

Roly Poly Putt

Level design tutorial - DeleD

Introduction:

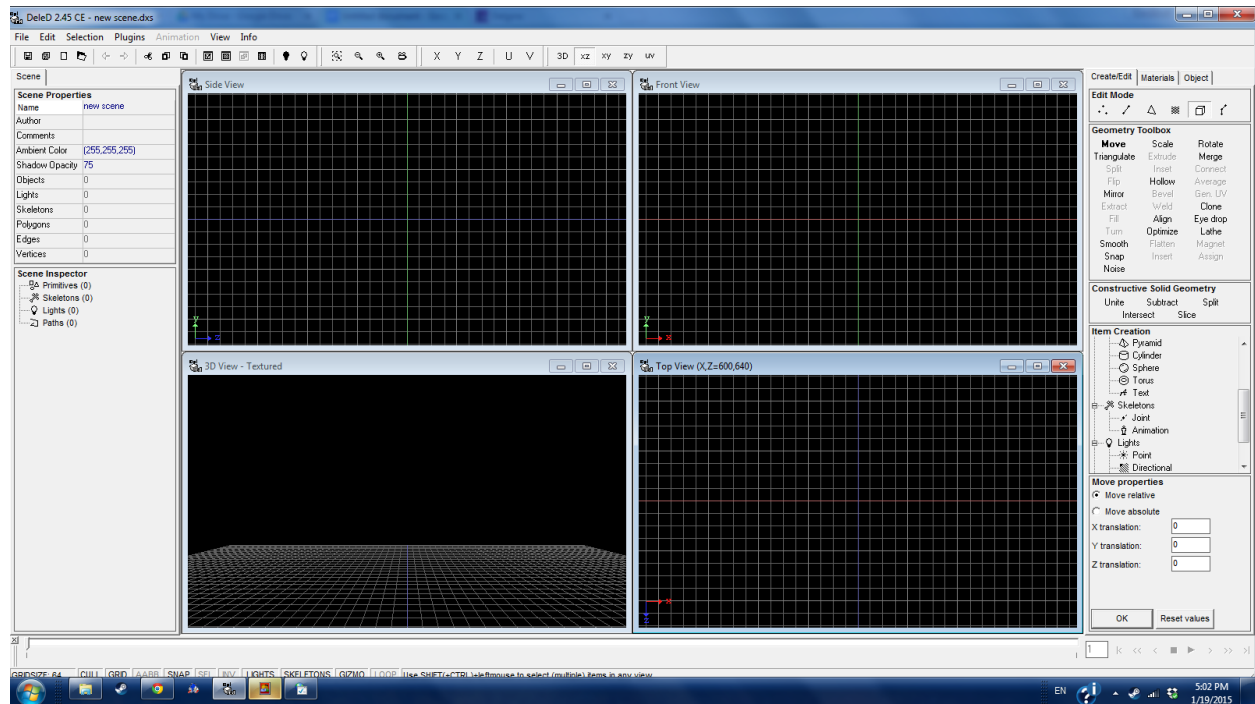
Welcome to the world of Roly Poly Putt, a game made by AJ and Mike. It was originally made for the iOS and Android phones, but it has now been ported to PC. Along with the port, they have given us free access to the developer tools, leaving us open to design levels, characters, and more! But, having these tools means nothing if we don't know how to use them. I am here to help with a small part of it, that being level design.

Being a former SRB2 level designer, I have had several years to get used to the mapping tools in it, and the flow of levels. So I took it upon myself to design one of the first levels for this game, and now I am writing a tutorial on how to design one yourself. So sit down, grab something to drink, and let's get started!

Getting Started:

As with any form of level design, you will be needing a program to build levels with. Roly Poly Putt uses 3D models known as .dxs files for levels, and these can be created in DeleD CE, a free modeling software you can download from the site at this link: [DeleD CE](#)

Once you have DeleD, open it up and we can get started!



This is what the main DeleD start screen looks like. On the left we have some info on the model we are working on, such as how many objects, lights, vertices, and polygons we have, as well as a list of each of the objects and lights used. On the right side we have our tool menu. This lets us create new objects and edit them. First we have three tabs, Create/Edit, Materials, and Object. Create/Edit is where we will spend most of our time when building the level, as it is where the object creation tools are at. The Materials tab is where we would go to add in textures to our level after we have it built, so we can have a nice and colorful playing field. And last but not least is the Object tab, which is where the small but important details are held for each object, such as making them snap to the grid, and scripting actions to them.

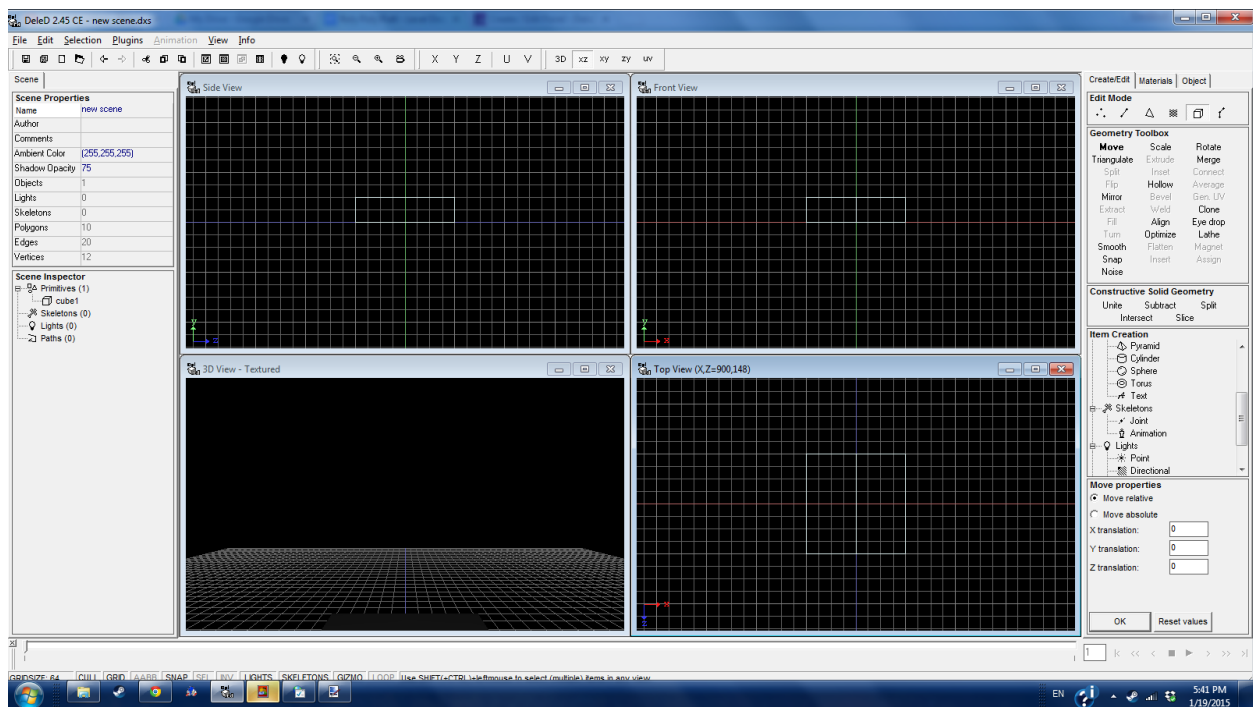
Below the tabs, we have a toolbox, filled with all sorts of tools we can use to make our level. It would take me ages to describe each one, but thankfully DeleD has a wiki that explains what each one does. You can find it at this link: [DeleD Wiki - Geometry Toolbox](#)

