

# Names

## \* Graph Resource Name

⇒ Graph Resource Name provide a hierarchical naming structure that is used for all resources in a ROS ~~Computation~~ Computation Graph such as Nodes, Parameters, Topics & Services.

⇒ These names are very powerful in ROS and centered to how large and more complicated systems are composed in ROS.

### Examples:

/  
/foo  
/foo/node1

⇒ Each resource is defined within a name space, which it may share with many other resources.

⇒ Resource can create resource within their namespace and they can access resource within or above their own namespace.

## \* Valid Names

A valid name has the following characteristics:

1. First character is an alpha character (a-z/A-Z), tilde (~) or forward slash (/).

2. Subsequent characters can be alphanumeric ([0-9]A-Z[A-Z]), Underscore(\_), or forward slashes (/)

### Exception

Base names cannot have forward slashes (/) or tildas (~) in them.

### \* Resolving

⇒ There are four types of Graph Resource Name in ROS, which have the following syntax:

- |                 |          |
|-----------------|----------|
| ① base          | base     |
| ② relative/name | relative |
| ③ global/name   | global   |
| ④ ~Private/name | Private  |

⇒ By default, resolution is done relative to the node's namespace.

⇒ Names that start with a '~' are private. They convert the node's name into a namespace.

↳ Example node1 in namespace /wg/  
has the private namespace /wg/node1

