

## e-Yantra Robotics Competition (eYRC-2016)

### Task 1 – Model a Terrain

We will now see the next sub module in BPY which is **bpy.path**. This module has a similar scope to `os.path` in Python, containing utility functions for dealing with paths in Blender.

1. **bpy.path.abspath(path):**

Returns the absolute path relative to the current blend file using the “//” prefix.

```
>>> bpy.path.abspath('//')  
'C:\\Users\\ERTS-DA\\Desktop\\BPY Tutorials\\'
```

2. **bpy.path.basename(path):**

Returns the tail of the path

```
>>> bpy.path.basename('C:\\Users\\ERTS-DA\\Desktop\\BPY Tutorials')  
'BPY Tutorials'
```

3. **bpy.path.clean\_name(name, replace='\_'):**

Returns a name with characters replaced that may cause problems under various circumstances, such as writing to a file. All characters besides A-Z/a-z, 0-9 are replaced with “\_” or the replace argument if defined.

```
>>> bpy.path.clean_name('tyu#sn&g5 g', replace='_')  
'tyu_sn_g5_g'
```

4. **bpy.path.display\_name(name):**

Creates a display string from name to be used menus and the user interface. Capitalize the first letter in all lowercase names, mixed case names are kept as is. Intended for use with filenames and module names.

```
>>> bpy.path.display_name('name')  
'Name'
```

5. **bpy.path.display\_name\_from\_filepath(name):**

Returns the path stripped of directory and extension, ensured to be utf8 compatible.

```
>>> bpy.path.display_name_from_filepath('C:\\Users\\ERTS-DA\\Desktop\\BPY Tutorials\\check.blend')  
'check'
```

6. **bpy.path.ensure\_ext(filepath, ext, case\_sensitive=False):**

Return the path with the extension added if it is not already set.

```
>>> bpy.path.ensure_ext('C:\\Users\\ERTS-DA\\Desktop\\BPY Tutorials\\check', '.blend', case_sensitive=False)  
'C:\\Users\\ERTS-DA\\Desktop\\BPY Tutorials\\check.blend'
```

7. **bpy.path.relpath(path):**

Returns the path relative to the current blend file using the “//” prefix.

```
>>> bpy.path.relpath('check.blend')  
'//...\\Program Files\\Blender Foundation\\Blender\\check.blend'
```