

# ***DUNGEON CRAWLER***

**Versión 2.0**

Dual TIC Tarragona – Diputació de Tarragona

Reus, 13 de Febrero de 2018

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## **1. Nombre del proyecto**

Dungeon Crawler

Versión 2.0

## **2. Participantes**

### **2.1. Programadores**

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### **2.2. Dictador benevolente**

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### **3. Descripción del proyecto**

Juego que permite escoger un héroe que luchará contra diferentes monstruos consecutivamente hasta que los mate y gane, o hasta que alguno de los monstruos lo mate y pierda.

Los héroes y los monstruos están almacenados en dos ficheros de texto secuenciales que se usarán para poder escoger el héroe que luchará contra los diferentes monstruos y ambos tienen los mismos campos.

El juego permitirá escoger el héroe, modificar sus características y mostrarlas.

El menú debe contener las opciones:

1. Seleccionar héroe
2. Modificar héroe
3. A la batalla!

## 4. Detalle del programa

### 4.1. Archivos que lo componen

Dungeon-Crawler\

→ DUNGCRWL.cbl

**Código fuente**

bin\

→ DUNGCRWL.exe

**Ejecutable**

→ HEROES.txt

**Registros de héroes**

→ DUNGEON.txt

**Registros de monstruos**

### 4.2. Github

- **Versión 1.0:** <https://github.com/Zafiro93/Dungeon-Crawler/releases/tag/v-1.0>
- **Versión 2.0:** <https://github.com/Zafiro93/Dungeon-Crawler/releases/tag/v-2.0>

### 4.3. Detalles de la versión 2.0

- Añadida una pantalla de inicio, una pantalla de partida ganada, de partida perdida y unos créditos al finalizar el juego.
- Aplicados dos conocimientos de las *Screens* en COBOL, tanto el *Screen Section* como aplicar el código en *DISPLAYS*.
- Integrados sistemas de Pausas para tener mejor visualización.
- Probado un sistema de música al iniciar el juego, que al final, no ha

resultado satisfactorio, pero no negamos que no pueda volver a probarse y usarse en un futuro.

- Optimización del código fuente, para un mejor rendimiento y funcionamiento de la aplicación.

## 5. Código fuente

IDENTIFICATION DIVISION.

PROGRAM-ID. DUNGRWL.

\*\*\*\*\*

\* JUEGO: DUNGEON CRAWLER \*

\*\*\*\*\*

ENVIRONMENT DIVISION.

INPUT-OUTPUT SECTION.

FILE-CONTROL.

SELECT HEROES-FILE ASSIGN TO "HEROES.TXT"

FILE STATUS IS WS-HEROES-FS

ORGANIZATION IS LINE SEQUENTIAL.

SELECT MONSTERS-FILE ASSIGN TO "DUNGEON.TXT"

FILE STATUS IS WS-MONSTERS-FS

ORGANIZATION IS LINE SEQUENTIAL.

DATA DIVISION.

FILE SECTION.

FD HEROES-FILE.

01 HEROES-REG.

05 HEROES-R-ID PIC 9(02) VALUE ZERO.

05 HEROES-R-STRENGTH PIC 9(02) VALUE ZERO.

05 HEROES-R-AGILITY PIC 9(02) VALUE ZERO.

05 HEROES-R-LEVEL PIC 9(02) VALUE ZERO.

05 HEROES-R-HP PIC 9(02) VALUE ZERO.

05 HEROES-R-PROFESSION PIC 9(02) VALUE ZERO.

FD MONSTERS-FILE.

01 MONSTERS-REG.

05 MONSTER-R-ID PIC 9(02) VALUE ZERO.

05 MONSTER-R-STRENGTH PIC 9(02) VALUE ZERO.

05 MONSTER-R-AGILITY PIC 9(02) VALUE ZERO.

05 MONSTER-R-LEVEL PIC 9(02) VALUE ZERO.



05 MONSTER-R-HP PIC 9(02) VALUE ZERO.

05 MONSTER-R-PROFESSION PIC 9(02) VALUE ZERO.

WORKING-STORAGE SECTION.

01 WS-CONSTANTS.

05 WS-GAME-NAME PIC X(15)  
VALUE "Dungeon Crawler".

05 WS-MAX-HEROES PIC 9(02) VALUE 7.

05 WS-MAX-MONSTERS PIC 9(02) VALUE 10.

05 WS-INPUT\_CURSOR\_SCREEN\_POS.

10 WS-ICSP-1-LINE PIC 9(02) VALUE 4.

10 WS-ICSP-1-COL PIC 9(02) VALUE 20.

10 WS-ICSP-2-LINE PIC 9(02) VALUE 7.

10 WS-ICSP-2-COL PIC 9(02) VALUE 14.

05 WS-DISPLAY-SHIFT.

10 WS-HEROES-MENU-TITLE-SHIFT PIC 9(02) VALUE 6.

10 WS-HEROES-MENU-CONTENT-SHIFT PIC 9(02) VALUE 2.

10 WS-MHM-TITLE-SHIFT PIC 9(02) VALUE 6.

05 WS-MAX-ANIMATION-CYCLES PIC 9(01) VALUE 3.

05 WS-MAX-IMG-FIGHT-LENGTH PIC 9(01) VALUE 9.

05 WS-INI-IMG-LINE PIC 9(02) VALUE 12.

05 WS-MAX-ARR PIC 9(02) VALUE 88.

05 WS-SCREEN-LINE-POS PIC 9(02) VALUE 1.

01 WS-AUX.

05 WS-AUX-NUMBER PIC S9(05) VALUE ZERO.

05 WS-AUX-ALPHA PIC X(01) VALUE SPACE.

01 WS-IMG-FIGHT.

05 W-IMG-FIGHT-MONSTER.

10 WS-IMG-FIGHT-M PIC X(29) OCCURS 9 TIMES VALUE SPACES.

\*> 10 FILLER VALUE " ".

\*> 10 FILLER VALUE " /-/--\ ".

\*> 10 FILLER VALUE " (@~@) )/\ ".

