The spaceship I made was done by doing the following:

I continued with the given spaceship code and added some structures and changed the colours of some parts to make my new spaceship. I added 13 new structures to the spaceship. All the structures where made from cylinder by adjusting the radius,length and doing transformations (scaling,translation, rotation). The structures that I added are:

1) Right tail front

2)Left tail front down

3) Right tail front down

4)Left tail back

5)Right tail back

6)Tail to spaceship connector1

7) Tail to spaceship connector2

8) Tail to spaceship connector3

9) Tail to spaceship connector4

10)Tail Lid left tail front

11) Tail Lid left tail front down

12) Tail Lid right tail front

13) Tail Lid right tail front down

Right tail front, Left tail front down, Right tail front down, Tail Lid left tail front, Tail Lid left tail front down, Tail Lid right tail front, Tail Lid right tail front down, Tail to spaceship connector1 and Tail to spaceship connector2 were used to create the back wings of the spaceship as we can see in the picture. It gives the spaceship a good design.

Left tail back, Right tail back, Tail to spaceship connector3 and Tail to spaceship connector4 were used to create the front design of the spaceship which looks like two small horns.

These new structures were scaled, translated and rotated in different angle along different axes to place it in the position they are right now.

All of the structures were made the child of the main parent of the spaceship which is passed from the "show_object_hiearchy" when the "make_spaceship function is called", so that when they move in a trajectory they move like a spaceship.

Trajectory planning:

For to make a nice trajectory for the spaceship I used roll,pitch and yaw movement along with translation.

First I Created five variables lon,lat,roll,pitch,yaw which store the needed values for our trajectory. Lon(x axis) and lat(y axis) contained the lonitudinal and latitudal movement of the spaceship which was done using translation.

Roll contained angles from pi/12,pi/11,pi/10… to pi/3 Pitch contained angles from pi/20,pi/19…pi/11   Yaw contained angled from -pi/12…-pi/3

We know that roll means rotation in x axis, pitch means rotation in yaxis and yaw is rotation in z axis. So we selected the values of the angles on the basis of these axis. For example yaw contains all negative values because we wanted the yaw to do rotation in counter clockwise direction.

Finally, a for loop was created to run from 1 to (size of the data in the variables) which for me was 10.

Then each time roll,pitch,yaw movement were done first by using the data in the variables then translation was done using lon and lat variables which made the spaceship move in a nice trajectory.