*
77 WS-SENHA                                  PIC X(10) VALUE SPACES.
77 WS-I                                      PIC 9(2) VALUE 1.
77 WS-TAMANHOSENHA                          PIC 9(2) VALUE 0.
77 WS-FLAGNUMERO                            PIC 9 VALUE 0.
77 WS-FLAGMAIUSCULA                        PIC 9 VALUE 0.
77 WS-FLAGMINUSCULA                        PIC 9 VALUE 0.
77 WS-FLAGESPECIAL                          PIC 9 VALUE 0.
77 WS-CARACTERE                             PIC X.
77 WS-VALIDACAOFINAL                        PIC 9 VALUE 0.

*
77 WS-TELEFONE                              PIC X(13) VALUE SPACES.
77 WS-TAMANHOFONE                          PIC 99 VALUE ZERO.
77 WS-ERRO-MENSAGEM                        PIC X(50) VALUE SPACES.

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77 WS-ID                      PIC 99    VALUE 0.
77 WS-TECLA-AUX              PIC X.
*
PROCEDURE DIVISION.
    SET EXIT-OK TO FALSE
    PERFORM 001-PRINCIPAL THRU 601-REGISTRAR UNTIL EXIT-OK
    PERFORM 801-FINALIZAR
*
000-PRINCIPAL SECTION.
001-PRINCIPAL.
    PERFORM 101-VALIDAR-EMAIL
    PERFORM 201-VALIDAR-NOME
    PERFORM 301-VALIDAR-PASSWORD
    PERFORM 401-VALIDAR-PHONE
    PERFORM 501-GERAR-ID
    PERFORM 601-REGISTRAR
    PERFORM 700-CONSULTA
    PERFORM 801-FINALIZAR
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100-VALIDAR-EMAIL SECTION.
101-VALIDAR-EMAIL.
    INITIALIZE WS-EMAIL-COMPLETO
    INITIALIZE WS-TOT-CAMPOS1
    DISPLAY "DIGITE SEU EMAIL COMPLETO"
    ACCEPT WS-EMAIL
    DISPLAY ' '
    DISPLAY 'VALIDAR EMAIL'
    MOVE WS-EMAIL          TO WS-EMAIL-COMPLETO
    MOVE 1                  TO WS-PONTEIRO1
    UNSTRING
        WS-EMAIL-COMPLETO
        DELIMITED BY '@'
        INTO WS-PRIM-PARTE COUNT IN WS-TM-1
            WS-SEG-PARTE  COUNT IN WS-TM-2
            WS-TER-PARTE  COUNT IN WS-TM-3
        WITH POINTER WS-PONTEIRO1
        TALLYING IN WS-TOT-CAMPOS1
    END-UNSTRING.

    DISPLAY "WS-PRIM-PARTE: " WS-PRIM-PARTE
    DISPLAY "WS-SEG-PARTE : " WS-SEG-PARTE
    DISPLAY "WS-TER-PARTE : " WS-TER-PARTE
    DISPLAY "WS-PONTEIRO  : " WS-PONTEIRO1
    DISPLAY "WS-TOT-CAMPOS: " WS-TOT-CAMPOS1
    DISPLAY "WS-TM-1.....: " WS-TM-1
    DISPLAY "WS-TM-2.....: " WS-TM-2
    DISPLAY "WS-TM-3.....: " WS-TM-3
    IF WS-EMAIL-COMPLETO > 10 AND WS-TM-1 > 0 AND
        (WS-SEG-PARTE = 'capgemini.com' OR 'bradesco.com')
        DISPLAY 'EMAIL VALIDO'