\*> 10 FILLER VALUE " \_\_\_\_/-- \ | ".

```
*>      10 FILLER VALUE " (oo)___ _ )_/"
*>      10 FILLER VALUE " ^^___/ \
*>      10 FILLER VALUE " \ |/-\
*>      10 FILLER VALUE " ( ) |
*>      10 FILLER VALUE " | \_/"
```

05 WS-IMG-FIGHT-SWORD.

10 WS-IMG-FIGHT-S PIC X(29) OCCURS 9 TIMES VALUE SPACES.

```
*>      10 FILLER VALUE " _____"
*>      10 FILLER VALUE " / \ / \
*>      10 FILLER VALUE " , | ' |
*>      10 FILLER VALUE " I __L_____ L__"
*>      10 FILLER VALUE "O====IE_____/ ./____>"
*>      10 FILLER VALUE " I \. ./
*>      10 FILLER VALUE " ` \. ./
*>      10 FILLER VALUE " \ /
*>      10 FILLER VALUE " ' "
```

05 WS-IMG-FIGHT-PHOTOGRAM PIC 9(01) VALUE ZERO.

05 WS-IMG-FIGHT-LINE-I PIC 9(02) VALUE ZERO.

01 WS-HEROES-FILE.

05 WS-HEROES-FS PIC X(02) VALUE ZEROES.

88 WS-H-FS-OK VALUE "00".

88 WS-H-FS-EOF VALUE HIGH-VALUE.

05 WS-HERO-PROFESSION PIC X(02) VALUE SPACES.

88 WS-H-P-GUERRERO VALUE "34".

88 WS-H-P-ARQUERO VALUE "44".

88 WS-H-P-MAGO VALUE "45".

05 WS-HEROES-REG.

10 WS-H-R-LENGTH PIC 9(01) VALUE ZERO.

10 WS-H-R-INDEX PIC 9(01) VALUE ZERO.

10 WS-H-R-CURRENT PIC 9(01) VALUE ZERO.

\* WS-HEROES-R OCCURS \*\*WS-MAX-HEROES\*\* TIMES

10 WS-HEROES-R OCCURS 7 TIMES.

15 WS-H-R-ID	PIC 9(02) VALUE ZERO.
15 WS-H-R-STRENGTH	PIC 9(02) VALUE ZERO.
15 WS-H-R-AGILITY	PIC 9(02) VALUE ZERO.
15 WS-H-R-LEVEL	PIC 9(02) VALUE ZERO.
15 WS-H-R-HP	PIC 9(02) VALUE ZERO.
15 WS-H-R-PROFESSION	PIC 9(02) VALUE ZERO.

01 WS-MONSTERS-FILE.

05 WS-MONSTERS-FS	PIC X(02) VALUE ZEROES.
88 WS-M-FS-OK	VALUE "00".
88 WS-M-FS-EOF	VALUE HIGH-VALUE.

05 WS-MONSTERS-REG.

10 WS-M-R-LENGTH	PIC 9(01) VALUE ZERO.
10 WS-M-R-INDEX	PIC 9(01) VALUE ZERO.
10 WS-M-R-CURRENT	PIC 9(01) VALUE ZERO.

\* WS-MONSTERS-R OCCURS \*\*WS-MAX-MONSTERS\*\* TIMES

10 WS-MONSTERS-R OCCURS 10 TIMES.

15 WS-M-R-ID	PIC 9(02) VALUE ZERO.
15 WS-M-R-STRENGTH	PIC 9(02) VALUE ZERO.
15 WS-M-R-AGILITY	PIC 9(02) VALUE ZERO.
15 WS-M-R-LEVEL	PIC 9(02) VALUE ZERO.
15 WS-M-R-HP	PIC 9(02) VALUE ZERO.
15 WS-M-R-PROFESSION	PIC 9(02) VALUE ZERO.

01 WS-VALID-OPTION PIC X(37) VALUES ALL SPACES.

88 WS-RESET-VALID-OPTION VALUE ALL SPACES.

88 WS-INVALID-OPTION

VALUE "[Escoge una opcion correcta]".

88 WS-MISSING-STEPS-OPTION

VALUE "[Primero debes seleccionar un heroe!]".

01 WS-SHOW-SELECTED-HERO-OPTION PIC X(08) VALUE ALL SPACES.

88 WS-RESET-SELECTED-HERO-OPTION VALUE ALL SPACES.

88 WS-SELECTED-HERO-OPTION VALUE "con ID: ".

01 WS-MAIN-MENU.

```

05 WS-MM-OPTION          PIC X(01) VALUE SPACE.

    88 WS-MM-OP-EXIT      VALUE "0".
    88 WS-MM-OP-SELECT    VALUE "1".
    88 WS-MM-OP-MODIFY    VALUE "2".
    88 WS-MM-OP-PLAY      VALUE "3".

05 WS-MM.

    10 FILLER              PIC X(15)
                           VALUE "MENU PRINCIPAL".

    10 WS-MM-ERROR         PIC X(37) VALUE ALL SPACES.
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(14) VALUE ALL "-".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(18) VALUE "Escoge una opcion:".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(20)
                           VALUE "1- Seleccionar heroe".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(19)
                           VALUE "2- Modificar heroe ".

    10 WS-MM-PREFIX        PIC X(08) VALUE SPACES.
    10 WS-MM-HERO-ID       PIC X(02) VALUE SPACES.
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(16) VALUE "3- A la batalla!".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(01) VALUE X"0A".
    10 FILLER              PIC X(09) VALUE "0- Salir.".

01 WS-HEROES-MENU.

    05 WS-H-OPTION         PIC X(01) VALUE SPACE.

        88 WS-H-OP-CONTINUE VALUE SPACE.
        88 WS-H-OP-EXIT    VALUE "0".

```

05 WS-HEROES-MENU-TITLE.

```

10 WS-HM-HEADING      PIC X(18)
   VALUE "LISTADO DE HEROES ".
10 WS-HM-ERROR         PIC X(28) VALUE ALL SPACES.
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(17) VALUE ALL "-".
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(18) VALUE "Escoge una opcion:".
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(52)
VALUE "      ID  Fuerza Agilidad Nivel P. Vida  Profesion".
10 FILLER              PIC X(01) VALUE X"0A".
10 FILLER              PIC X(52)
VALUE "      --  -----  -----  -----  -----  -----".

```

05 WS-HEROES-MENU-CONTENT.

```

10 WS-HMC-SELECTED    PIC X(01) VALUE SPACE.
10 FILLER              PIC X(01) VALUE SPACE.
10 WS-HMC-INDEX       PIC 9(01).
10 FILLER              PIC X(02) VALUE "- ".
10 WS-HMC-ID          PIC 9(02) .
10 FILLER              PIC X(04) VALUE SPACES.
10 WS-HMC-STRENGTH    PIC 9(02).
10 FILLER              PIC X(07) VALUE SPACES.
10 WS-HMC-AGILITY     PIC 9(02).
10 FILLER              PIC X(06) VALUE SPACES.
10 WS-HMC-LEVEL       PIC 9(02).
10 FILLER              PIC X(06) VALUE SPACES.
10 WS-HMC-HP          PIC 9(02).
10 FILLER              PIC X(06) VALUE SPACES.
10 WS-HMC-PROFESSION  PIC X(08).