Under the toolbox we find the Constructive Geometry Frame. Here we can use some fancy actions to mold our objects into what we want them to be, such as cutting holes in them, merging two objects into one, and more.

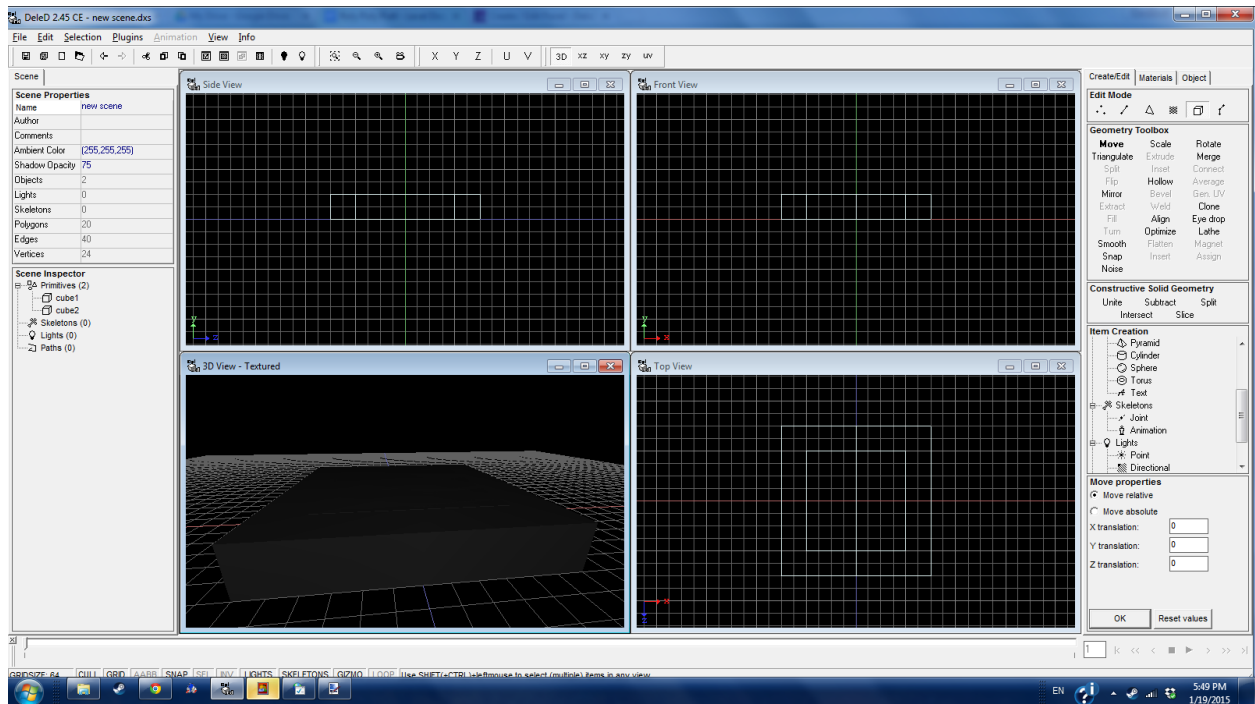
The second to last menu on the side is the Item Creation list, and this is where all the objects and lights we use to make our levels with, are held. Under the list is a small area that will give you options to fine-tune the object you are about to create, letting you get the right object for your needs.

Level Design Basics:

Now that you have a base knowledge on what you have to work with in DeleD, let's start off on the level. First, let's make a small box for the starting area. To do this, left click inside one of the windows that shows a 2D grid, and drag. Let's make this block fill up 4 large grid squares. Click on one of the edges and drag it to the size of 4 large squares, like so:

