

In this short tutorial something on how to create User Data and how to read / write User Data. You can use it to store temporary data or to create a simple GUI using your User Data.

Let's begin with some code to explain the basics. It is a simple script to add 2 User Data fields to a specific object.

```
import c4d
from c4d import gui
#Welcome to the world of Python
```

```
def main():
    gui.MessageDialog('Start Script.')

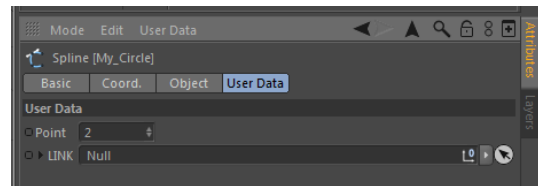
    obj = doc.SearchObject("My_Circle")
    if (len(obj.GetUserDataContainer()) == 0):
        bc = c4d.GetCustomDatatypeDefault(c4d.DTYPE_LONG) # Create default container
        bc[c4d.DESC_NAME] = "Point" # Rename the entry
        element1 = obj.AddUserData(bc) # Add userdata container
        obj[element1] = 2 # Assign a value

        bc = c4d.GetCustomDatatypeDefault(c4d.DTYPE_BASELISTLINK)
        bc[c4d.DESC_NAME] = "LINK"
        element2 = obj.AddUserData(bc)
        obj[element2] = None

    for id, bc in obj.GetUserDataContainer():
        print bc[c4d.DESC_NAME], obj[id]

    c4d.EventAdd()

if __name__ == '__main__':
    main()
```



Detailed explanation:

```
gui.MessageDialog('Start Script.')
```

Just to indicate that the script is started. No real functionality behind it.

```
obj = doc.SearchObject("My_Circle")
```

We are going to add the User Data to the My_Circle object, so first get the My_Circle object information. This object must be present!

```
if (len(obj.GetUserDataContainer()) == 0):
```

Check whether there is already User Data added to the object.

If not already added (len of the DataContainer = 0), start adding the User Data.

```
bc = c4d.GetCustomDatatypeDefault(c4d.DTYPE_LONG) # Create default container
bc[c4d.DESC_NAME] = "Point" # Rename the entry
element1 = obj.AddUserData(bc) # Add userdata container
obj[element1] = 2 # Assign a value
```

Start by adding a Integer (Long) field.

Create the default container and give it a name ("Point").

Then add the just created (User Data) field to the object and give it an initial value (2).

```
bc = c4d.GetCustomDatatypeDefault(c4d.DTYPE_BASELISTLINK)
bc[c4d.DESC_NAME] = "LINK"
element2 = obj.AddUserData(bc)
obj[element2] = None
```

Second we going to add a Link field (DTYPE_BASELISTLINK).

Create the default container and give it a name ("LINK").

Then add the just created (User Data) field to the object and give it an initial value (empty link = None).

```
for id, bc in obj.GetUserDataContainer():
    print bc[c4d.DESC_NAME], obj[id]
```

Just to show how to get the User Data, the User Data is printed on the console.

```
c4d.EventAdd()
```

As last, trigger Cinema / inform Cinema on these changes.