```

05 WS-HEROES-MENU-FOOTER.

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(09) VALUE "0- Salir".

01 WS-MOD-HEROES-MENU.

05 WS-MHM-OPTION PIC X(01) VALUE SPACE.

88 WS-MHM-OP-CONTINUE VALUE SPACE.

88 WS-MHM-OP-EXIT VALUE "0".

88 WS-MHM-OP-STRENGTH VALUE "1".

88 WS-MHM-OP-AGILITY VALUE "2".

88 WS-MHM-OP-LEVEL VALUE "3".

88 WS-MHM-OP-HP VALUE "4".

05 WS-MHM-TITLE.

10 FILLER PIC X(16)  
VALUE "MODIFICAR HEROE ".

10 WS-MHM-ERROR PIC X(28) VALUE ALL SPACES.

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(15) VALUE ALL "-".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(18) VALUE "Escoge una opcion:".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(01) VALUE X"0A".

05 WS-MHM-SELECTION-TITLE.

10 FILLER PIC X(16)  
VALUE "MODIFICAR HEROE ".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(15) VALUE ALL "-".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(01) VALUE X"0A".

10 FILLER PIC X(30)

VALUE "Selecciona el nuevo valor de: ".

10 WS-MHM-SEL-TIT-MODIFYING PIC X(11) VALUE ALL SPACES.

```

10 FILLER                PIC X(01) VALUE X"0A".
10 FILLER                PIC X(01) VALUE X"0A".
10 FILLER                PIC X(15) VALUE "Antiguo valor: ".
10 WS-MHM-SEL-TIT-NEWVALUE PIC X(10) VALUE ALL SPACES.
10 FILLER                PIC X(01) VALUE X"0A".
10 FILLER                PIC X(13) VALUE "Nuevo valor: ".
05 WS-MHM-CONTENT.
    10 FILLER                PIC X(11) VALUE "1- Fuerza: ".
    10 WS-MHM-C-STRENGTH    PIC 9(02) VALUE ZEROES.
    10 FILLER                PIC X(01) VALUE X"0A".
    10 FILLER                PIC X(13) VALUE "2- Agilidad: ".
    10 WS-MHM-C-AGILITY    PIC 9(02) VALUE ZEROES.
    10 FILLER                PIC X(01) VALUE X"0A".
    10 FILLER                PIC X(10) VALUE "3- Nivel: ".
    10 WS-MHM-C-LEVEL      PIC 9(02) VALUE ZEROES.
    10 FILLER                PIC X(01) VALUE X"0A".
    10 FILLER                PIC X(16)
                                VALUE "4- Puntos Vida: ".
    10 WS-MHM-C-HP        PIC 9(02) VALUE ZEROES.
05 WS-MHM-FOOTER.
    10 FILLER                PIC X(01) VALUE X"0A".
    10 FILLER                PIC X(09) VALUE "0- Salir".
01 WS-PAUSE-MECHANISM.
    05 WS-PM-NOW-1.
        10 WS-PM-NOW-1-DATE PIC 9(08) VALUE ZERO.
        10 WS-PM-NOW-1-TIME PIC 9(08) VALUE ZERO.
    05 WS-PM-NOW-2.
        10 WS-PM-NOW-2-DATE PIC 9(08) VALUE ZERO.
        10 WS-PM-NOW-2-TIME PIC 9(08) VALUE ZERO.
    05 WS-PM-WRK-ONE-DAY   PIC 9(08) VALUE ZERO.
    05 WS-PM-DELTA-TIME    PIC 9(08) VALUE ZERO.
01 WS-CREDITS.

```

```
05 WS-C-ARR                                PIC X(42) OCCURS 88 TIMES
                                           VALUE SPACES.
```

```
05 WS-C-POS                                PIC 9(02) VALUE 1.
```

```
05 WS-C-I                                  PIC 9(02) VALUE 1.
```

```
05 WS-C-SCREEN-LINE                        PIC 9(02) VALUE 1.
```

```
05 WS-C-FINAL-POS                         PIC 9(02) VALUE 0.
```

SCREEN SECTION.

01 SS-CLEAR-SCREEN.

05 BLANK SCREEN.

01 SS-INTRO.

05 SS-TITLE-1.

```
10 LINE 02 COL 10 VALUE "_____" FOREGROUND-COLOR IS 6.
```

```
10 LINE 03 COL 10 VALUE "| _ \" FOREGROUND-COLOR IS 6.
```

```
10 LINE 04 COL 10 VALUE
```

```
"| | | | _ _ _ _ _ _ _ _ _ _"
```

```
FOREGROUND-COLOR IS 6.
```

```
10 LINE 05 COL 10 VALUE
```

```
"| | | | | | | ' _ \ / _ ` | / _ \ / _ \ | ' _ \"
```

```
FOREGROUND-COLOR IS 6.
```

```
10 LINE 06 COL 10 VALUE
```

```
"| | / / | | | | | ( _ | | _ / ( _ ) | | | |"
```

```
FOREGROUND-COLOR IS 6.
```

```
10 LINE 07 COL 10 VALUE
```

```
"| _ _ / \ _ , _ | | | _ \ _ , | \ _ | \ _ / | | | |"
```

```
FOREGROUND-COLOR IS 6.
```

```
10 LINE 08 COL 10 VALUE "
```

```
_ / |"
```

```
FOREGROUND-COLOR IS 6.
```

```
10 LINE 09 COL 10 VALUE "
```

```
| _ _ /"
```

```
FOREGROUND-COLOR IS 6.
```

