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;2019

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TITLE BATALHANAVAL

.MODEL SMALL

.STACK 100H

.DATA

L1 DB 0Ah,0Dh," ",0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0BBh,20h,20h,20h,20h,20h,0DBh,0DBh,0BBh,20h,20h,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,"$"

L2 DB 0Ah,0Dh," ",0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0C8h,0CDh,0CDh,0DBh,0DBh,0C9h,0CDh,0CDh,0BCh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,"$"

L3 DB 0Ah,0Dh," ",0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0c9h,0BCh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,"$"

L4 DB 0Ah,0Dh," ",0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,"$"

L5 DB 0Ah,0Dh," ",0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0c9h,0BCh,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,"$"

L6 DB 0Ah,0Dh," ",0C8h,0CDh,0CDh,0CDh,0CDh,0CDh,0BCh,20h,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,20h,20h,20h,0C8h,0CDh,0BCh,20h,20h,20h,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,0C8H,0CDh,0CDh,0CDh,0CDh,0CDh,0CDh,0BCh,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,"$"

L7 DB 0Ah,0Dh," ",0DBh,0DBh,0DBh,0BBh,20h,20h,20h,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0BBh,20h,20h,20h,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0BBh,20h,20h,20h,20h,20h,"$"

L8 DB 0Ah,0Dh," ",0DBh,0DBh,0DBh,0DBh,0BBh,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BBh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,"$"

L9 DB 0Ah,0Dh," ",0DBh,0DBh,0C9h,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,"$"

L10 DB 0Ah,0Dh," ",0DBh,0DBh,0BAh,0C8h,0DBh,0DBh,0BBh,0DBh,0DBh,0BAh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,0C8h,0DBh,0DBh,0BBh,20h,0DBh,0DBh,0C9h,0BCh,0DBh,0DBh,0C9h,0CDh,0CDh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,20h,20h,20h,"$"

L11 DB 0Ah,0Dh," ",0DBh,0DBh,0BAh,20h,0C8h,0DBh,0DBh,0DBh,0DBh,0BAh,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,20h,0C8h,0DBh,0DBh,0DBh,0DBh,0C9h,0BCh,20h,0DBh,0DBh,0BAh,20h,20h,0DBh,0DBh,0BAh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0DBh,0BBh,"$"

L12 DB 0Ah,0Dh," ",0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0CDh,0CDh,0BCh,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0CDh,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,20h,20h,0C8h,0CDh,0BCh,0C8H,0CDh,0CDh,0CDh,0CDh,0CDh,0CDh,0BCh,"$"

V1 DB 0Ah,0Dh," \_| \_| \_|\_|\_| \_|\_|\_|\_|\_| \_|\_| \_|\_|\_| \_|\_|\_| \_|\_| $"

V2 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_|$"

V3 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_|\_|\_| \_| \_|\_|\_|\_|$"

V4 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_|$"

V5 DB 0Ah,0Dh," \_| \_|\_|\_| \_| \_|\_| \_| \_| \_|\_|\_| \_| \_|",0Ah,0Dh,"$"

V6 DB 0Ah,0Dh," \_| \_|\_| \_|\_|\_| \_|\_| \_|\_|\_| \_|\_| \_|\_|\_| $"

V7 DB " \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| $"

V8 DB " \_| \_| \_| \_| \_|\_| \_|\_|\_|\_| \_| \_| \_| \_| \_|\_|\_| $"

V9 DB " \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| $"

V10 DB " \_|\_| \_|\_| \_|\_|\_| \_| \_| \_|\_|\_| \_|\_| \_| \_| $"

V11 DB 0Ah,0Dh," \_|\_|\_| \_|\_| \_|\_|\_| \_|\_| \_|\_|\_| \_|\_|\_|\_| \_| \_| \_|\_|\_| \_|$"

V12 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_|\_| \_| \_| \_|$"

V13 DB 0Ah,0Dh," \_|\_|\_| \_|\_|\_|\_| \_|\_|\_| \_|\_|\_|\_| \_|\_|\_| \_|\_|\_| \_| \_| \_| \_|\_| \_|$"

V14 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_| \_|\_| \_| $"

V15 DB 0Ah,0Dh," \_| \_| \_| \_| \_| \_| \_| \_|\_|\_| \_|\_|\_|\_| \_| \_| \_|\_|\_| \_|$"

ONE1 DB " \_|",0Ah,0Dh,"$" ;Utiliza-se 4 vezes

ONE2 DB " \_|\_|",0Ah,0Dh,"$"

TWO1 DB " \_|\_| ",0Ah,0Dh,"$"

TWO2 DB " \_| \_|",0Ah,0Dh,"$"

TWO3 DB " \_| ",0Ah,0Dh,"$"

TWO4 DB " \_| ",0Ah,0Dh,"$"

TWO5 DB " \_|\_|\_|\_|",0Ah,0Dh,"$"

INICIO DB "Para iniciar o jogo, aperte ENTER", 0Ah, 0Dh, "$"

CONT1 DB (0) ;Contador de acertos do jogador 1

CONT2 DB (0) ;Contador de acertos do jogador 2

JOCOUNT1 DB (0) ; Contador de jogadas player1

JOCOUNT2 DB (0) ; Contador de jogadas player2

TABULEIRO1 DB 36 DUP (0) ;Posicao sem navio vale 0.

