

```
function
constant
    SIZE := 10;
endconstant
var
    CHAR name[15], board[SIZE][SIZE], col2;
    INTEGER num, aux := 2, i, j, exp := 0, col := -1, row, rep := 0;
endvar

WRITE " _ _ _ _ _ _ _ _ _ _ \n"
"| | | | |\ | _ \| _ \| | / _ \| \n"
"|_|_|_||\ |||_|)| | | |_| \n"
"| _ |||. \| |||| _ / | | _ | \n"
"|_|_|_||\ |_|_|_\ \| | |_|_| \n"
"|_|_ \|/_ \|_\|_\|_| \| \|_|_|_| \n"
"\t _ _ _ _ _"
"\n\t|_|_| / _ \|_|/_ \|_"
"\n\t|_|_|_|_|_|_|_|_|"
"\n\t|_|_|_|_|_|_|_|_|"
"\n\t|_|_|_|_|_|_|_|_|"
"\n\t|_|_|_|_|_|_|_|_|";

WRITE "\n\n Introduce tu nombre: ";
READ name;

do {
    WRITE "\n\n Saludos name, escoge la dificultad del juego:\n\n 1 - Fácil\t\t\t"
        "+50 XP\n 2 - Heroico\t\t\t +100 XP\n 3 - Legendario\t\t\t"
        "+200 XP\n 4 - Salir del programa.\t +0 XP\n\n Tus puntos"
        " actuales son: exp XP\n\n*****\n";

    READ num;

    while num < 1 OR num > 4 do
        WRITE "Ese número no está disponible. Prueba otra vez.\n"
            "(Intentos restantes aux\n";

        READ num;
        aux := aux - 1;
        if aux == 0 then
            break;
        endif
    endwhile
endwhile
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if aux > 0 then
    switch num
    case 1:
        WRITE " Vale jugaremos en Fácil, tranquilo/a no será\n difícil.\n";

        //Printar el tablero vacío.
        WRITE ""\n\tA B C D E F G H I J\n"
        "  +---+---+---+---+---+---+---+---+---+\n";
        for i := 0 to SIZE
            if i == 9 then
                WRITE " i + 1 |";
            else
                WRITE " i + 1 |";
            endif
            for j := 0 to SIZE
                WRITE " |";
                j := j + 1;
            endfor
            i := i + 1;
        endfor
        WRITE "\n  +---+---+---+---+---+---+---+---+---+\n";

        //Poner los barcos en el tablero.
        for i := 0 to SIZE
            for j := 0 to SIZE
                if i == 1 AND j == 8 then
                    board[i][j] := 1;
                else
                    if i == 2 AND (j == 2 || j == 4 || j == 5 || j == 8) then
                        board[i][j] := 1;
                    else
                        if i == 3 AND (j == 2 || j == 8) then
                            board[i][j] := 1;
                        else
                            if i == 4 AND (j == 2) then
                                board[i][j] := 1;
                            else
                                if i == 5 AND (j == 4 || j == 5 || j == 6 || j == 7) then
                                    board[i][j] := 1;
                                else
                                    if i == 8 AND (j == 2 || j == 3 || j == 4 || j == 5 || j == 6) then
                                        board[i][j] := 1;
                                    else

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board[i][j] := 0;
endif
endif
endif
endif
endif
j := j + 1;
endif
endfor
i := i + 1;
endfor

do
WRITE "\n Introduce la fila: ";
READ row;
while row < 1 OR row > 10;

do
WRITE "\n Introduce la columna: ";
READ col2;

//Comparamos la letra introducida con su carácter en la tabla ASCII.
if col2 == 65 OR col2 == 97 then
col := 0;
else
if col2 == 66 OR col2 == 98 then
col := 1;
else
if col2 == 67 OR col2 == 99 then
col := 2;
else
if col2 == 68 OR col2 == 100 then
col := 3;
else
if col2 == 69 OR col2 == 101 then
col := 4;
else
if col2 == 70 OR col2 == 102 then
col := 5;
else
if col2 == 71 OR col2 == 103 then
col := 6;
else

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        WRITE " i + 1 |";
    else
        WRITE " i + 1 |";
    endif
for j:= 0 to SIZE
    WRITE " |";
    j := j + 1;
endfor
i := i + 1;
endfor
WRITE "\n  +---+---+---+---+---+---+---+---+---\n";

//Poner los barcos en el tablero.
for i:= 0 to SIZE
    for j:= 0 to SIZE
        if i == 0 AND (j == 8 || j == 9) then
            board[i][j] := 1;
        else
            if i == 2 AND (j == 2 || j == 3 || j == 4 || j == 5 || j == 6) then
                board[i][j] := 1;
            else
                if i == 3 AND j == 7 then
                    board[i][j] := 1;
                else
                    if i == 4 AND j == 7 then
                        board[i][j] := 1;
                    else
                        if i == 5 AND (j == 2 || j == 3 || j == 4 || j == 7) then
                            board[i][j] := 1;
                        else
                            if i == 7 AND (j == 6 || j == 7 || j == 8 || j == 9) then
                                board[i][j] := 1;
                            else
                                board[i][j] := 0;
                            endif
                        endif
                    endif
                endif
            endif
        endif
    endfor
    i := i + 1;
endfor

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endfor

do
    WRITE "\n Introduce la fila: ";
    READ row;
while row < 1 OR row > 10;

do
    WRITE "\n Introduce la columna: ";
    READ col2;

    //Comparamos la letra introducida con su carácter en la tabla ASCII.
    if col2 == 65 OR col2 == 97 then
        col := 0;
    else
        if col2 == 66 OR col2 == 98 then
            col := 1;
        else
            if col2 == 67 OR col2 == 99 then
                col := 2;
            else
                if col2 == 68 OR col2 == 100 then
                    col := 3;
                else
                    if col2 == 69 OR col2 == 101 then
                        col := 4;
                    else
                        if col2 == 70 OR col2 == 102 then
                            col := 5;
                        else
                            if col2 == 71 OR col2 == 103 then
                                col := 6;
                            else
                                if col2 == 72 OR col2 == 104 then
                                    col := 7;
                                else
                                    if col2 == 73 OR col2 == 105 then
                                        col := 8;
                                    else
                                        if col2 == 74 OR col2 == 106 then
                                            col := 9;
                                        endif
                                    endif
                                endif
                            endif
                        endif
                    endif
                endif
            endif
        endif
    endif
endif