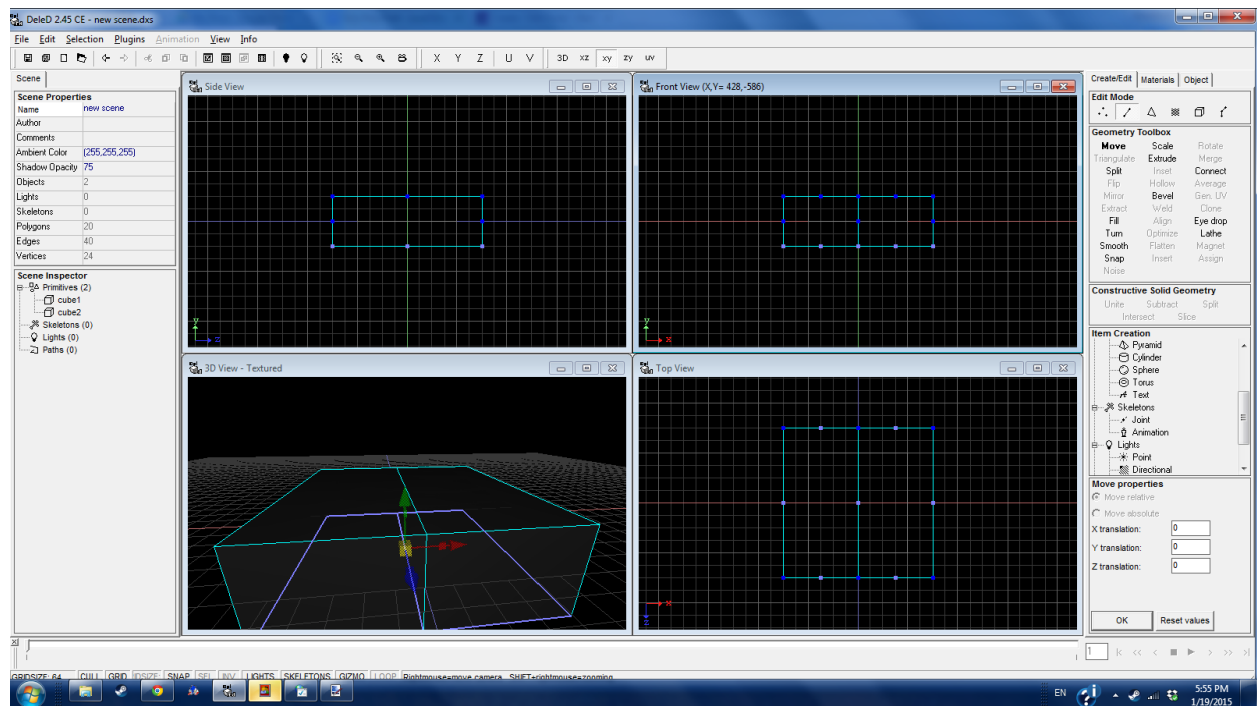


Now that we have a box, let's add some walls around it. To do this, let's make a new box around the old one, but have this one be 2 small squares bigger, allowing it to overhang the first box.

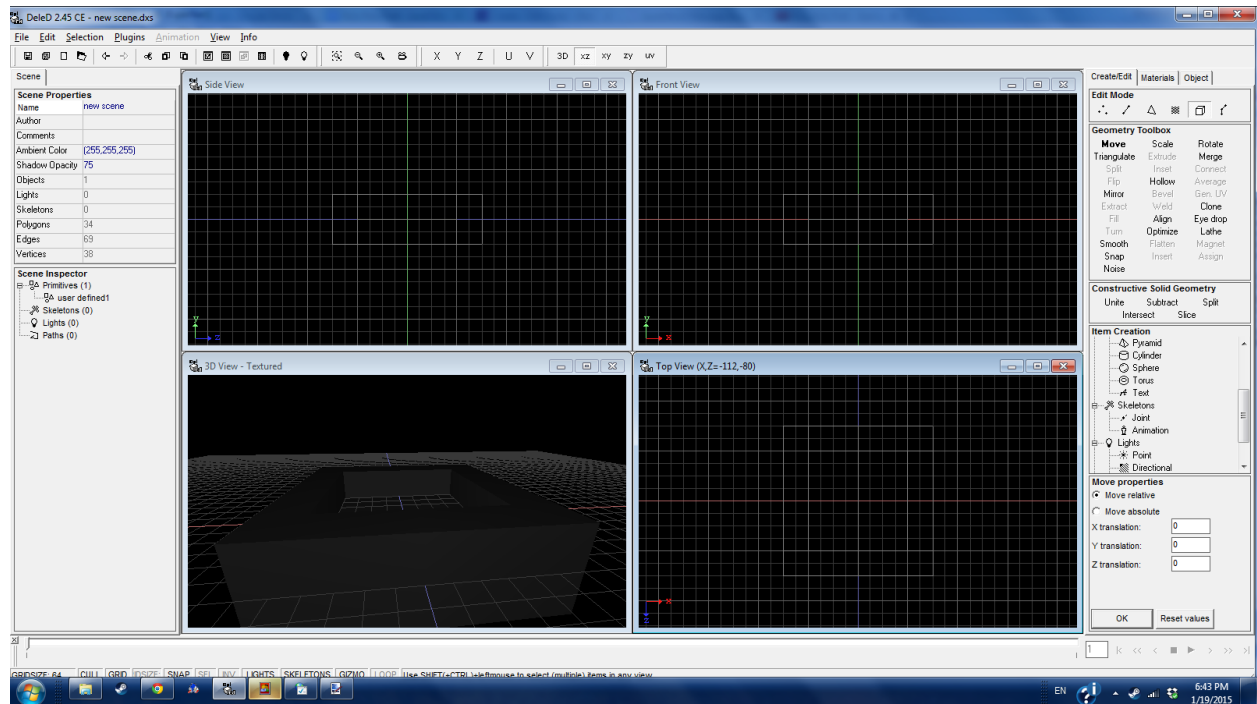


After that, shift click on the new box to select it. This will highlight the box. In my DeleD it will be Cyan, but for you it would be black if you haven't changed the color settings. Now go over to the toolbox menu and switch to Edge Mode, this will let you grab the edges of the box and move them. Let's move the bottom edges down two small boxes. To do this, shift click on one of the side views of the box. and drag over the bottom line of the box. This will select all of the edges along the bottom, letting you