05 SS-TITLE-2.

```
10 LINE 10 COL 10 VALUE
```

```
" _____ "
```



```

        FOREGROUND-COLOR IS 6.
10 LINE 11 COL 10 VALUE
    "          /  _ \          | |"
        FOREGROUND-COLOR IS 6.
10 LINE 12 COL 10 VALUE
    "          | /  \/_ _ _ _ _ _ | | _ _ _ _ @"
        FOREGROUND-COLOR IS 6.
10 LINE 13 COL 10 VALUE
    "          | |  | ' _ / _ ` \ \ / \ / / | / _ \ ' _ |"
        FOREGROUND-COLOR IS 6.
10 LINE 14 COL 10 VALUE
    "          | \ _ / \ | | ( _ | | \ v  v / | | _ / |"
        FOREGROUND-COLOR IS 6.
10 LINE 15 COL 10 VALUE
    "          \ _ / _ | \ _ , _ | \ / \ / | _ | \ _ | _ |"
        FOREGROUND-COLOR IS 6.
05 SS-TITLE-3.
10 LINE 18 COL 40 VALUE
    "Hecho por Juan Ramon & Juanjo Sanchez"
        FOREGROUND-COLOR IS 2.
05 SS-TITLE-4.
10 LINE 20 COL 15 VALUE
    "          />" FOREGROUND-COLOR IS 3.
10 LINE 21 COL 15 VALUE
    " ( )          //-----("
        FOREGROUND-COLOR IS 3.
10 LINE 22 COL 15 VALUE
    " (*)OXOXOX(>          PULSE ENTER PARA CONTINUAR          \".
10 LINE 23 COL 15 VALUE
    " ( )          \ \-----)"
        FOREGROUND-COLOR IS 3.
10 LINE 24 COL 15 VALUE

```

```
"                \>" FOREGROUND-COLOR IS 3 BEEP.

05 PIC X USING WS-AUX-ALPHA.

*****

PROCEDURE DIVISION.

MAIN-PROCEDURE.

    PERFORM INIT--WS-HEROES-R--CONTENT
    IF WS-M-FS-OK THEN
        IF WS-M-FS-OK THEN
            PERFORM INI--WS-IMG-FIGHT
            PERFORM INI-CREDITS-ARRAY
            PERFORM DISPLAY-INTRO
            PERFORM DISPLAY-MAIN-MENU UNTIL WS-MM-OP-EXIT
        END-IF
    END-IF

    GO TO STOP-RUN.

*****

* == [DISPLAY-MAIN-MENU] =====BEGIN=
DISPLAY-MAIN-MENU.

    PERFORM SET-MAIN-MENU-ERROR
    IF WS-H-R-CURRENT > 0 THEN
        SET WS-SELECTED-HERO-OPTION TO TRUE
        MOVE WS-SHOW-SELECTED-HERO-OPTION TO WS-MM-PREFIX
        MOVE WS-H-R-ID(WS-H-R-CURRENT) TO WS-MM-HERO-ID
    ELSE
        SET WS-RESET-SELECTED-HERO-OPTION TO TRUE
        MOVE WS-SHOW-SELECTED-HERO-OPTION TO WS-MM-PREFIX
        MOVE SPACE TO WS-MM-HERO-ID
    END-IF.

    DISPLAY WS-MM LINE 1 COL 1.

    SET WS-RESET-VALID-OPTION TO TRUE
```

```
ACCEPT WS-MM-OPTION LINE WS-ICSP-1-LINE COL WS-ICSP-1-COL.  
DISPLAY SS-CLEAR-SCREEN.
```

```
EVALUATE TRUE  
WHEN WS-MM-OP-SELECT  
    PERFORM DISPLAY-SELECT-HERO  
WHEN WS-MM-OP-MODIFY  
    IF WS-H-R-CURRENT > 0 THEN  
        PERFORM DISPLAY-MODIFY-HERO  
    ELSE  
        SET WS-MISSING-STEPS-OPTION TO TRUE  
    END-IF  
WHEN WS-MM-OP-PLAY  
    IF WS-H-R-CURRENT > 0 THEN  
        PERFORM PLAY  
    ELSE  
        SET WS-MISSING-STEPS-OPTION TO TRUE  
    END-IF  
WHEN WS-MM-OP-EXIT  
    PERFORM EXIT-GAME  
WHEN OTHER  
    SET WS-INVALID-OPTION TO TRUE  
END-EVALUATE  
DISPLAY SS-CLEAR-SCREEN.
```

\*\*\*\*\*

```
SET-MAIN-MENU-ERROR.  
MOVE WS-VALID-OPTION TO WS-MM-ERROR.
```

\*\*\*\*\*

```
DISPLAY-SELECT-HERO.  
SET WS-RESET-VALID-OPTION TO TRUE.  
PERFORM DISPLAY-HEROES-MENU UNTIL WS-H-OP-EXIT OR  
    (1 <= WS-H-OPTION AND WS-H-OPTION <= WS-H-R-LENGTH)
```

```
IF NOT WS-H-OP-EXIT THEN
    MOVE WS-H-OPTION TO WS-H-R-CURRENT
END-IF
SET WS-H-OP-CONTINUE TO TRUE.
SET WS-RESET-VALID-OPTION TO TRUE.
*****
DISPLAY--WS-HEROES-R.
IF WS-H-R-INDEX = WS-H-R-CURRENT THEN
    MOVE "*" TO WS-HMC-SELECTED
ELSE
    MOVE SPACE TO WS-HMC-SELECTED
END-IF

MOVE WS-H-R-INDEX TO WS-HMC-INDEX
MOVE WS-H-R-ID(WS-H-R-INDEX) TO WS-HMC-ID
MOVE WS-H-R-STRENGTH(WS-H-R-INDEX) TO WS-HMC-STRENGTH
MOVE WS-H-R-AGILITY(WS-H-R-INDEX) TO WS-HMC-AGILITY
MOVE WS-H-R-LEVEL(WS-H-R-INDEX) TO WS-HMC-LEVEL
MOVE WS-H-R-HP(WS-H-R-INDEX) TO WS-HMC-HP

MOVE WS-H-R-PROFESSION(WS-H-R-INDEX)
    TO WS-HERO-PROFESSION

EVALUATE TRUE
WHEN WS-H-P-GUERRERO
    MOVE "GUERRERO" TO WS-HMC-PROFESSION
WHEN WS-H-P-ARQUERO
    MOVE "ARQUERO " TO WS-HMC-PROFESSION
WHEN WS-H-P-MAGO
    MOVE " MAGO " TO WS-HMC-PROFESSION
END-EVALUATE
```

```
ADD 1 TO WS-AUX-NUMBER.
DISPLAY WS-HEROES-MENU-CONTENT
    LINE WS-AUX-NUMBER COL 1.
*****
DISPLAY-HEROES-MENU.
    PERFORM SET-LIST-HEROES-MENU-TO-ERROR.
    PERFORM DISPLAY-HEROES-MENU-TITLE.
    PERFORM DISPLAY-HEROES-MENU-CONTENT.
    PERFORM DISPLAY-HEROES-MENU-FOOTER.
    ACCEPT WS-H-OPTION LINE WS-ICSP-1-LINE COL WS-ICSP-1-COL.

    IF NOT (1 <= WS-H-OPTION AND WS-H-OPTION <= WS-H-R-LENGTH)
        THEN
            SET WS-INVALID-OPTION TO TRUE
        ELSE
            SET WS-RESET-VALID-OPTION TO TRUE
    END-IF
    DISPLAY SS-CLEAR-SCREEN.
*****
DISPLAY-HEROES-MENU-TITLE.
    DISPLAY WS-HEROES-MENU-TITLE LINE 1 COL 1.
*****
DISPLAY-HEROES-MENU-CONTENT.
    MOVE WS-HEROES-MENU-TITLE-SHIFT TO WS-AUX-NUMBER.
    ADD WS-HEROES-MENU-CONTENT-SHIFT TO WS-AUX-NUMBER.

    PERFORM DISPLAY--WS-HEROES-R VARYING WS-H-R-INDEX
        FROM 1 BY 1 UNTIL WS-H-R-INDEX > WS-H-R-LENGTH.
*****
DISPLAY-HEROES-MENU-FOOTER.
    COMPUTE WS-AUX-NUMBER = WS-HEROES-MENU-TITLE-SHIFT
        + WS-HEROES-MENU-CONTENT-SHIFT + WS-H-R-LENGTH + 1.
```