```

```
endif  
endif  
endif  
endif  
endif  
while col < 0 OR col > 9;  
  
    row := row - 1;  
  
    if board[ row ][ col ] == 1  
        WRITE "\n\n\t\t\t\t\tTOCADO!\n\n\tLos barcos están representados con █."  
        "\n\tTu disparo está representado con 'X'.  
        "\n\n\tA B C D E F G H I J\n          +"  
        "-+-+-+-----+\n");  
        for i:= 0 to SIZE do  
            if i== 9 then  
                WRITE " i + 1 | ";  
            else  
                WRITE " i + 1 | ";  
            endif  
            for j:= 0 to SIZE do  
                if board[ row ][ col ] == 0  
                    WRITE " |";  
                else  
                    if i== row AND j== col  
                        WRITE "X|";  
                    else  
                        WRITE "█|";  
                    endif  
                endif  
            endfor  
            j := j + 1;  
        endfor  
        WRITE "\n      +-+-+-+-----+\n";  
        i := i + 1;  
    endfor  
  
exp := exp + 100;  
WRITE "\n Tus puntos actuales son: exp XP\n";  
do  
    WRITE " ¿Quieres volver a jugar? [1 = Sí / 0 = No]\n";  
    READ rep;
```



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while rep < 0 OR rep > 1;

else
    WRITE "\n\n\t\t\tAGUA!"
        "\n\n\t  A B C D E F G H I J\n  +-"
        "+-----+";
    for i := 0 to SIZE do
        if i == 9 then
            WRITE " i + 1 |";
        else
            WRITE " i + 1 |";
        endif
        for j := 0 to SIZE do
            WRITE " |";
            j := j + 1;
        endfor
        WRITE "\n  +-----+";
        i := i + 1;
    endfor
do
    WRITE " ¿Quieres volver a jugar? [1 = Sí / 0 = No]\n";
    READ rep;
    while rep < 0 OR rep > 1;

endif

break;

case 3:
    WRITE " ¿Estás seguro de que quieres jugar en Legendario?\n "
        " Si lo superas, serás recordado con honor.\n";

    //Printar el tablero vacío.
    WRITE "" "\n\tA B C D E F G H I J\n"
        "  +-----+";
    for i := 0 to SIZE
        if i == 9 then
            WRITE " i + 1 |";
        else
            WRITE " i + 1 |";
        endif
        for j := 0 to SIZE
            WRITE " |";
            j := j + 1;
        endfor
        i := i + 1;
    endfor

