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Subject: Re: AVALANCHE.PRO .... games in IDL FTW

Posted by [rogass](#) on Mon, 14 Dec 2009 08:18:25 GMT

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On 14 Dez., 09:04, munka <[mynameismu...@gmail.com](mailto:mynameismu...@gmail.com)> wrote:

> If you have ever needed to plot a whole bunch of things, you may of  
> put a plot command in a for/while loop. If you forgot to put  
> something like wait,1 in your loop, you might have gotten something  
> that looks like an animation almost. I noticed this, and this  
> "animation" in combination with the cursor function, you can make some  
> sweet games... like avalanche. I got bored and wrote out this game in  
> IDL (It's less than 200 lines!)  
>  
> I realize there is some crappy programming going on in this program,  
> but oh well! I've only known of IDL (or programming for that matter)  
> for less than 3 years. (I'm an undergrad in physics/astronomy)  
>  
> Stuff like  
> for i=0,maxenemies-1,1 do Xenemypos[i]=0.0  
> instead of:  
> Xenemypos=replicate(0.0,maxenemies)  
> and the use of goto statements..... :O  
> But don't worry about that....  
>  
> So, I don't really have any questions. I'm just here to share the  
> wealth and show y'all this program. I have a better game written with  
> the same... "engine"..... but I've been adding comments to it,  
> because it is a bit more complicated. I'll post that on here a  
> probably sometime later this week. If you have questions or comments,  
> feel free to email me at billfreeman44 [at] yahoo.com. I don't check  
> my gmail very often.  
>  
> Also, all this was possible because of Dr. Fanning's amazingly helpful  
> website ;)  
>  
> Enjoy!  
> ~Bill  
>  
> (and if you look closely, you might even be able to cheat! :D )  
>  
> pro avalanche  
> ;VARIABLES  
> difficulty=1 ;set by user in game (see into game screen)  
> levelnum=1  
> maxnumlevels=50  
> usersizex=.5  
> usersizey=.5  
> maxenemies=1001

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> enemypsym=2
>
> thetime=long(0)
> thekey='string'
> ans='string'
> Xenemypos=fltarr(maxenemies)
> Yenemypos=fltarr(maxenemies)
> Yenemyvel=fltarr(maxenemies)
> Tenemytim=fltarr(maxenemies)
> for i=0,maxenemies-1,1 do Xenemypos[i]=0.0
> for i=0,maxenemies-1,1 do Yenemypos[i]=0.0
> for i=0,maxenemies-1,1 do Yenemyvel[i]=1./10*RANDOMU(S, 1)
> for i=0,maxenemies-1,1 do Tenemytim[i]=0.0
> enemynum=0
> thetime=long(1)
>
> ;INTRO GAME SCREEN
> plot,[0,100],[0,100],/nodata
> xyouts,50,60, "AVALANCHE",alignment=.5,charsize=3.5
> xyouts,50,50, "click a difficulty to begin",alignment=.5,charsize=2.5
> xyouts,50,45, "hit p to pause (while playing)",alignment=.
> 5,charsize=2
> xyouts,50,40, "hit any key to EXIT (while playing)",alignment=.
> 5,charsize=1
> xyouts,25,25, "EASY",alignment=.5,charsize=1
> xyouts,50,25, "MEDIUM",alignment=.5,charsize=1
> xyouts,75,25, "HARD",alignment=.5,charsize=1
>
> ;GET DIFFICULTY
> cursor,xpos,ypos,/up
> if abs(xpos-25) lt abs(xpos-50) and abs(xpos-25) lt abs(xpos-75) then
> difficulty=1
> if abs(xpos-50) lt abs(xpos-25) and abs(xpos-50) lt abs(xpos-75) then
> difficulty=2
> if abs(xpos-75) lt abs(xpos-25) and abs(xpos-75) lt abs(xpos-50) then
> difficulty=3
> plot,[0,100],[0,100],/nodata
> if difficulty eq 1 then xyouts,50,50, "EASY",charsize=2
> if difficulty eq 2 then xyouts,50,50, "MEDIUM",charsize=2
> if difficulty eq 3 then xyouts,50,50, "HARD",charsize=2
> WAIT,1
>
> while levelnum lt maxnumlevels do begin
>
> levelstart:
> ;LEVEL VARIABLES...
> levellength=long(320);length of level in frames
> diffnum=100.;fix(35+levelnum*1.5+difficulty*2);percent chance of