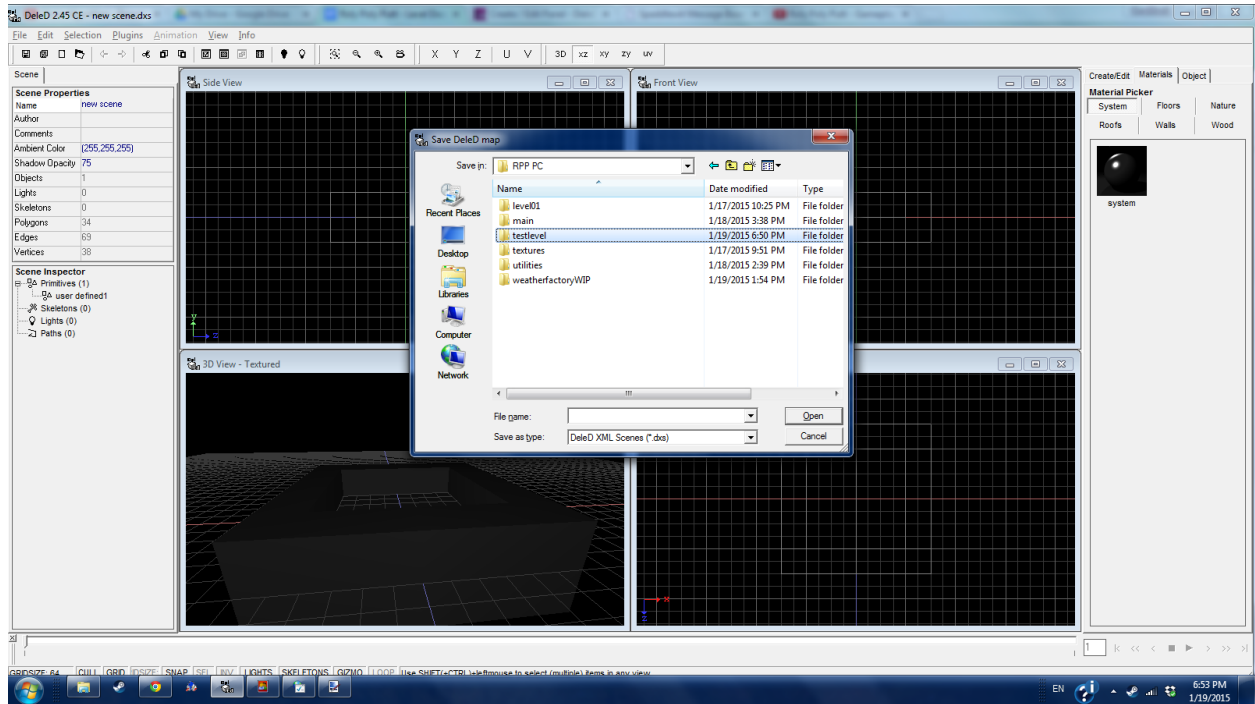
move them all at once, and not having to do them one at a time.



Now, let's make the edges stick up above the level. To do this we will be cutting a hole where our first box was at. With the newest box selected, go back into Object Mode, and shift-click the first box. Then, using the same method as before, go to line mode and raise the **top** lines of the box up by 1 small square. After that, Unselect everything by shift-clicking outside of everything. Then, Reselect the second box by shift-clicking on it, and then the first box by ctrl-shift-clicking on it. Now, look in the Constructive Geometry Frame and find the "Subtract" button, click on it. The box should now have a hole in it where the first box was at, leaving us with a small hole with a edging around it.