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        DISPLAY ' '
    ELSE
        DISPLAY 'EMAIL INVALIDO. '
        ' '
        ' E-MAIL VALIDO (TER PELO MENOS 10 CARACTERES, '
        ' TER PELO MENOS UM CARACTERE ANTES DO @ E '
        ' PERTEM CER AO DOMINIOS CAPGEMINI.COM'
        ' OU BRADESCO.COM'
    PERFORM 101-VALIDAR-EMAIL.
*
200-VALIDAR-NOME SECTION.
201-VALIDAR-NOME.
    INITIALISE WS-NOME-COMPLETO
    INITIALISE WS-T-CAMPOS
    DISPLAY "DIGITE SEU NOME COMPLETO"
    ACCEPT WS-NOME
    DISPLAY ' '
    DISPLAY 'VALIDAR NOME'
    MOVE WS-NOME                TO WS-NOME-COMPLETO
    MOVE 1                      TO WS-PONTEIRO2
    UNSTRING
        WS-NOME-COMPLETO
        DELIMITED BY ALL SPACES
        INTO WS-PRIM-NOME COUNT IN WS-T-1
            WS-NOME-MEIO COUNT IN WS-T-2
            WS-ULTI-MOME COUNT IN WS-T-3
        WITH POINTER WS-PONTEIRO2
        TALLYING IN WS-T-CAMPOS
    END-UNSTRING
    DISPLAY 'WS-PRIM-NOME : ' WS-PRIM-NOME
    DISPLAY 'WS-NOME-MEIO : ' WS-NOME-MEIO
    DISPLAY 'WS-ULTI-NOME : ' WS-ULTI-MOME
    DISPLAY 'WS-POINTER : ' WS-PONTEIRO2
    DISPLAY 'WS-T-CAMPOS : ' WS-T-CAMPOS
    IF WS-T-CAMPOS >= 2
        DISPLAY 'NOME VALIDO'
        DISPLAY ' '
    ELSE
        DISPLAY 'NOME DEVE TER PELO MENOS 2 PALAVRAS'
    PERFORM 201-VALIDAR-NOME.
*
300-VALIDAR-PASSWORD SECTION.
301-VALIDAR-PASSWORD.
    INITIALIZE WS-SENHA
    INITIALIZE WS-I
    INITIALIZE WS-TAMANHOSENHA
    INITIALIZE WS-FLAGNUMERO
    INITIALIZE WS-FLAGMAIUSCULA
    INITIALIZE WS-FLAGMINUSCULA
    INITIALIZE WS-FLAGESPECIAL
    INITIALIZE WS-CARACTERE
    INITIALIZE WS-VALIDACAOFINAL

    DISPLAY 'DIGITE SUA SENHA'
    ACCEPT WS-SENHA

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DISPLAY 'VALIDAR SENHA'
MOVE WS-SENHA TO WS-TAMANHOSENHA
COMPUTE WS-TAMANHOSENHA = FUNCTION LENGTH(WS-SENHA).
PERFORM VARYING WS-I FROM 1 BY 1 UNTIL WS-I >
    WS-TAMANHOSENHA
    MOVE WS-SENHA(WS-I:1) TO WS-CARACTERE
EVALUATE TRUE
    WHEN FUNCTION NUMVAL-C(WS-CARACTERE) > 0
        SET WS-FLAGNUMERO TO 1
    WHEN WS-CARACTERE >= 'A' AND WS-CARACTERE <= 'Z'
        SET WS-FLAGMAIUSCULA TO 1
    WHEN WS-CARACTERE >= 'a' AND WS-CARACTERE <= 'z'
        SET WS-FLAGMINUSCULA TO 1
    WHEN WS-CARACTERE = '!' OR WS-CARACTERE = '@' OR
        WS-CARACTERE = '#' OR WS-CARACTERE = '$' OR
        WS-CARACTERE = '%' OR WS-CARACTERE = '"' OR
        WS-CARACTERE = '&' OR WS-CARACTERE = '*'
        SET WS-FLAGESPECIAL TO 1
    WHEN OTHER
        CONTINUE
END-EVALUATE
END-PERFORM.
IF WS-TAMANHOSENHA >= 8 AND
    WS-FLAGNUMERO = 1 AND
    WS-FLAGMAIUSCULA = 1 AND
    WS-FLAGMINUSCULA = 1 AND
    WS-FLAGESPECIAL = 1
    THEN
        SET WS-VALIDACAOFINAL TO 1
END-IF.
IF WS-VALIDACAOFINAL = 1
    THEN
        DISPLAY 'SENHA VALIDA.'
        DISPLAY ' '
    ELSE
        DISPLAY 'SENHA INVALIDA. SENHA COM PELO MENOS 8 CARACTERES,'
        DISPLAY ' UM NUMERO, UMA LETRA MAIUSCULA, UMA LETRA '
        DISPLAY ' MINUSCULA E UM CARACTERE ESPECIAL.'
PERFORM 301-VALIDAR-PASSWORD.
*
400-VALIDAR-PHONE SECTION.
401-VALIDAR-PHONE.
    INITIALIZE WS-TELEFONE
    DISPLAY 'INSIRA O TELEFONE (COM 11 OU 12 CARACTERES): '
    ACCEPT WS-TELEFONE
    DISPLAY ' '
    DISPLAY 'VALIDAR TELEFONE'
    DISPLAY ' '
    COMPUTE WS-TAMANHOFONE = FUNCTION LENGTH( FUNCTION TRIM
        ( WS-TELEFONE ) ).
    IF WS-TAMANHOFONE < 11 OR WS-TAMANHOFONE > 12
        DISPLAY 'ERRO: O TELEFONE INSERIDO TEM '
        DISPLAY WS-TAMANHOFONE ' CARACTERES. '
    DISPLAY ' '
    DISPLAY 'TELEFONE COM NO MINIMO 11 CARACTERES E NO MAXIMO 12'

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        WHEN 'c'
            DISPLAY '-----'
            PERFORM 001-PRINCIPAL THRU 601-REGISTRAR UNTIL EXIT-OK
        WHEN 'f'
            DISPLAY 'OBRIGADO'
            PERFORM 801-FINALIZAR
        WHEN 'F'
            DISPLAY 'OBRIGADO'
            PERFORM 801-FINALIZAR
        WHEN OTHER
            DISPLAY 'DADO INVALIDO, DIGITE A LETRA CORRETA'
            PERFORM 700-CONSULTA
    END-EVALUATE
*
    800-FINALIZAR SECTION.
    801-FINALIZAR.
        STOP RUN.
    END PROGRAM APCOB106.