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endfor
WRITE "\n  +--+--+--+--+--+--+--+--+--+--+";

//Poner los barcos en el tablero.
for i := 0 to SIZE
  for j := 0 to SIZE
    if i == 1 AND (j == 1 OR j == 2 OR j == 3 OR j == 4) then
      board[i][j] := 1;
    else
      if i == 4 AND (j == 0 || j == 4 || j == 5 || j == 6) then
        board[i][j] := 1;
      else
        if i == 5 AND (j == 0 || j == 2) then
          board[i][j] := 1;
        else
          if i == 6 AND (j == 2) then
            board[i][j] := 1;
          else
            if i == 7 AND (j == 2 || j == 7 || j == 8 || j == 9) then
              board[i][j] := 1;
            else
              if i == 8 AND (j == 2) then
                board[i][j] := 1;
              else
                if i == 9 AND (j == 2) then
                  board[i][j] := 1;
                else
                  board[i][j] := 0;
                endif
              endif
            endif
          endif
        endif
      endif
    endif
  endif
  j := j + 1;
endfor
i := i + 1;
endfor

do
  WRITE "\n Introduce la fila: ";
  READ row;

```

```

while row < 1 OR row > 10;

do
    WRITE "\n Introduce la columna: ";
    READ col2;

    //Comparamos la letra introducida con su carácter en la tabla ASCII.
    if col2 == 65 OR col2 == 97 then
        col := 0;
    else
        if col2 == 66 OR col2 == 98 then
            col := 1;
        else
            if col2 == 67 OR col2 == 99 then
                col := 2;
            else
                if col2 == 68 OR col2 == 100 then
                    col := 3;
                else
                    if col2 == 69 OR col2 == 101 then
                        col := 4;
                    else
                        if col2 == 70 OR col2 == 102 then
                            col := 5;
                        else
                            if col2 == 71 OR col2 == 103 then
                                col := 6;
                            else
                                if col2 == 72 OR col2 == 104 then
                                    col := 7;
                                else
                                    if col2 == 73 OR col2 == 105 then
                                        col := 8;
                                    else
                                        if col2 == 74 OR col2 == 106 then
                                            col := 9;
                                        endif
                                    endif
                                endif
                            endif
                        endif
                    endif
                endif
            endif
        endif
    endif
endif

```

```
endif  
endif  
while col < 0 OR col > 9;  
  
row := row - 1;  
  
if board[row][col] == 1  
    WRITE "\n\n\t\t\tTOCADO!\n\tLos barcos están representados con █."  
    "\n\tTu disparo está representado con 'X'.  
    "\n\n\tA B C D E F G H I J\n      +-"  
    "+---+---+---+---+---+---+---+---+\n");  
for i:= 0 to SIZE do  
    if i== 9 then  
        WRITE " i + 1 |";  
    else  
        WRITE " i + 1 |";  
    endif  
    for j:= 0 to SIZE do  
        if board[row][col] == 0  
            WRITE " |";  
        else  
            if i== row AND j== col  
                WRITE "X|";  
            else  
                WRITE "█|";  
            endif  
        endif  
        j := j + 1;  
    endfor  
    WRITE "\n      +-+---+---+---+---+---+---+---+---+\n";  
    i := i + 1;  
endfor  
exp := exp + 200;  
WRITE "\n Tus puntos actuales son: exp XP\n";  
do  
    WRITE " ¿Quieres volver a jugar? [1 = Sí / 0 = No]\n";  
    READ rep;  
while rep < 0 OR rep > 1;  
  
else  
    WRITE "\n\n\t\t\tAGUA!"  
    "\n\n\t A B C D E F G H I J\n      +"
```

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        "-----+\\n";
    for i := 0 to SIZE do
        if i == 9 then
            WRITE " i + 1 |";

        else
            WRITE " i + 1 |";

        endif
        for j := 0 to SIZE do
            WRITE " |";
            j := j + 1;

        endfor
        WRITE "\\n  -----+\\n";
        i := i + 1;

    endfor

do
    WRITE " ¿Quieres volver a jugar? [1 = Sí / 0 = No]\\n";
    READ rep;
    while rep < 0 OR rep > 1;

endif
        break;
    default:
        rep := 0;
        break;
while ( num < 0 AND num > 5 ) OR rep == 1;
WRITE " Saliste del programa.\\n"
    " Muchas gracias por jugar <3.\\n"
    " Tus puntos actuales son exp XP";
endfunction

```