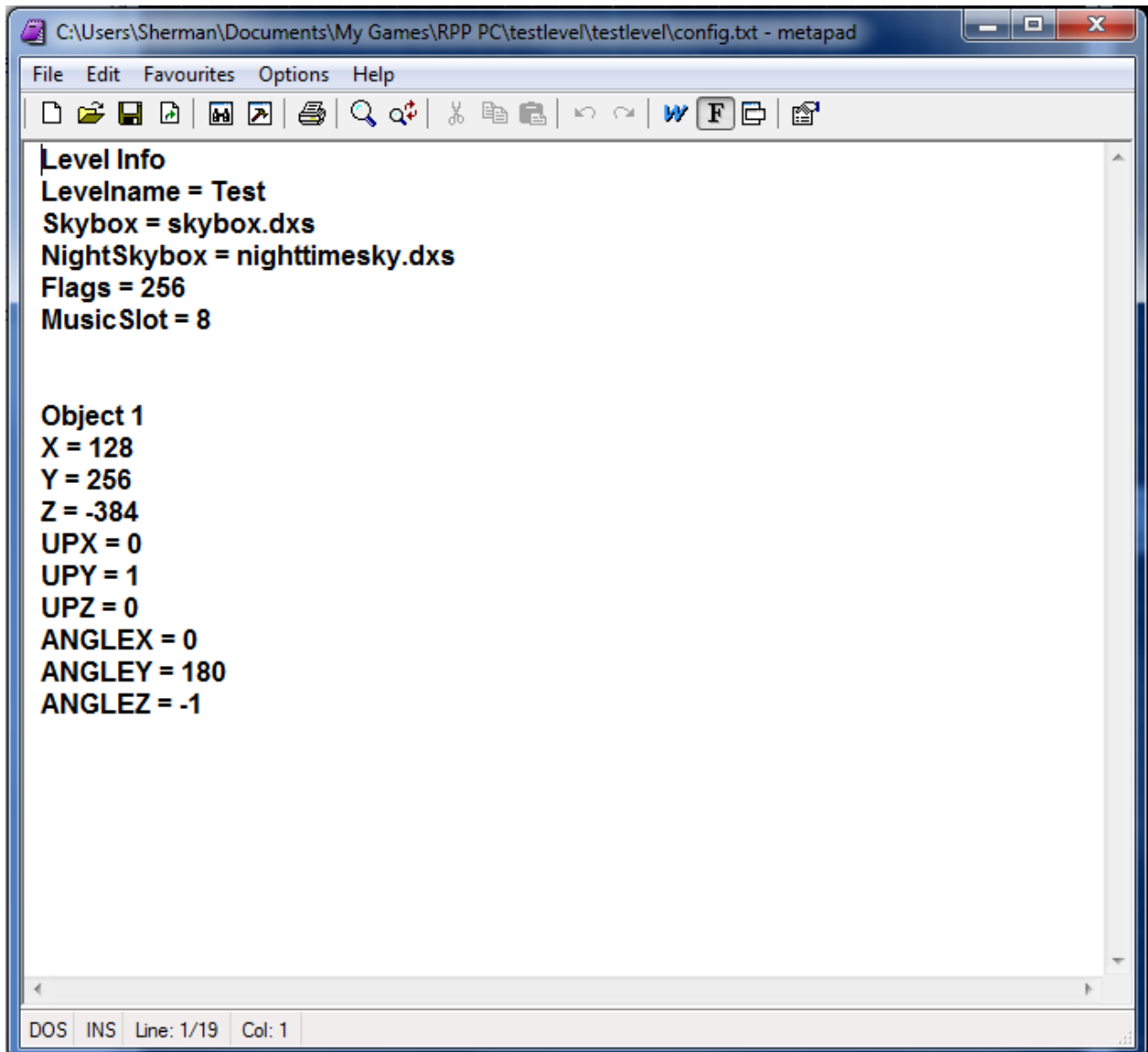


And there we have it, this is pretty much a level, let's save this level now so we can move on to the next stage. Where you will be wanting to save this level at, is in a new folder inside the folder the game is installed in, let's call it "testlevel".



Open up the new folder, and make another folder inside of it called “testlevel”. Then go inside that folder, and save the level as “level”. Every level you create **must** named “level”, or the game will not see them as levels. Now, if you were to try and play the level now, it would just crash. to fix this, we must add in a player start and Level Info.

Where you saved the level at, create a new .txt file and call it "config" This will be what we will be using to create the player spawn point. Open up the .txt file and copy this into it:



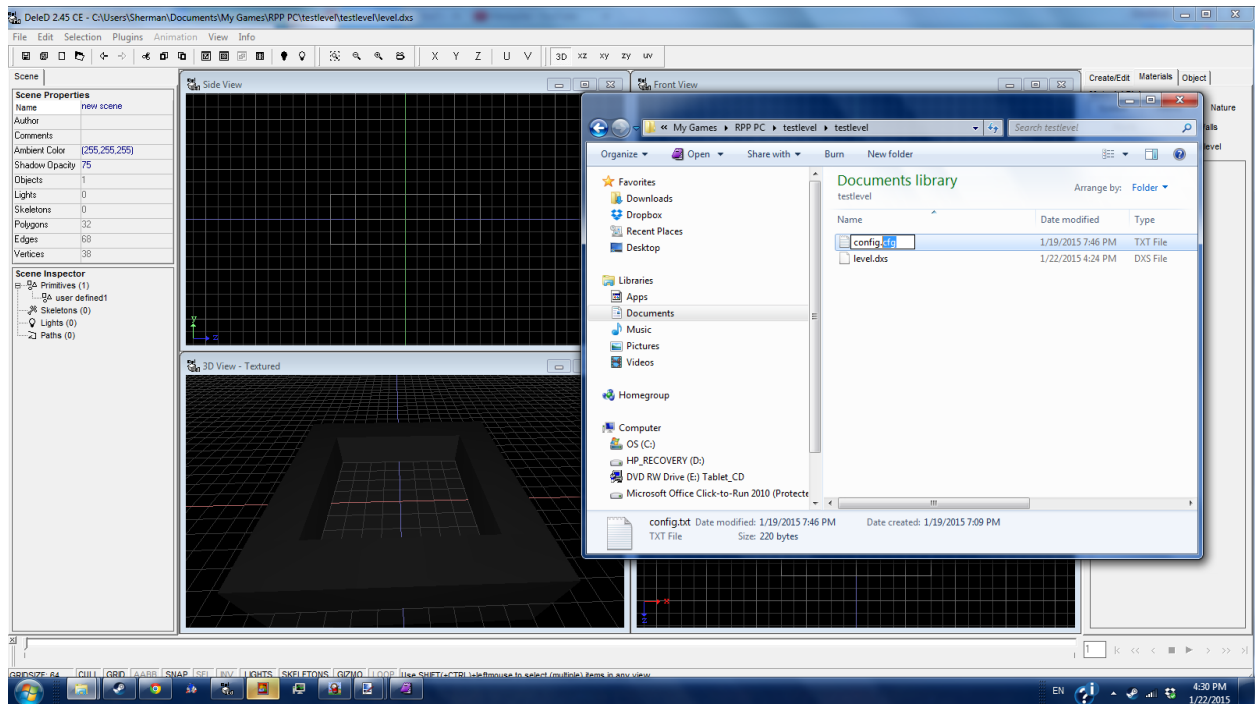
The image shows a screenshot of a Metapad text editor window. The title bar reads "C:\Users\Sherman\Documents\My Games\RPP PC\testlevel\testlevel\config.txt - metapad". The menu bar includes "File", "Edit", "Favourites", "Options", and "Help". The toolbar contains various icons for file operations and editing. The text area contains the following configuration data:

```
Level Info  
Levelname = Test  
Skybox = skybox.dxs  
NightSkybox = nighttimesky.dxs  
Flags = 256  
MusicSlot = 8  
  
Object 1  
X = 128  
Y = 256  
Z = -384  
UPX = 0  
UPY = 1  
UPZ = 0  
ANGLEX = 0  
ANGLEY = 180  
ANGLEZ = -1
```

The status bar at the bottom shows "DOS INS Line: 1/19 Col: 1".