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FDCOBM58.cpy

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01 REG-USUARIOS.
03 ID-USUARIO          PIC 9(02).
03 NOME-USUARIO        PIC X(22).
03 EMAIL-USUARIO       PIC X(22).
03 PHONE-USUARIO       PIC X(13).
03 PASSWORD-USUARIO    PIC X(10).

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SAÍDA

USUARIOS.DAT	19/03/2024 14:39	Arquivo DAT	16KB
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APCOB107.cbl

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*****
* Author: WALDIR NASCIMENTO COSTA
* Date: 17/03/2024
* Purpose: LISTAR USUARIOS - LISTAGEM INDEXADA
*****

IDENTIFICATION DIVISION.
PROGRAM-ID. APCOB107.
*
ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SPECIAL-NAMES.
    DECIMAL-POINT IS COMMA.
    INPUT-OUTPUT SECTION.
    FILE-CONTROL.
        SELECT USUARIOS ASSIGN TO
            'C:\Users\LENOVO\Desktop\COBOLPRG\USUARIOS.DAT'
        ORGANISATION IS INDEXED
        ACCESS MODE IS SEQUENTIAL
        RECORD KEY IS ID-USUARIO

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        FILE STATUS IS WS-FS.

*
DATA DIVISION.
FILE SECTION.
FD USUARIOS.
    COPY FDCOBM58.

*
WORKING-STORAGE SECTION.
01 WS-REGISTRO                                PIC X(69) VALUE SPACES.
01 FILLER REDEFINES WS-REGISTRO.
    03 WS-ID-USUARIO                          PIC 9(02).
    03 WS-NOME-USUARIO                        PIC X(22).
    03 WS-EMAIL-USUARIO                      PIC X(22).
    03 WS-PHONE-USUARIO                      PIC X(13).
    03 WS-PASSWORD-USUARIO                  PIC X(10).

77 WS-FS                                      PIC 99.
77 WS-EOF                                     PIC X.
77 WS-EXIT                                    PIC X.
77 WS-CONT                                    PIC 9(003) VALUES ZEROS.

*
PROCEDURE DIVISION.
MAIN-PROCEDURE.
    SET EXIT-OK TO FALSE
    DISPLAY '      ID      NOME      '
           '      EMAIL      PHONE      SENHA'

    PERFORM P300-LISTAR THRU P300-FIM
    PERFORM P900-FIM

P300-LISTAR.
    SET EOF-OK TO FALSE
    SET FS-OK TO TRUE
    SET WS-CONT TO 0.

*
    OPEN INPUT USUARIOS

*
    IF FS-OK THEN
        PERFORM UNTIL EOF-OK
            READ USUARIOS INTO WS-REGISTRO
            AT END
                SET EOF-OK TO TRUE
            NOT AT END
                DISPLAY ' REG '

            ADD 1 TO WS-CONT
            DISPLAY 'REGISTRO '
            DISPLAY ' '
                WS-CONT
                ' '
                WS-ID-USUARIO
                ' '

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                                WS-NOME-USUARIO
                                ' '
                                WS-EMAIL-USUARIO
                                ' '
                                WS-PHONE-USUARIO
                                ' '
                                WS-PASSWORD-USUARIO
                                ' '

                                END-READ
                                END-PERFORM
                                ELSE
                                    DISPLAY 'ERRO AO ABRIR O ARQUIVO DE USUARIOS.'
                                    DISPLAY 'FILE STATUS: 'WS-FS
                                END-IF

                                CLOSE USUARIOS
                                .
                                P300-FIM.
                                P900-FIM.

                                STOP RUN.
                                END PROGRAM APCOB107.

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SAÍDA

	ID	NOME	EMAIL	PHONE	SENHA	
REG	001	01	Carlos Sousa	carlos@capgemini.com	75949877474	Carlos@31
REG	002	02	Mateus Costa	mateus@capgemini.com	75949877474	Mateus#32
REG	003	03	Andre Luis	andre@capgemini.com	75949877474	Andre\$33
REG	004	04	Marcos Sintra	marcos@bradesco.com	75949877474	Marcos&36