

Repeat mit Blender

Repeat-Script 0.3 Documentation

Preface

I love that array-functions.

Installation

1. Download the script repeat.py
2. Copy the script in the **scripts**-directory of your Blender

Execute the script

Run the script from the 3d View's Mesh->Objects menu.

Picture 1

Usage

This script give you the possiblity to copy one or many objects in different directions and with different values of the copy object. It save the settings in a file, for later usage.

Functions

Picture 2

- 1,2,3 - single values (Move, Rotation, Scale, X, Y, Z)
- 4 - fixing value section (single/sum)
- 5,6,7 - single values (Move, Rotation, Scale, X, Y, Z)
- 8 - sum of all single values (Move, Rotation, Scale, X, Y, Z)
- 8 - uniform scale of object
- 9 - number of copies in 1./2. and 3. dimension
- 10,11,12 - X,Y,Z values of 2. and 3. dimension
- 13 - total numbers of all copies
- 14 - reset all values to default
- 15 - type of resultobject(s) (full copy/instance)
- 16 - undo action
- 17 - action

Example

In that example we make a very simple greek temple.

1. Add a new cube (**shift + A**)
Screen4
2. Modify the cube to a platform
Screen5
3. Set a cylinder in a corner of this platform (**shift + a**)
Screen6
4. Select the cylinder (**right mouse button**)

5. Set value Y in single section row move to 5 and press OK-Button.
Screen7
6. Now you got a row of 10 pillars.
Screen8
7. Select the corner pillar-cylinders (**shift + right mouse button**)
Screen9
8. Press the Default-Button to reset.
9. Set value X in single section row move to 5 and the number of copies to 8, then press OK-Button.
ScreenA
10. Now we have a C-like pillar-set.
ScreenB
11. Press the Default-Button to reset.
12. To the last: set value Y in single section row move to 5 and the number of copies to 9, then press OK-Button.
ScreenC
13. Finished.
Finishpicture

Planned Functions

- Avoid rotation-bug.
- Use templates.

Links

- Blender
- My Pointalign-script

Thanks

I'd like to say thanks some people, that support me in different ways.

- **Ideasman** from Blender-Forum for the instancecopy-code
- **madcello** from Blender-Forum he wrote a similar script

Code

```
#!BPY
```

```
""" Registrationsinformationen fuer Blender-Menues
Name: 'Repeat'
Blender: 236
Group: 'Object'
Tip: 'Repeat objects'
"""
__author__ = "Thomas Buschhardt"
__url__ = ["Script Site, www.buschhardt.de/repeat"]
__version__ = "0.3 20050202"
__email__ = ["Thomas Buschhardt, thomas:buschhardt*de"]
```

```
__bpydoc__ = """\nThis script implements object repeat functions in Blender.
```

Usage:

Select the objects you want to work on, run this script from the 3d View's Objects->Scripts menu.

You can control the move, rotation, size and number of copies global X,Y and Z axis.
There is a undo function and all settings a save to a file, for next time use.
To quit the script press 'ESC' or 'Q'.

Thanks goes to ideasman (Blender-Forum) for the instance copy code!

```
"""\n\n##\n# Hauptmodule einladen\n##\nimport Blender\n\n##\n# globale Variablen\n##\ncolDefault=(0,0,0,0,0,0,100.0,100.0,100.0,0,0,0,0,0,0,100.0,100.0,100.0,0,0,0,0,0,0,10,1,1,0,0,0,0)\ncolVar=[]\nfor i in colDefault:colVar.append(i)\n#0-2 mov sng\n#3-5 rot sng\n#6-8 siz sng\n#9-11 mov sum\n#12-14 rot sum\n#15-17 siz sum\n#18-20 2 dim\n#21-23 3 dim\n#24-26 num 1/2/3 dim\n#27-29 fix mov/rot/siz\n#30 full/instance\n\ncolOriginal=[]\ncolKopie=[]\ncolSlider=[]\nfor i in range(4):colSlider.append(Blender.Draw.Create(0))\n\n##\n# Hilfsfunktionen\n##\ndef kopieObjekt(Objekt,type=0):#0 full 1 instanz\n    if type==0:\n        Meshneu=Blender.NMesh.GetRawFromObject(Objekt.getName())\n        objneu=Blender.NMesh.PutRaw(Meshneu)\n        objneu.setLocation(Objekt.getLocation())\n        objneu.setEuler(Objekt.getEuler())\n    else:\n        scn = Blender.Scene.getCurrent()\n        type = Objekt.getType()\n        objneu = Blender.Object.New(type)
```

```

objneu.shareFrom(Objekt)
scn.link(objneu)
objneu.setMatrix(Objekt.getMatrix())
# Copy other attributes.
objneu.drawMode = Objekt.drawMode
objneu.Layer = Objekt.Layer
scn.update(1)
return objneu

def speichere():
dir=Blender.Get("datadir")
if dir!=None:
f=open(dir+"repeat03.ini","w")
ergg=""
for i in colVar:ergg+=str(i)+"\t"
f.write(ergg)
f.close()

def lese():
dir=Blender.Get("datadir")
if dir!=None:
try:
f=open(dir+"repeat03.ini","r")
ergg=f.read()
f.close()
numb=-1
zwischen=""
for i in ergg:
if i=="\t":
numb+=1
colVar[numb]=eval(zwischen)
zwischen=""
else:zwischen+=i
except:pass

def holeFloat(Initialwert,Bezeichnung="",noneg=0):
if noneg==0:
result = Blender.Draw.PupFloatInput(Bezeichnung,Initialwert,-10000,10000,100,1)
else:
result = Blender.Draw.PupFloatInput(Bezeichnung,Initialwert,0,10000,100,1)
if result != None:return result
else:return Initialwert

def holeInt(Initialwert,Bezeichnung=""):
result = Blender.Draw.PupIntInput(Bezeichnung,Initialwert,1,10000)
if result != None:return result
else:return Initialwert

def rahmen(text,xmin,xmax,ymin,ymax,xtext):
Blender.BGL.glColor3f(0,0,0)
Blender.BGL.glRasterPos2i(xmin+3,ymax-3)
Blender.Draw.Text(text)
Blender.BGL.glBegin(Blender.BGL.GL_LINE_STRIP)
Blender.BGL.glVertex2i(xmin,ymax)