DISPLAY WS-HEROES-MENU-FOOTER

LINE WS-AUX-NUMBER COL 1.

\*\*\*\*\*

SET-LIST-HEROES-MENU-TO-ERROR.

MOVE WS-VALID-OPTION TO WS-HM-ERROR.

\*\*\*\*\*

DISPLAY-MODIFY-HERO.

SET WS-MHM-OP-CONTINUE TO TRUE

SET WS-RESET-VALID-OPTION TO TRUE

PERFORM DISPLAY-MOD-HEROES-MENU UNTIL WS-MHM-OP-EXIT

SET WS-RESET-VALID-OPTION TO TRUE.

\*\*\*\*\*

PLAY.

PERFORM INIT--WS-MONSTERS-R--CONTENT

IF WS-H-R-CURRENT > 0 THEN

IF WS-M-R-LENGTH > 0 THEN

MOVE 1 TO WS-M-R-CURRENT

PERFORM UNTIL

NOT (WS-H-R-HP(WS-H-R-CURRENT) > 0

AND WS-M-R-CURRENT <= WS-M-R-LENGTH)

DISPLAY SS-CLEAR-SCREEN

PERFORM FIGHT-MONSTER

ADD 1 TO WS-M-R-CURRENT

END-PERFORM

IF WS-H-R-HP(WS-H-R-CURRENT) > 0 THEN

PERFORM WIN

ELSE

PERFORM LOSE

END-IF

ELSE

DISPLAY

"No quedan mas monstruos contra los que luchar"

LINE 22 COL 1

PERFORM PRESS-KEY-TO-CONTINUE

END-IF

ELSE

DISPLAY "Debes de seleccionar un heroe primero!"

LINE 22 COL 1

PERFORM PRESS-KEY-TO-CONTINUE

END-IF.

\*\*\*\*\*

FIGHT-MONSTER.

PERFORM UNTIL WS-H-R-HP(WS-H-R-CURRENT) = 0

OR WS-M-R-HP(WS-M-R-CURRENT) = 0

DISPLAY "LUCHA POR TU VIDA !!"

LINE 1 COL 1

DISPLAY "-----"

LINE 2 COL 1

DISPLAY "LUCHAS CONTRA EL MONSTRUO CON ID: "

LINE 4 COL 1

DISPLAY WS-M-R-PROFESSION(WS-M-R-CURRENT)

LINE 4 COL 35

DISPLAY ", CON FUERZA: "

LINE 4 COL 37

DISPLAY WS-M-R-STRENGTH(WS-M-R-CURRENT)

LINE 4 COL 51

DISPLAY "TIENES HP: "

LINE 5 COL 1

DISPLAY WS-H-R-HP(WS-H-R-CURRENT)

LINE 5 COL 12

DISPLAY ", CON FUERZA: "

```
LINE 5 COL 14
DISPLAY WS-H-R-STRENGTH(WS-H-R-CURRENT)
LINE 5 COL 28

IF WS-H-R-STRENGTH(WS-H-R-CURRENT)
  > WS-M-R-STRENGTH(WS-M-R-CURRENT) THEN
    COMPUTE WS-AUX-NUMBER =
      WS-M-R-HP(WS-M-R-CURRENT)
      - WS-H-R-STRENGTH(WS-H-R-CURRENT)
    IF WS-AUX-NUMBER < 0 THEN
      MOVE 0 TO WS-M-R-HP(WS-M-R-CURRENT)
    ELSE
      MOVE WS-AUX-NUMBER TO WS-M-R-HP(WS-M-R-CURRENT)
    END-IF

    DISPLAY "HAS HERIDO AL MONSTRUO, TIENE HP: "
    LINE 6 COL 1
    DISPLAY WS-M-R-HP(WS-M-R-CURRENT)
    LINE 6 COL 35
  ELSE
    COMPUTE WS-AUX-NUMBER =
      WS-H-R-HP(WS-H-R-CURRENT)
      - WS-M-R-STRENGTH(WS-M-R-CURRENT)
    IF WS-AUX-NUMBER < 0 THEN
      MOVE 0 TO WS-H-R-HP(WS-H-R-CURRENT)
    ELSE
      MOVE WS-AUX-NUMBER TO WS-H-R-HP(WS-H-R-CURRENT)
    END-IF

    DISPLAY "TE HA HERIDO EL MONSTRUO, TIENES HP: "
    LINE 6 COL 1
    DISPLAY WS-H-R-HP(WS-H-R-CURRENT)
```



LINE 6 COL 38

END-IF

PERFORM FIGHT-MONSTER-ANIMATION

END-PERFORM.

\*\*\*\*\*

EXIT-GAME.

PERFORM DISPLAY-CREDITS-MOVE.

\* == [DISPLAY-MAIN-MENU] =====END=

\*\*\*\*\*

\* == [INIT--WS-HEROES-R--CONTENT] =====BEGIN=

INIT--WS-HEROES-R--CONTENT.

OPEN INPUT HEROES-FILE.

IF NOT WS-H-FS-OK THEN

PERFORM ERROR-OPENING-HEROES

ELSE

PERFORM SET--WS-HEROES-R--CONTENT

CLOSE HEROES-FILE

END-IF.

\*\*\*\*\*

SET--WS-HEROES-R--CONTENT.