TABULEIRO2 DB 36 DUP (0)

J1T1 DB "JOGADOR 1 - TABULEIRO 1", 10, 13, "$"

J2T2 DB 10, 13, 10, 13, "JOGADOR 2 - TABULEIRO 2", 10, 13, "$"

LC DB 10, 13, "Linha e coluna da posicao: $"

P1 DB 10, 13, 10, 13, "Vez do jogador 1: $"

P2 DB 10, 13, 10, 13, "Vez do jogador 2: $"

FAIL DB 10, 13, "Valor invalido! Tente novamente$"

WATER DB 10, 13, "Tiro na agua!$"

PE DB 10, 13, "Posicao ja escolhida! Jogue novamente$"

NA DB 10, 13, "Navio acertado!$"

.CODE

EXIBET1 PROC

PUSH SI

PUSH BX

PUSH CX

MOV AH,2

MOV DL,10

INT 21H

MOV AH,2

MOV DL,13

INT 21H

XOR SI,SI

XOR BX,BX

MOV CH,6

RESETAL1:

MOV CL,6

EXIBEL1:

MOV AH,2

MOV DL,TABULEIRO1[BX][SI]

CMP DL,1

JNE ISNTONE1

ADD DL,47

JMP CONTINUE1

ISNTONE1:

ADD DL,48

CONTINUE1:

INT 21H

INC SI

DEC CL

JNZ EXIBEL1

DEC CH

MOV AH,2

MOV DL,10

INT 21H

MOV AH,2

MOV DL,13

INT 21H

JNZ RESETAL1

POP CX

POP BX

POP SI

RET

EXIBET1 ENDP

EXIBET2 PROC

PUSH SI

PUSH BX

PUSH CX

MOV AH,2

MOV DL,10

INT 21H

MOV AH,2

MOV DL,13

INT 21H

XOR SI,SI

XOR BX,BX

MOV CH,6

RESETAL2:

MOV CL,6

EXIBEL2:

MOV AH,2

MOV DL,TABULEIRO2[BX][SI]

CMP DL,1

JNE ISNTONE2

ADD DL,47

JMP CONTINUE2

ISNTONE2:

ADD DL,48

CONTINUE2:

INT 21H

INC SI

DEC CL

JNZ EXIBEL2

DEC CH

MOV AH,2

MOV DL,10

INT 21H

MOV AH,2

MOV DL,13

INT 21H

JNZ RESETAL2

POP CX

POP BX

POP SI

RET

EXIBET2 ENDP

PROC TITULO

MOV AH,9

LEA DX, L1

INT 21H

LEA DX, L2

INT 21H

LEA DX, L3

INT 21H

LEA DX, L4

INT 21H

LEA DX, L5

INT 21H

LEA DX, L6

INT 21H

LEA DX, L7

INT 21H

LEA DX, L8

INT 21H

LEA DX, L9

INT 21H

LEA DX, L10

INT 21H

LEA DX, L11

INT 21H

LEA DX, L12

INT 21H

RET

ENDP TITULO

;Referencia: http://regismain.wikidot.com/assembler

;MOV AX, 0B800h ;Move o endereço de vídeo para AX

;MOV ES, AX ;Aponta ES para o segmento de vídeo

;XOR DI, DI ;Zera DI

;MOV CX, 2000 ;Move 2000 (80x25) para CX

;MOV AH, AH ;Move o atributo para AH

;MOV AL, CH ;Move o caracter a usar para AL

;REP STOSW ;Faz isso

;RET

PROC LIMPATELA

MOV AH, 0

MOV AL, 3

INT 10H

RET

ENDP LIMPATELA

PROC PULALINHA

MOV CX, 2

P:

MOV AH, 2

MOV DL, 10

INT 21H

MOV DL, 13

INT 21H

LOOP P

RET

ENDP PULALINHA

PROC LERTABS

XOR BX, BX ;MOV BX, 0

XOR SI, SI ;MOV SI, 0

JMP MSG

ERRO1:

MOV AH, 9

LEA DX, FAIL

INT 21H

MSG:

MOV AH, 9

LEA DX, LC

INT 21H

MOV AH, 7

INT 21H

AND AL, 11011111B

CMP AL, 65

JB ERRO1

CMP AL, 70

JA ERRO1

MOV BL, AL

SUB BL, 65

JZ L

MOV DL, BL

XOR BL, BL ;MOV BL, 0

LINHA:

ADD BL, 6

DEC DL

JNZ LINHA

L:

XOR BH, BH ;MOV BH, 0

MOV AH, 7

INT 21H

CMP AL, 49

JB ERRO1

CMP AL, 54

JA ERRO1

SUB AL,49

JZ PP

XOR SI, SI ;MOV SI, 0

MOV DH, AL

COLUNA:

