

```
import maya.cmds as cmds
```

```
allShaders = [] #add all shaders to allShaders array
```

```
print allShaders
```

```
cmds.select( '*_shdr' ) #REMOVE SCENE NAME SPACES #End all shaders is _shdr
```

```
materialSelection = cmds.ls(sl=True)
```

```
print materialSelection
```

```
meshes = maya.cmds.ls( type="mesh" ) #select all geo objects and combine
```

```
cmds.select( meshes )
```

```
cmds.polyUnite( n='combinedGeometry', ch=False )
```

```
for i in materialSelection: #add all shaders as elements to materialSelection array
```

```
    print i
```

```
    cmds.select ( i )
```

```
    sl = cmds.ls(sl=1, o=1)
```

```
    materialNiceName = sl[0]
```

```
    print materialNiceName
```

```
    cmds.ls( materialNiceName )
```

```
    allShaders.append(cmds.ls(sl=True))
```

```
print allShaders
```

```
'''
```

```
Select Next shader
```

```
Duplicate model (rename)
```

```
select NEXT shaders faces
```

```
create quick selection set for duplicate model faces
```

```
selecet selection set
```

```
extract and separate geometry
```

```
Delete remaining geometry and name geo accordingly
```

```
Put in group n=extractedGeometry_grp repeat
```

```
'''
```

```
allQuickSets = [] #add all faces of each shader to selectionSets
```

```
for i in allShaders:
```

```
    cmds.select ( i )
```

```
    sl = cmds.ls(sl=1, o=1)
```

```
    materialNiceName = sl[0]
```

```
    print materialNiceName
```

```
    cmds.hyperShade(objects='')
```

```
    print str( materialNiceName )+"Set"
```

```
    cmds.sets( n=str(materialNiceName )+"Set" ) #named (materialNiceName[0], 'set') #
```

```
cmds.setAttr( str(aimedJoints [i])+'.rotateZ', lock=True)
```

```
    cmds.select( str( materialNiceName )+"Set", noExpand=True )
```

```
    allQuickSets.append(cmds.ls(sl=True))
```

```
print allQuickSets
```

```
for i in allQuickSets:
    cmds.select ( i )
    selection = cmds.ls(selection=True)
    print 'selection is ', selection
    if len(selection) > 0:
        print 'Extracting', i, 'geometry'
        cmds.polyCut( )
    else:
        print 'No faces selected... moving on.'

cmds.select( clear=True )
cmds.select ( 'combinedGeometry' )
cmds.polySeparate( 'combinedGeometry' )
```