```



```

def allg_ereignis(erg,wert):
    if erg==Blender.Draw.ESCKEY or erg==Blender.Draw.QKEY:Blender.Draw.Exit()

##
# Auswerten von Schalter-Ereignissen
##
def schalter_ereignis(erg):
    global colVar,colOriginal,colKopie
    if erg<4:# mov sng
        colVar[erg-1]=holeFloat(colVar[erg-1],"units")
        colVar[erg+8]=colVar[erg-1]*colVar[24]
    elif erg>3 and erg<7:# rot sng
        colVar[erg-1]=holeFloat(colVar[erg-1],"degree")
        colVar[erg+8]=colVar[erg-1]*colVar[24]
    elif erg>6 and erg<10:# siz sng
        colVar[erg-1]=holeFloat(colVar[erg-1],"percent",1)
        colVar[erg+8]=(colVar[erg-1]/100)**colVar[24]*100
    elif erg>9 and erg<13:# mov sum
        colVar[erg-1]=holeFloat(colVar[erg-1],"units")
        colVar[erg-10]=colVar[erg-1]/colVar[24]
    elif erg>12 and erg<16:# rot sum
        colVar[erg-1]=holeFloat(colVar[erg-1],"degree")
        colVar[erg-10]=colVar[erg-1]/colVar[24]
    elif erg>15 and erg<19:# siz sum
        colVar[erg-1]=holeFloat(colVar[erg-1],"percent",1)
        colVar[erg-10]=(colVar[erg-1]/100)**(1.0/colVar[24])*100
    elif erg>18 and erg<25:# 2 + 3 dim
        colVar[erg-1]=holeFloat(colVar[erg-1],"units")
    elif erg==25:# number 1 dim
        altwert=colVar[24]
        colVar[24]=holeInt(colVar[24])
        if altwert!=colVar[24]:
            for i in range(3):
                if colVar[27]==0:
                    colVar[i+9]=colVar[i]*colVar[24]
                else:
                    colVar[i]=colVar[i+9]/colVar[24]
                if colVar[28]==0:
                    colVar[i+12]=colVar[i+3]*colVar[24]
                else:
                    colVar[i+3]=colVar[i+12]/colVar[24]
                if colVar[29]==0:
                    colVar[i+15]=(colVar[i+6]/100)**colVar[24]*100
                else:
                    colVar[i+6]=(colVar[i+15]/100)**(1.0/colVar[24])*100
    elif erg>25 and erg<28:# number 2 + 3 dim
        colVar[erg-1]=holeInt(colVar[erg-1])
    elif erg>27 and erg<32:# fix mov/rot/siz objecttyp
        colVar[erg-1]=colSlider[erg-28].val
    elif erg==100:# default
        colVar=[]
        for i in colDefault:colVar.append(i)
    elif erg==101:# undo
        for i in colKopie:Blender.Scene.getCurrent().unlink(i)

```

```

    for i in colOriginal:i.select(1)
    colOriginal=[]
    colKopie=[]
    Blender.Redraw()
elif erg==102:# uniform
    colVar[7]=colVar[6]
    colVar[8]=colVar[6]
    colVar[15]=(colVar[6]/100)**colVar[24]*100
    colVar[16]=colVar[15]
    colVar[17]=colVar[15]
elif erg==103:# ok
    pi2=180/3.1415926
    colOriginal=[]
    colKopie=[]
    for obj in Blender.Object.GetSelected():
        erstkopie=0
        if obj.getType()=="Mesh":
            colOriginal.append(obj)
            objLoc=obj.getLocation()
            objRot=obj.getEuler()
            objScale=obj.getSize()
            for i in range(colVar[24]):
                for j in range(colVar[25]):
                    for k in range(colVar[26]):
                        ob=kopieObjekt(obj,colVar[30])
                        if erstkopie==0:erstkopie=ob
                        ob.setLocation(objLoc[0]+i*colVar[0]+j*colVar[18]+k*colVar[21],objLoc[1]+i*colVar[1]+j*col
                        ob.setEuler(objRot[0]+i*(colVar[3]/pi2),objRot[1]+i*(colVar[4]/pi2),objRot[2]+i*(colVar[5]
                        ob.setSize(objScale[0]*(colVar[6]/100)**i,objScale[1]*(colVar[7]/100)**i,objScale[2]*(col
                        colKopie.append(ob)
                    Blender.Scene.getCurrent().unlink(erstkopie)
            Blender.Redraw()
speichere()

lese()

Blender.Draw.Register(fenster,allg_ereignis,schalter_ereignis)

```