MOVE 0 TO WS-H-R-LENGTH.

PERFORM READ-FILE-HEROES VARYING WS-H-R-INDEX FROM 1 BY 1

UNTIL WS-H-FS-EOF OR WS-H-R-INDEX > WS-MAX-HEROES.

\*\*\*\*\*

READ-FILE-HEROES.

READ HEROES-FILE INTO WS-HEROES-R(WS-H-R-INDEX)

AT END

SET WS-H-FS-EOF TO TRUE

NOT AT END

ADD 1 TO WS-H-R-LENGTH

END-READ.

\*\*\*\*\*

ERROR-OPENING-HEROES.

DISPLAY "["WS-GAME-NAME"] Fichero HEROES no disponible."

\* == [INIT--WS-HEROES-R--CONTENT] =====END=

\*\*\*\*\*

\* == [INIT--WS-MONSTERS-R--CONTENT] =====BEGIN=

INIT--WS-MONSTERS-R--CONTENT.

OPEN INPUT MONSTERS-FILE.

IF NOT WS-M-FS-OK THEN

PERFORM ERROR-OPENING-MONSTERS

ELSE

PERFORM SET--WS-MONSTERS-R--CONTENT

CLOSE MONSTERS-FILE

END-IF.

\*\*\*\*\*

SET--WS-MONSTERS-R--CONTENT.

MOVE 0 TO WS-M-R-LENGTH.

PERFORM READ-FILE-MONSTERS VARYING WS-M-R-INDEX FROM 1 BY 1

UNTIL WS-M-FS-EOF OR WS-M-R-INDEX > WS-MAX-MONSTERS.

\*\*\*\*\*

READ-FILE-MONSTERS.

READ MONSTERS-FILE INTO WS-MONSTERS-R(WS-M-R-INDEX)

AT END

SET WS-M-FS-EOF TO TRUE

NOT AT END

ADD 1 TO WS-M-R-LENGTH

END-READ.

\*\*\*\*\*

ERROR-OPENING-MONSTERS.

DISPLAY "["WS-GAME-NAME"] Fichero MONSTERS no disponible."

\* == [INIT--WS-MONSTERS-R--CONTENT] =====END=

\*\*\*\*\*

DISPLAY-MOD-HEROES-MENU.

MOVE WS-H-R-STRENGTH((WS-H-R-CURRENT)) TO WS-MHM-C-STRENGTH.

MOVE WS-H-R-AGILITY(WS-H-R-CURRENT) TO WS-MHM-C-AGILITY.

MOVE WS-H-R-LEVEL(WS-H-R-CURRENT) TO WS-MHM-C-LEVEL.

MOVE WS-H-R-HP(WS-H-R-CURRENT) TO WS-MHM-C-HP.

PERFORM SET-MENU-ERROR.

DISPLAY WS-MHM-TITLE LINE 1 COL 1.

COMPUTE WS-AUX-NUMBER = WS-MHM-TITLE-SHIFT.

DISPLAY WS-MHM-CONTENT LINE WS-AUX-NUMBER COL 1.

COMPUTE WS-AUX-NUMBER = WS-MHM-TITLE-SHIFT + 4.

DISPLAY WS-MHM-FOOTER LINE WS-AUX-NUMBER COL 1.

SET WS-RESET-VALID-OPTION TO TRUE

ACCEPT WS-MHM-OPTION LINE WS-ICSP-1-LINE COL WS-ICSP-1-COL.

DISPLAY SS-CLEAR-SCREEN.

EVALUATE TRUE

WHEN WS-MHM-OP-STRENGTH

MOVE WS-H-R-STRENGTH(WS-H-R-CURRENT)

TO WS-MHM-SEL-TIT-NEWVALUE

MOVE "Fuerza" TO WS-MHM-SEL-TIT-MODIFYING

DISPLAY WS-MHM-SELECTION-TITLE LINE 1 COL 1

ACCEPT WS-H-R-STRENGTH(WS-H-R-CURRENT)

LINE WS-ICSP-2-LINE COL WS-ICSP-2-COL

```
WHEN WS-MHM-OP-AGILITY
    MOVE WS-H-R-AGILITY(WS-H-R-CURRENT)
        TO WS-MHM-SEL-TIT-NEWVALUE

    MOVE "Agilidad" TO WS-MHM-SEL-TIT-MODIFYING
    DISPLAY WS-MHM-SELECTION-TITLE LINE 1 COL 1

    ACCEPT WS-H-R-AGILITY(WS-H-R-CURRENT)
        LINE WS-ICSP-2-LINE COL WS-ICSP-2-COL
WHEN WS-MHM-OP-LEVEL
    MOVE WS-H-R-LEVEL(WS-H-R-CURRENT)
        TO WS-MHM-SEL-TIT-NEWVALUE

    MOVE "Nivel" TO WS-MHM-SEL-TIT-MODIFYING
    DISPLAY WS-MHM-SELECTION-TITLE LINE 1 COL 1

    ACCEPT WS-H-R-LEVEL(WS-H-R-CURRENT)
        LINE WS-ICSP-2-LINE COL WS-ICSP-2-COL
WHEN WS-MHM-OP-HP
    MOVE WS-H-R-HP(WS-H-R-CURRENT)
        TO WS-MHM-SEL-TIT-NEWVALUE

    MOVE "Puntos Vida" TO WS-MHM-SEL-TIT-MODIFYING
    DISPLAY WS-MHM-SELECTION-TITLE LINE 1 COL 1

    ACCEPT WS-H-R-HP(WS-H-R-CURRENT)
        LINE WS-ICSP-2-LINE COL WS-ICSP-2-COL
WHEN OTHER
    SET WS-INVALID-OPTION TO TRUE
END-EVALUATE
DISPLAY SS-CLEAR-SCREEN.
```

\*\*\*\*\*

SET-MENU-ERROR.

MOVE WS-VALID-OPTION TO WS-MHM-ERROR.

\*\*\*\*\*

PAUSE.

ACCEPT WS-PM-NOW-1-DATE FROM DATE.

ACCEPT WS-PM-NOW-1-TIME FROM TIME.

MOVE 0 TO WS-PM-WRK-ONE-DAY.

PERFORM UNTIL WS-PM-DELTA-TIME > 00000050

ACCEPT WS-PM-NOW-2-DATE FROM DATE

IF WS-PM-NOW-2-DATE > WS-PM-NOW-1-DATE

MOVE 24000000 TO WS-PM-WRK-ONE-DAY

END-IF

ACCEPT WS-PM-NOW-2-TIME FROM TIME

COMPUTE WS-PM-DELTA-TIME = (WS-PM-NOW-2-TIME +  
WS-PM-WRK-ONE-DAY - WS-PM-NOW-1-TIME)

END-PERFORM.