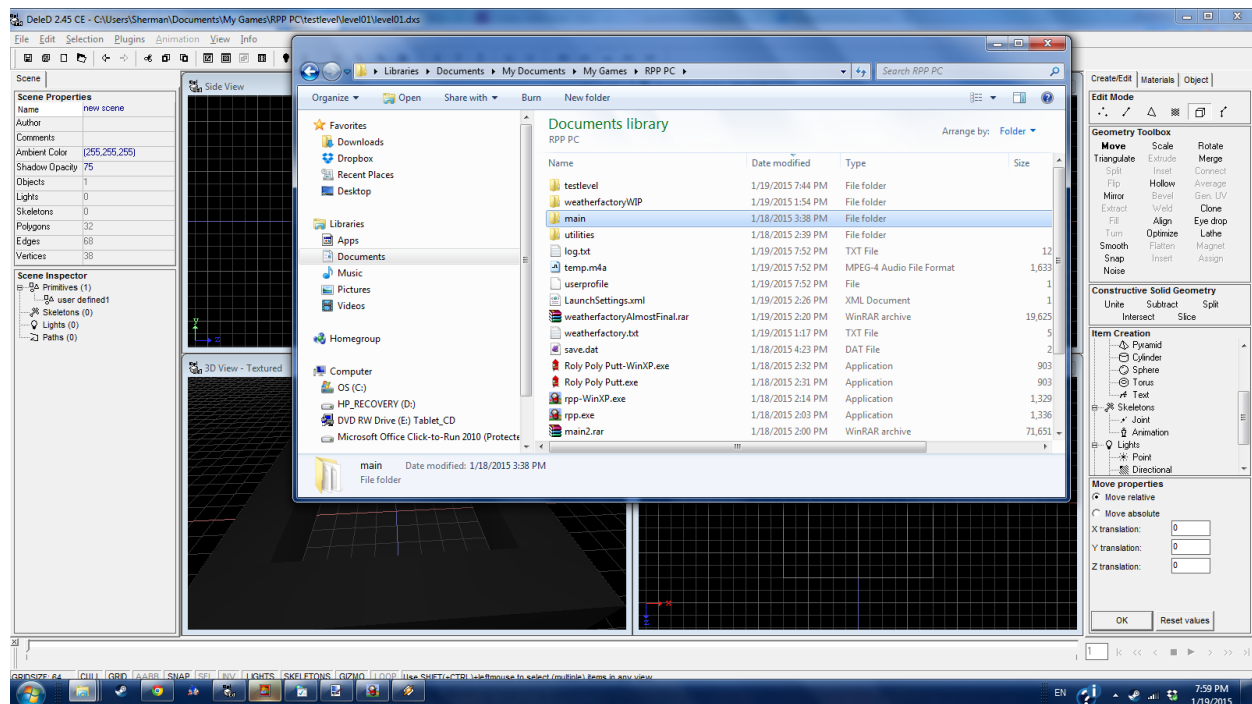
Now, save the text file and close it. Go back to the folder you saved it and the level to and right click on the text file and go to rename it. Replace the .txt with .cfg, this

will make it a config file the game can read so it will know to look here for the level's info.

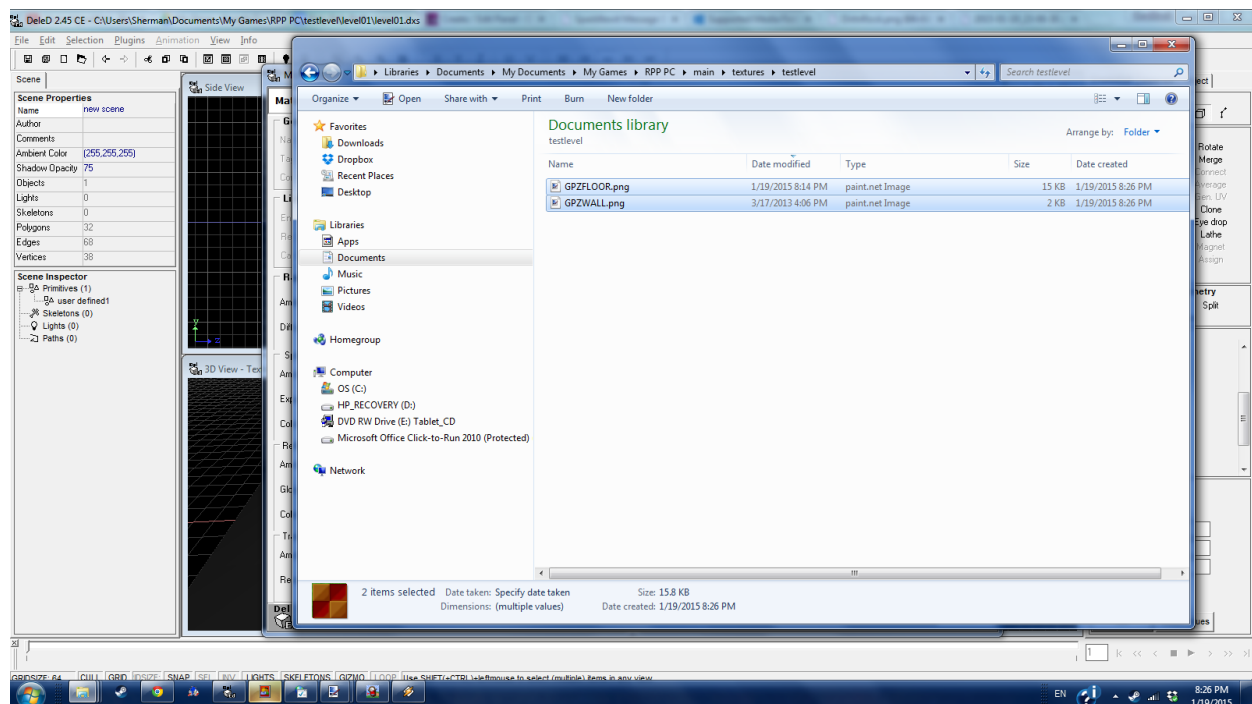


Texturing the Level:

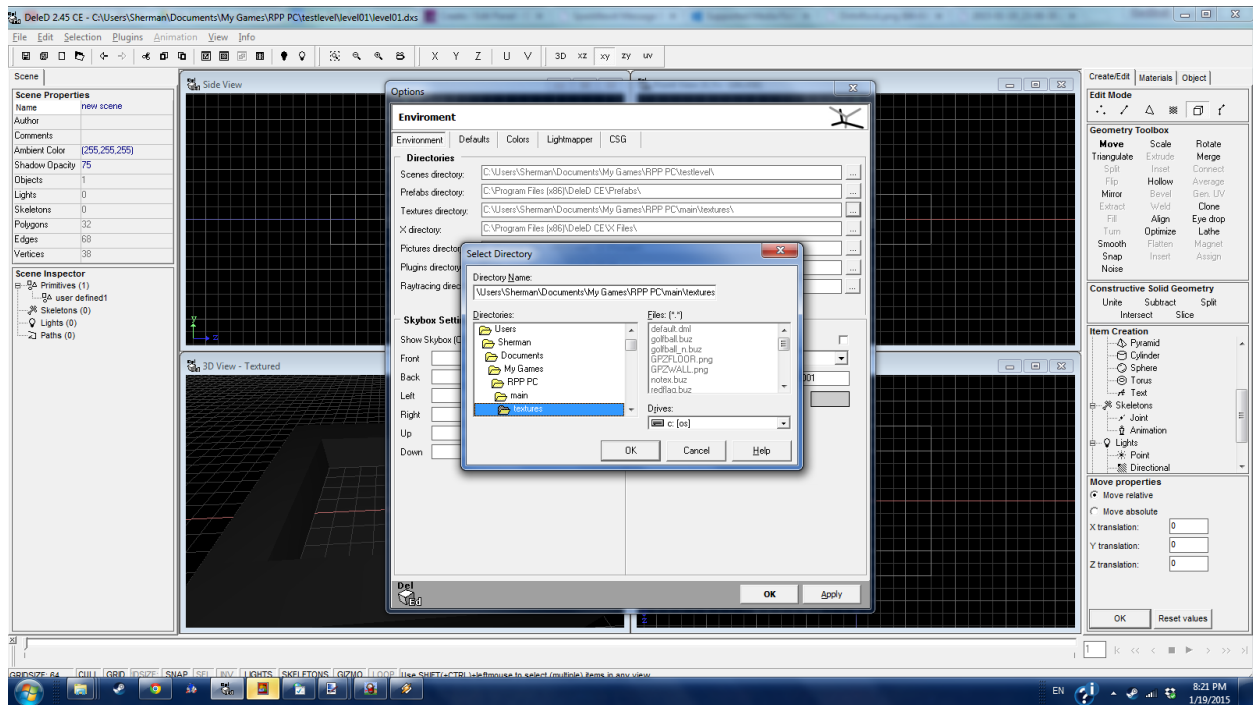
When you loaded up the level you would have noticed, it is all one color, a white box with no shading whatsoever. Let's fix this shall we? Go to your main Roly Poly Putt folder and find "main.zip and extract it to your Roly Poly Putt folder.



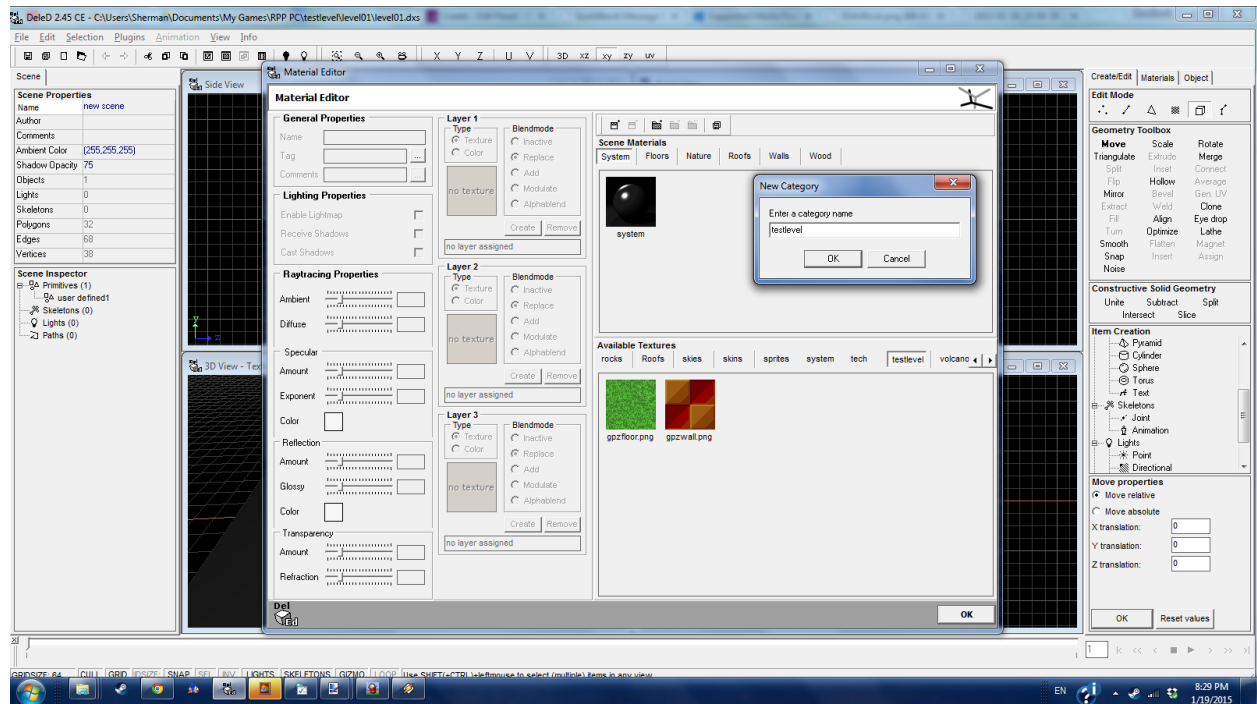
Now, go get the files you wish to use for your textures and paste them into a folder called "testlevel" inside the "textures" folder inside the "main" folder you just created. The textures should be .png files so DeleD can read them.



