

3D GAME STUDIO – TUTORIAL EXERCISE #3 SPRITES, CAMERAS, SHADOWS, SOUNDTRACK, PANELS



In this exercise we will learn how to use WED to:

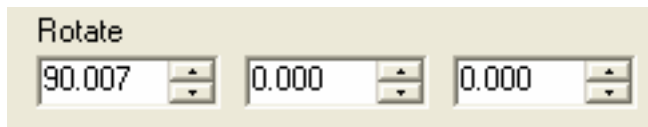
- Add sprites (2-dimensional images)
- Add a 3rd person camera
- Show character shadows
- Add an MP3 soundtrack
- Insert fullscreen panels for game startup credits, etc

SPRITES

Sprites are 2-dimensional flat images in .PCX, .BMP, or .TGA format. They are sometimes called “billboards” or “decals” (like in Counter Strike). Animated sprites can be inserted into the game and are used for such things as flames, blood spatters, and explosions. The manual has a good description of the types of model used in 3DGS and how they are used (see attached).

To add a 2d sprite to a surface:

1. Create an image in .pcx, .bmp, or .tga format. If in .tga format, the alpha channel can be used for transparency.
2. Copy the image to your working directory.
3. Go to Object > Add Sprite. Navigate to your sprite and select.
4. Scale, drag and rotate the sprite in WED until it is a good size and it is against a surface (wall, floor, ceiling, etc).
5. Save, build  (do full build or “update entities” if all you’ve done is add the sprite), run .
6. Take a look at your sprite. Notice that as you move the sprite turns to face you. This is the default. To make it stationary right click on the sprite and select Properties, and change the left hand rotate box to something slightly greater than 90 degrees (e.g. 90.007).



Now when you build and run the image should remain stationary as you move around.

7. [OPTIONAL] If you want to have a go at an animated sprite, in Photoshop construct an image that has all the sprites side by side and end the file name with '+n' where 'n' is the number of frames. This is `explo+7.bmp` from the `c:\Program Files\Gstudio\work` folder:



For more details on animated sprites refer to the manual and the forum.

CAMERAS

We already have a first person camera whose attributes are contained in the `camerafirstPerson01.wdl` script. You can also add 3rd person and free cameras.

Add a 3rd Person Camera

To add a 3rd person camera go to `File > Add Script` and select the `camera3rd01.wdl` script. Now after building and running, when you press `F7` you can toggle between the first and third person cameras. Note that unless your character model has built-in animation (not all the stock figures do), it will simply glide along the floor rather than walk.

Add a Free Camera

A "free" camera must be attached to an entity:

1. go to `File > Add Script` and select the `cameraFree01.wdl` script.
2. Insert a model into the game, (e.g. a `ball.mdl` from `Gstudio6\template_6\models`).
3. Right click on the model, select `Behavior` and select `cameraFree01`.
4. Build and run. Press `F7` until you get the free camera. Move the camera around using the `I, J, K, L, U, and O` keys. Enjoy the flight!

CHARACTER SHADOWS

Character shadows are off by default. To give your model character shadow, right click on it, select `properties` and check the `shadow` box.

Experiment with what happens when you check some of the other boxes such as `Metal`.

SOUNDTRACK

To insert a looping mp3 soundtrack:

Go to the Resource tab, right click on your main script file and open it. Type the code in bold below at the position indicated. DO NOT TYPE IN ANYTHING THAT IS NOT IN BOLD. Anything followed by // is a comment your guidance. Comments are ignored by the compiler.

```
//list of "include" files
.....
include <aiFPS01.wdl>;

//music handle
var musicHandle;

.....etc

function main()
{

//start the music
//loop it at 100% volume
musicHandle = media_loop("my_soundtrack.mp3",null,100);

.....etc

}
```

Replace "my_soundtrack" with the name of your mp3 file. To play just once, use media_play(). Build and run.

PANELS

Panels are used to display text and numeric information on the screen. For example, instructions and credits at the start and end of games, and health, lives, or other information during the game. Unfortunately there is no way to add panels apart from adding code to the main script. Fortunately this is not too difficult. In this exercise we will add a single panel at the start of your game.

Create your panel at the resolution in which the game will start. Let's assume this is 1024x768. We will set this later in the main function. Create the image in .pcx format. To avoid some serious fiddling around this image must be saved to C:\Program Files\GStudio6\template_6\images, i.e. to the local hard drive.

The coding is best illustrated by example. The bold code is what you add. Text following // are comments to you from me. For more information on panels refer to the help system in WED.

```

.....
include <display_fullscreen.wdl>;
include <aiFPS01.wdl>;
.....etc

//this defines the image you will use for your startup panel and goes after the include
//statements. start_image_1 should be changed to the name of your image
bmap start_image_1 = <start_image_1.pcx>;

//immediately after this define the panel where the image will be displayed

//Startup panel
    panel pan_start_1 {
        bmap = start_image_1; //panel background image
        flags = refresh, d3d; }

//set the startup resolution. See manual for list of resolutions and associated //numbers
var video_mode = 8; //1024x768

//start in fullscreen mode
video_screen=1;

////////////////////////////////////
// Desc: The main() function is started at game start
function main()
{

    //music code goes here

    //display startup panel

    freeze_mode = 1;
    pan_start_1.visible=on;
    sleep(10);
    pan_start_1.visible=off;

    //freezemode = 1 – this freezes the game
    //sleep(10) pauses the game for 10 secs. Put in any time you want.

```