EXP 1 DIRECTORY MAKING

Step 1: Open a new terminal window using the keyboard shortcut [Ctrl + Alt + T]
Step 2: Navigate to the desired location in the system using "cd" command
Step3: Use the Command – "mkdir –p "
Step 4: Use "ls" command
Step 5: Check the list displayed
 Step 6: The directory created should get listed

EXP 2 SIMPLE PUBLISHER NODE

```python
import rospy
from std_msgs.msg import String
 def talker():
pub = rospy.Publisher('chatter', String, queue_size=10)
rospy.init_node('talker', anonymous=True)
 rate = rospy.Rate(10) # 10hz
 while not rospy.is_shutdown():
   hello_str = "hello world %s" % rospy.get_time()
 rospy.loginfo(hello_str)
 pub.publish(hello_str)
 rate.sleep()
```

```python
if __name__ == '__main__':
 try:
talker()
 except rospy.ROSInterruptException:
 pass
```

EXP 3 SIMPLE PUBLISHER NODE

```python
import rospy
from std_msgs.msg import String
defcallback(data):  rospy.loginfo(rospy.get_caller_id()  +
"I heard %s",data.data)
def listener():
rospy.init_node('listener'anonymous=True)
rospy.Subscriber("chatter",String, callback)
rospy.spin()
 if __name__ == '__main__':
 listener()
```

EXP 4 GAZEBO SIMULATOR

Step 1: Open Gazebo simulator

Step 2: Click on Edit menu

Step 3: Select Building editor for creating building structures

Step 4: In the editor window draw the plan of the building

Step 5: Check the preview window and change the plan if required

 Step 6: Click on File menu

 Step 7: Click on Save

Step 8: Enter the file name and Click on "Save" button

Step 9: Close Building editor

 Step 10: Click on Edit menu

 Step 11: Select Model Editor to create any other model.

Step 12: Create the required model using basic shapes like Cuboid, Sphere, and Cylinder.

Step 13: Click on File menu

Step 14: Click on Save

Step 15: Enter the file name and Click on "Save" button