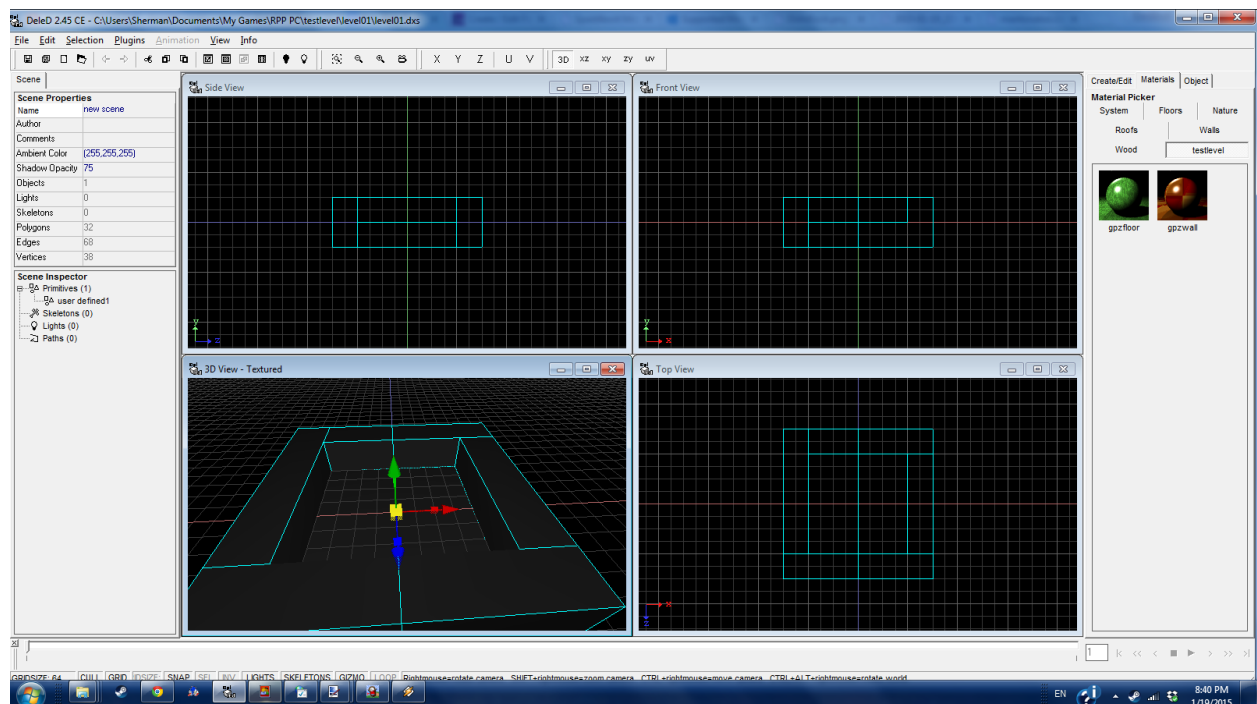
Now, in DeleD, open up the Options screen, and go to the Environment tab. Go to the Textures directory and direct it to the textures folder inside the “main” folder. Hit Apply and then Ok.



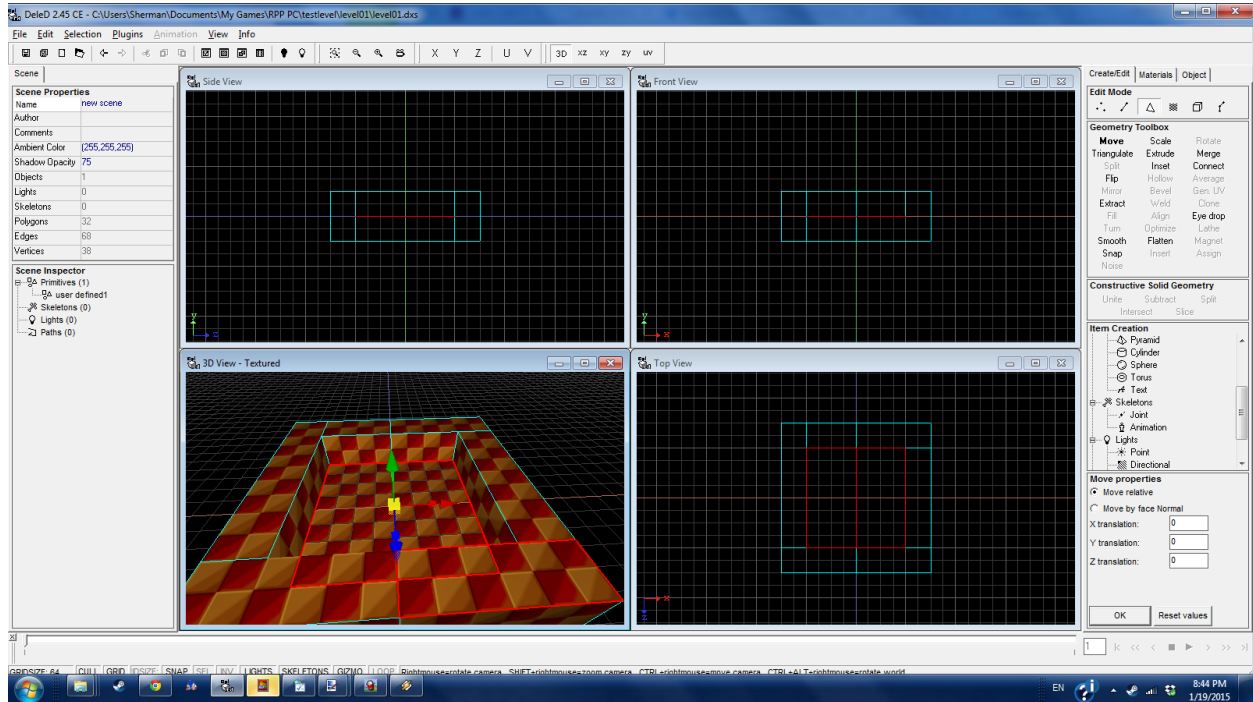
Now, open the material editor, guide the bottom tab list to the “testlevel” tab, you should see your textures there. On the top, add in a new tab called “testlevel”, this will be where the new textures will go.



Drag and drop the new textures and then hit OK to close the Material Editor. Shift-Click on the level to select it, and then switch to the Material Tab on the right side of the screen. And open up the “testlevel” tab, this should show your brand new textures.



Click on any one of the textures to have it applied to the level, but we don't want all one texture do we? Let's make the lower part of the level grass, shall we? Go back into Create/Edit mode and switch to faces mode, and select the faces of the ground in the center by Shift-Ctrl-Clicking.



Then, go back into the Material Editor and simply click on the second texture and viola! You have now done the first half in texturing your level. Let's move on the the second half shall we?