e-Yantra Robotics Competition (eYRC-2017)
Task 1 – Transporter Bot

We will now see the next sub module in BPY which is bpy.context. The context members available depend on the area of blender which is currently being accessed. While it's useful to be able to access data directly by name or as a list, it's more common to operate on the user's selection. The context is always available from 'bpy.context' and can be used to get the active object, scene, tool settings along with many other attributes. BPY Context module is read-only.
These values cannot be modified directly, though they may be changed by running API functions or by using the data API.

bpy.context commands:

>>> **bpy.context.object**: Gives access to the active object in the 3D View. In this the default object - Cube is shown as the active object.

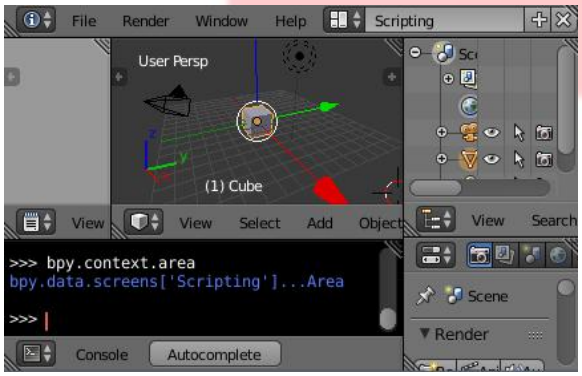
```
>>> bpy.context.object
bpy.data.objects['Cube']
```

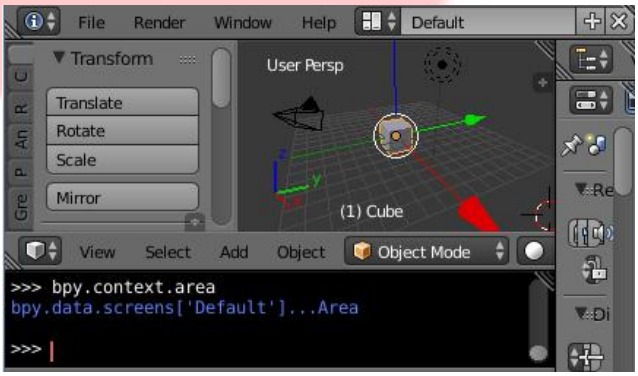
>>> **bpy.context.selected_objects**: Gives access to a list of all selected objects. In the image below, first only Cube was selected. If we select the default objects on 3D window then it will show Cube, Lamp and Camera.

```
>>> bpy.context.selected_objects
[bpy.data.objects['Cube']]

>>> bpy.context.selected_objects
[bpy.data.objects['Cube'], bpy.data.objects['Lamp'], bpy.data.objects['Camera']]
```

>>> **bpy.context.area:** This will print the type of Screen currently used.





>>> **bpy.context.active_object:** Gives access to the active object in 3D window.

```
>>> bpy.context.active_object
bpy.data.objects['Cube']
```

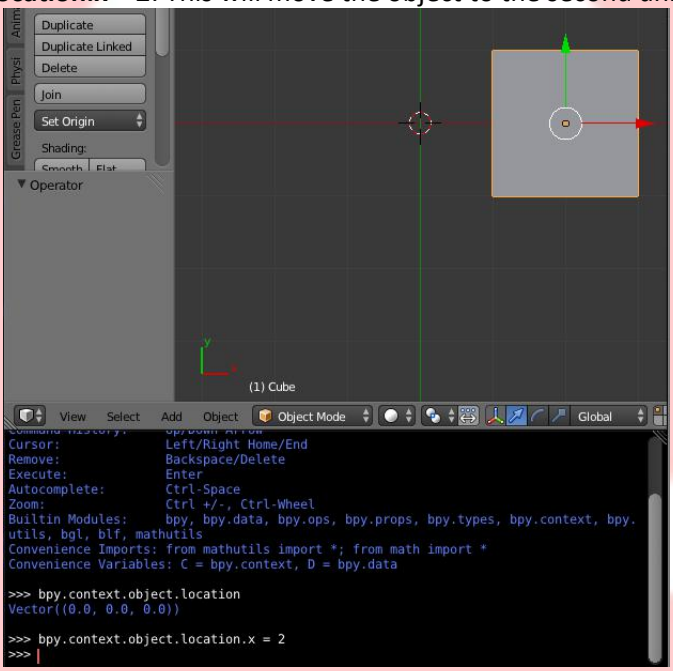
>>> **bpy.context.mode:** This will print the current 3D view mode i.e. Object, Edit, etc.

```
>>> bpy.context.mode
'OBJECT'
```

>>> **bpy.context.object.location:** Gives the vector location of the active object. You can also access the location by writing **bpy.context.object.location.xyz**

```
>>> bpy.context.object.location
Vector((1.0, 0.0, 0.0))
```

>>> **bpy.context.object.location.x = 2**: This will move the object to the second unit.



If you want to set the object at particular xyz location, then use **bpy.context.object.location.xyz =(x,y,z)**.

This will move the object to the 1st unit of x, y and z location.