PERFORM RESETEAR.

\*\*\*\*\*

RESETEAR.

MOVE 0 TO WS-PM-DELTA-TIME.

\*\*\*\*\*

INI--WS-IMG-FIGHT.

\* TODO : Read from file

MOVE "		" TO WS-IMG-FIGHT-M(01).
MOVE "	/-/--\	" TO WS-IMG-FIGHT-M(02).
MOVE "	(@~@) )/\	" TO WS-IMG-FIGHT-M(03).
MOVE "	___/-- \	" TO WS-IMG-FIGHT-M(04).
MOVE "	(oo)___ _ )_/	" TO WS-IMG-FIGHT-M(05).
MOVE "	^^___/ \	" TO WS-IMG-FIGHT-M(06).
MOVE "	\  /-\	" TO WS-IMG-FIGHT-M(07).
MOVE "	( )	" TO WS-IMG-FIGHT-M(08).
MOVE "	\_/	" TO WS-IMG-FIGHT-M(09).

```

MOVE "      _____      " TO WS-IMG-FIGHT-S(01).
MOVE "      /      \ /      \" TO WS-IMG-FIGHT-S(02).
MOVE "      ,      |      '      |      " TO WS-IMG-FIGHT-S(03).
MOVE "      I __L_____      L__ " TO WS-IMG-FIGHT-S(04).
MOVE "O====IE_____/. /____>" TO WS-IMG-FIGHT-S(05).
MOVE "      I      \.      ./      " TO WS-IMG-FIGHT-S(06).
MOVE "      `      \.      ./      " TO WS-IMG-FIGHT-S(07).
MOVE "      \ /      " TO WS-IMG-FIGHT-S(08).
MOVE "      '      " TO WS-IMG-FIGHT-S(09).

```

\*\*\*\*\*

FIGHT-MONSTER-ANIMATION.

PERFORM WS-MAX-ANIMATION-CYCLES TIMES

MOVE WS-INI-IMG-LINE TO WS-IMG-FIGHT-LINE-I

MOVE 1 TO WS-IMG-FIGHT-PHOTOGRAM

PERFORM WS-MAX-IMG-FIGHT-LENGTH TIMES

DISPLAY WS-IMG-FIGHT-M(WS-IMG-FIGHT-PHOTOGRAM)

AT LINE WS-IMG-FIGHT-LINE-I COL 10

ADD 1 TO WS-IMG-FIGHT-PHOTOGRAM

ADD 1 TO WS-IMG-FIGHT-LINE-I

END-PERFORM

PERFORM PAUSE

MOVE WS-INI-IMG-LINE TO WS-IMG-FIGHT-LINE-I

MOVE 1 TO WS-IMG-FIGHT-PHOTOGRAM

PERFORM WS-MAX-IMG-FIGHT-LENGTH TIMES

DISPLAY WS-IMG-FIGHT-S(WS-IMG-FIGHT-PHOTOGRAM)

AT LINE WS-IMG-FIGHT-LINE-I COL 10

ADD 1 TO WS-IMG-FIGHT-PHOTOGRAM

ADD 1 TO WS-IMG-FIGHT-LINE-I

END-PERFORM

PERFORM PAUSE

END-PERFORM.

\*\*\*\*\*

PRESS-KEY-TO-CONTINUE.

DISPLAY "Pulsa INTRO para continuar ... "

LINE 25 COL 1.

ACCEPT WS-AUX-ALPHA

LINE 25 COL 36.

\*\*\*\*\*

DISPLAY-INTRO.

DISPLAY SS-TITLE-1.

PERFORM PAUSE.

DISPLAY SS-TITLE-2.

PERFORM PAUSE.

DISPLAY SS-TITLE-3.

PERFORM PAUSE.

DISPLAY SS-TITLE-4.

ACCEPT SS-INTRO.

DISPLAY SS-CLEAR-SCREEN.

\*\*\*\*\*

DISPLAY-CREDITS-MOVE.

DISPLAY SS-CLEAR-SCREEN.

PERFORM VARYING WS-C-POS FROM 1 BY 1

UNTIL WS-C-POS > WS-MAX-ARR

MOVE WS-SCREEN-LINE-POS TO WS-C-SCREEN-LINE

PERFORM VARYING WS-C-I FROM WS-C-POS BY 1

UNTIL WS-C-I > WS-MAX-ARR

DISPLAY WS-C-ARR(WS-C-I) LINE WS-C-SCREEN-LINE COL 25

ADD 1 TO WS-C-SCREEN-LINE

END-PERFORM

COMPUTE WS-C-FINAL-POS = WS-C-POS - 1

PERFORM VARYING WS-C-I FROM 1 BY 1

UNTIL WS-C-I > WS-C-FINAL-POS

```

DISPLAY "
LINE WS-C-SCREEN-LINE COL 25
ADD 1 TO WS-C-SCREEN-LINE
END-PERFORM
PERFORM PAUSE
END-PERFORM.
*****
WIN.
DISPLAY SS-CLEAR-SCREEN.
*****YOU
DISPLAY
"8b      d8  ad8888ba    88      88"
AT LINE 2 COL 10.
DISPLAY
" Y8      8P d8b      d8b  88      88"
AT LINE 3 COL 10.
DISPLAY
" Y8      8P d8      8b 88      88"
AT LINE 4 COL 10.
DISPLAY
" 8aaaa8 88      88 88      88"
AT LINE 5 COL 10.
DISPLAY
"      88      88      88 88      88"
AT LINE 6 COL 10.
DISPLAY
"      88      Y8      8P 88      88"
AT LINE 7 COL 10.
DISPLAY
"      88      Y8a      a8P Y8a      a8P"
AT LINE 8 COL 10.
DISPLAY

```



```
"      88      Y888888Y      Y888888Y"
```

```
AT LINE 9 COL 10.
```

```
*****WIN!
```

```
DISPLAY
```

```
"I8      8      8I 88 888b      88      88"
```

```
AT LINE 12 COL 13.
```

```
DISPLAY
```

```
" 8b      d8b      d8 88 8888b      88      88"
```

```
AT LINE 13 COL 13.
```

```
DISPLAY
```

```
" 8      8 8      8 88 88 8b      88      88"
```

```
AT LINE 14 COL 13.
```

```
DISPLAY
```

```
" Y8      8P Y8      8P 88 88 8b      88      88"
```

```
AT LINE 15 COL 13.
```

```
DISPLAY
```

```
" 8b  d8  8b  d8      88 88      8b 88      88"
```

```
AT LINE 16 COL 13.
```

```
DISPLAY
```

```
"      8a a8      8a a8      88 88      8b 88"
```

```
AT LINE 17 COL 13.
```

```
DISPLAY
```

```
"      8a8      8a8      88 88      8888      aa"
```

```
AT LINE 18 COL 13.
```

```
DISPLAY
```

```
"      8      8      88 88      888      88"
```

```
AT LINE 19 COL 13.
```

```
DISPLAY "HAS GANADO!"
```

```
AT LINE 22 COL 35.
```

```
PERFORM PRESS-KEY-TO-CONTINUE.
```

```
DISPLAY SS-CLEAR-SCREEN.
```

```
*****
```

LOSE.

