## UNIT 2  ROS TERMS AND TEXTBOOK

Before a beginner even opens a web tutorial or book or sees a ROS video, it is helpful to learn a few terms that pertain to ROS. These terms describe the main components of a ROS system.

| Table 1. ROS Useful Terms | | |
|---|---|---|
| Item | Type | Comment |
| Repositories | A **software repository** is a storage location from which software packages may be retrieved and installed on a computer. | http://en.wikipedia.org/wiki/Software_repository<br><br>GitHub is used to download the ROS packages used by the Baxter system:<br>http://sdk.rethinkrobotics.com/wiki/Workstation_Setup |
| Packages | Contains files to allow execution of ROS programs | A package typically contains source files and executable scripts that can be BASH, Python, or other code. |
| Manifest Package.xml | Information about a package | The manifest defines properties about the package such as the package name, version numbers, authors, maintainers, and dependencies on other packages. |
| ROS Master | Registers the name and location of each node. | Allows nodes to communicate. Nodes can be in different computers. |
| Parameter Server | Data types that define certain information for nodes. | Certain nodes require parameters to define aspects of the node. |
| Nodes | Processes that execute commands. | Executable code written in Python or C++ usually. Python nodes use the client library  rospy |
| Topic | Name of a message. | For example, Baxter's cameras "publish" the image they receive as a topic with a name that indicates it is a camera image. |
| Services | Allows communication between nodes. | Used by nodes to communicate with other nodes and request a response. |
| Messages | Data sent between nodes. | Messages are "published" by a node and "subscribed to" by another node. |
| Bags | Data storage for messages. | Used to save and playback data such as sensor data. |

*Table 1  ROS Terms        From Turtlesim Guide  Pg 6*


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HANDOUT ROS INDIGO CHEATSHEAT AND ROS COMMAND LINE TOOLS

*ROScheatsheet_catkin.pdf*          http://wiki.ros.org/ROS/CommandLineTools