```
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\n"
        "\t _____ _      ___ _____  ___"
        "\n\t|  ___| |    / _ \\_  __|/ _ \\"
        "\n\t| |__ | |   | | | | | | | |__| |"
        "\n\t|  __|| |   | | | | | | |  __  |"
        "\n\t| |   | |___| |_| | | | | | | |"
        "\n\t|_|   |_____\\___/  |_|  |_| |_|\n");

        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 "
                        "+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
```

```
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
```

```
                                                        board[ i ][ j ] := 0;
                                                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
while col < 0 OR col > 9;

row := row - 1;

if board[ row ][ col ] == 1
                WRITE "\n\n\t\t\t¡TOCADO!\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
                        endif
```

```
                                        j := j + 1;
                        endfor
                        WRITE "\n      +---+---+---+---+---+---+---+---+---+---+\n";
                        i := i + 1;
                endfor
                exp := exp + 50;
                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\t¡AGUA!"
                                "\n\n\t   A   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
                                        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;
                        case 2:
                WRITE "  ¡Con que Heroico! Veo que te gustan los retos.\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 == 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
                    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\t¡TOCADO!\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 + 100;
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\t¡AGUA!"
                                           "\n\n\t   A   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
                                                    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;
                    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"
                            "      +---+---+---+---+---+---+---+---+---+\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 == 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
                        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\t¡TOCADO!\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\t¡AGUA!"
                "\n\n\t   A  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
                                        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:
                                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
```