DISPLAY SS-CLEAR-SCREEN.

\*\*\*\*\*GAME

DISPLAY

" ad8888ba db 88b d88 8888888888"

AT LINE 2 COL 10.

DISPLAY

" d8 8b d88b 888b d888 88"

AT LINE 3 COL 10.

DISPLAY

"d8 d8 8b 88 8b d8 88 88"

AT LINE 4 COL 10.

DISPLAY

"88 d8 8b 88 8b d8 88 88aaaaa"

AT LINE 5 COL 10.

DISPLAY

"88 88888 d8YaaaaY8b 88 8b d8 88 88"

AT LINE 6 COL 10.

DISPLAY

"Y8 88 d8 8b 88 8b d8 88 88"

AT LINE 7 COL 10.

DISPLAY

" Y8a a88 d8 8b 88 888 88 88"

AT LINE 8 COL 10.

DISPLAY

" Y88888888P d8 8b 88 8 88 8888888888"

AT LINE 9 COL 10.

\*\*\*\*\*OVER

DISPLAY

" ad8888ba 8b d8 88888888888 88888888ba"

AT LINE 12 COL 13.

DISPLAY

" d8            8b   8b                    d8   88                    88                    8b"

AT LINE 13 COL 13.

DISPLAY

"d8            8b   8b                    d8   88                    88                    8P"

AT LINE 14 COL 13.

DISPLAY

"88            88   8b                    d8   88aaaaa                    88aaaaaa8P"

AT LINE 15 COL 13.

DISPLAY

"88            88   8b   d8                    88                    88                    88"

AT LINE 16 COL 13.

DISPLAY

"Y8            8P            8b d8                    88                    88                    8b"

AT LINE 17 COL 13.

DISPLAY

" Y8a            a8P                    888                    88                    88                    8b"

AT LINE 18 COL 13.

DISPLAY

" Y8888888Y                    8                    888888888888 88                    8b"

AT LINE 19 COL 13.

DISPLAY "HAS PERDIDO!"

AT LINE 22 COL 35.

PERFORM PRESS-KEY-TO-CONTINUE.

DISPLAY SS-CLEAR-SCREEN.

\*\*\*\*\*

INI-CREDITS-ARRAY.

MOVE "            ORIGINAL CONCEPT            " TO WS-C-ARR(40).

MOVE "            -----            " TO WS-C-ARR(41).

MOVE "            Albert Llauroado            " TO WS-C-ARR(42).

MOVE "            " TO WS-C-ARR(43).

MOVE "            DESIGNERS            " TO WS-C-ARR(44).

MOVE "            -----            " TO WS-C-ARR(45).

MOVE "	Juan Ramon Espuny	" TO WS-C-ARR(46).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(47).
MOVE "		" TO WS-C-ARR(48).
MOVE "	LEVEL / SCENARIO DESIGN	" TO WS-C-ARR(49).
MOVE "	-----	" TO WS-C-ARR(50).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(51).
MOVE "	Juan Ramon Espuny	" TO WS-C-ARR(52).
MOVE "		" TO WS-C-ARR(53).
MOVE "	PROGRAMMING	" TO WS-C-ARR(54).
MOVE "	-----	" TO WS-C-ARR(55).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(56).
MOVE "	Juan Ramon Espuny	" TO WS-C-ARR(57).
MOVE "		" TO WS-C-ARR(58).
MOVE "	LEVEL / SCENARIO DESIGN	" TO WS-C-ARR(59).
MOVE "	-----	" TO WS-C-ARR(60).
MOVE "	Lead Programming:	" TO WS-C-ARR(61).
MOVE "	Juan Ramon Espuny	" TO WS-C-ARR(62).
MOVE "	Additional Programming:	" TO WS-C-ARR(63).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(64).
MOVE "		" TO WS-C-ARR(65).
MOVE "	GAME ENGINE / DEVELOPMENT SYSTEM	" TO WS-C-ARR(66).
MOVE "	-----	" TO WS-C-ARR(67).
MOVE "	OpenCobol IDE	" TO WS-C-ARR(68).
MOVE "		" TO WS-C-ARR(69).
MOVE "	GRAPHICS PROGRAMMING	" TO WS-C-ARR(70).
MOVE "	-----	" TO WS-C-ARR(71).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(72).
MOVE "	Juan Ramon Espuny	" TO WS-C-ARR(73).
MOVE "		" TO WS-C-ARR(74).
MOVE "	SOUND PROGRAMMING	" TO WS-C-ARR(75).
MOVE "	-----	" TO WS-C-ARR(76).
MOVE "	Juan Jose Sanchez	" TO WS-C-ARR(77).

```
MOVE "                                " TO WS-C-ARR(78).
MOVE "                                " TO WS-C-ARR(79).
MOVE "          Thanks for playing!  " TO WS-C-ARR(80).
MOVE "                                " TO WS-C-ARR(81).
MOVE "                                " TO WS-C-ARR(82).
MOVE "Special Thanks to Albert Llauro" TO WS-C-ARR(83).
*****
STOP-RUN.
      STOP RUN.
END PROGRAM DUNGCRWL.
```

## **6. Conclusión**

Ha quedado un buen proyecto y una buena experiencia de trabajo, con este proyecto. Al final, todo se resume en una buena cooperación por cada miembro del equipo y la diversa creatividad de cada uno.

Hemos usado Git, para poder dividirnos las tareas y después poder juntarlo todo en uno. Como se ha visto anteriormente, hemos usado GitHub como repositorio para subir el proyecto y poder distribuarnos las tareas de una forma más cómoda.