INC SI

DEC DH

JNZ COLUNA

PP:

RET

ENDP LERTABS

PROC WIN

MOV AH, 9

LEA DX, V1

INT 21H

LEA DX, V2

INT 21H

LEA DX, V3

INT 21H

LEA DX, V4

INT 21H

LEA DX, V5

INT 21H

RET

ENDP WIN

PROC PLA1

MOV AH, 9

LEA DX, V6

INT 21H

LEA DX, ONE1

INT 21H

LEA DX, V7

INT 21H

LEA DX, ONE2

INT 21H

LEA DX, V8

INT 21H

LEA DX, ONE1

INT 21H

LEA DX, V9

INT 21H

LEA DX, ONE1

INT 21H

LEA DX, V10

INT 21H

LEA DX, ONE1

INT 21H

RET

ENDP PLA1

PROC PLA2

MOV AH, 9

LEA DX, V6

INT 21H

LEA DX, TWO1

INT 21H

LEA DX, V7

INT 21H

LEA DX, TWO2

INT 21H

LEA DX, V8

INT 21H

LEA DX, TWO3

INT 21H

LEA DX, V9

INT 21H

LEA DX, TWO4

INT 21H

LEA DX, V10

INT 21H

LEA DX, TWO5

INT 21H

RET

ENDP PLA2

PROC CONGRATZ

MOV AH, 9

LEA DX, V11

INT 21H

LEA DX, V12

INT 21H

LEA DX, V13

INT 21H

LEA DX, V14

INT 21H

LEA DX, V15

INT 21H

RET

ENDP CONGRATZ

PROC MAIN

MOV AX, @DATA

MOV DS, AX

MOV AH, 0

MOV AL, 3

INT 10H

CALL LIMPATELA

CALL TITULO

CALL PULALINHA

MOV AH, 9

LEA DX, INICIO

INT 21H

INICIAR:

MOV AH, 7

INT 21H

CMP AL, 13

JNE INICIAR

COMECOU:

CALL LIMPATELA

MOV AH, 9

LEA DX, J1T1

INT 21H

MOV CX, 5

LER1:

JMP CONTINUA

ERRO3:

MOV AH, 9

LEA DX, PE

INT 21H

CONTINUA:

CALL LERTABS

CMP TABULEIRO1[BX+SI], 1

JE ERRO3

MOV TABULEIRO1[BX+SI], 1

LOOP LER1

CALL LIMPATELA

MOV CX, 5

MOV AH, 9

LEA DX, J2T2

INT 21H

LER2:

JMP CONTINUA2

ERRO4:

MOV AH, 9

LEA DX, PE

INT 21H

CONTINUA2:

CALL LERTABS

CMP TABULEIRO2[BX+SI], 1

JE ERRO4

MOV TABULEIRO2[BX+SI], 1

LOOP LER2

JOGADA:

CALL LIMPATELA

CALL EXIBET2

MOV AH, 9

LEA DX, P1

INT 21H

PLAYER1:

CALL LERTABS

CMP TABULEIRO2[BX+SI], 2

JE OCUPADO1

CMP TABULEIRO2[BX+SI], 0

JE AGUA1

MOV AH, 9

LEA DX, NA

INT 21H

INC CONT1

JMP POSICAO1

OCUPADO1:

MOV AH, 9

LEA DX, PE

INT 21H

JMP PLAYER1

AGUA1:

MOV AH, 9

LEA DX, WATER

INT 21H

POSICAO1:

MOV TABULEIRO2[BX+SI], 2

CALL EXIBET2

CMP CONT1, 5

JE FIM1

MOV AH,1

INT 21h

XOR AL,AL

CALL LIMPATELA

CALL EXIBET1

MOV AH, 9

LEA DX, P2

INT 21H

PLAYER2:

CALL LERTABS

CMP TABULEIRO1[BX+SI], 2

JE OCUPADO2

CMP TABULEIRO1[BX+SI], 0

JE AGUA2

MOV AH, 9

LEA DX, NA

INT 21H

INC CONT2

JMP POSICAO2

OCUPADO2:

MOV AH, 9

LEA DX, PE

INT 21H

JMP PLAYER2

AGUA2:

MOV AH, 9

LEA DX, WATER

INT 21H

POSICAO2:

MOV TABULEIRO1[BX+SI], 2

CALL EXIBET1

CMP CONT2, 5

JE FIM2

MOV AH,1

INT 21h

XOR AL,AL

JMP JOGADA

FIM1:

CALL LIMPATELA

CALL PULALINHA

CALL WIN

CALL PLA1

CALL CONGRATZ

JMP FIM

FIM2:

CALL LIMPATELA

CALL PULALINHA

CALL WIN

CALL PLA2

CALL CONGRATZ

FIM:

CALL PULALINHA

MOV AH, 4CH

INT 21H

ENDP MAIN

END MAIN