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> enemy spawn
>
> ;LEVEL BEGIN
>     for thetime=long(0),long(levellength),1 do begin
>
> ;DRAW LEVEL
>     plot,[0,100],[0,100],/nodata,xminor=1,yminor=1,xmargin=[0,0] ,ymargin=
> [0,0],ticklen=0,xticks=1,yticks=1
>
> ;DRAW SCORE
>     xyouts,2,98, "score = "+strcompress(string(fix(((levelnum+float
> (thetime)/float(levellength))*1000.-1000.)*difficulty)))
>
> ;INTRO TO EACH LEVEL..
>     if thetime lt 32 then begin
>         xyouts,50,70, "Beginning level "+strcompress(string(levelnum),/
> remove_all),alignment=.5
>         xyouts,50,65, "This will last $"
>         +strcompress(string(fix(levellength)/32),/remove_all)+""
>         seconds",alignment=.5
>         xyouts,50,60, "Enemies/sec= "+strcompress(string(diffnum*
> (32.0/100.0)),/remove_all),alignment=.5
>     endif
>
> ;DRAW USER...
>     cursor,xpos,ypos,/nowait
> ;CHECK IF USER OUT OF RANGE.
>     IF xpos lt usersizex then xpos=usersizex
>     IF xpos gt 100-usersizex then xpos=100.-usersizex
>     IF ypos lt usersizey then ypos=usersizey
>     IF ypos gt 100.-usersizey then ypos=100.-usersizey
>     oplot,[xpos-usersizex,xpos-usersizex,xpos+usersizex,xpos
> +usersizex,xpos-usersizex],$
>         [ypos-usersizey,ypos+usersizey,ypos+usersizey,ypos-
> usersizey,ypos-usersizey],linestyle=0
>
> ;DRAW ENEMIES...
>     index=WHERE(Tenemytim ge 1)
>     check=size(index)
>     if check[0] ne 0 then begin
>         oplot,Xenemypos[index],Yenemypos[index],psym=enemypsym
>     endif
>
> ;CHECK FOR PAUSE...
>     input=get_kbrd(0)
>     if input ne "" then thekey=input
>     if thekey eq '.' then goto,hax
>     if thekey ne 'string' then begin

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>         if thekey ne 'p' then begin
>             print, "EXITING."
>             plot,indgen(100),indgen(100)
>             goto, theend
>             endif
>             print,'paused.. enter to continue, or type exit to exit.'
>             read,ans
>             if ans eq 'exit' then goto, theend
>             thekey='string'
>             endif
>
> ;CHECK FOR HIT...
>             if thekey eq '.' then goto,hax
>             hittest=WHERE((Xenemypos gt xpos-usersizex and Xenemypos lt xpos
> +usersizex) $
>                 and (Yenemypos gt ypos-usersizey and Yenemypos lt
> ypos+usersizey))
>             check=size(hittest)
>             if check[0] ne 0 then begin
>                 oplot,indgen(100),indgen(100),linestyle=difficulty
>                 print, "HIT!"
>                 PRINT, "YOU FAIL..."
>                 print, "Total score = ",fix(((levelnum+float(thetime)/float
> (levellength))*1000.-1000.)*difficulty)
>                 goto, theend
>             endif
>             hax:
>
> ;WAIT
>             wait,0.03125;32 fps
>
> ;RECALCULATE ENEMY LOCATION...
>             index=where(Tenemytim ge 1)
>             check=size(index)
>             if check[0] ne 0 then begin
>                 Xenemypos[index]=Xenemypos[index]
>                 Yenemypos[index]=Yenemypos[index]+Yenemyvel[index]-difficult y/3.0
>                 Tenemytim[index]=Tenemytim[index]+1
>             endif
>
> ;GENERATE NEW ENEMIES...
>             rn1=FIX(levelnum*difficulty*RANDOMU(S, 1))
>             while rn1 le levelnum*difficulty do begin
>                 enemynum++
>                 if enemynum ge maxenemies-1 then enemynum=0
>                 newvel= fix(RANDOMU(S, 1)*32.0)/32.0+levelnum/maxnumlevels
>                 newpos=FIX(100*RANDOMU(S, 1))
>                 Tenemytim=enemynum]=1

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>             Xenemypos[enemynum]=newpos
>             Yenemypos[enemynum]=100.0
>             Yenemyvel[enemynum]=newvel*(-1)
>             rn1++
>         endwhile
>
> ;DELETE OLD ENEMIES
>         del=WHERE(Yenemypos gt 101 or Yenemypos lt -1)
>         check=size(del)
>         if check[0] ne 0 then begin
>             Xenemypos[del]=0.0
>             yenemypos[del]=0.0
>             yenemyvel[del]=0.0
>             Tenemytim[del]=0
>         endif
>
> ;LEVEL END
> endfor
>
> ;END OF LEVEL CHANGES
>         usersizex=usersizex+.1*difficulty
>         usersizey=usersizey+.1*difficulty
>         levelnum++
> endwhile
>
> print, "you win!"
> theend:
> print, "END OF PROGRAM."
> end

```

Funny!!!! Maybe you have also time to give those items some color and maybe you make in the next step an "ultimate" gamepack with nibbles, pong and so on :) How about Quake? :)

Indeed - Very funny.

Regards

CR

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