

NAME

gv_tcl - graph manipulation in tcl

SYNOPSIS

```
#!/usr/bin/tclsh
package require gv
```

USAGE

Requires tcl8.3 or later.

INTRODUCTION

gv_tcl is a dynamically loaded extension for **tcl** that provides access to the graph facilities of **graphviz**.

COMMANDS**New graphs**

New empty graph

```
<graph_handle> gv::graph <name>
<graph_handle> gv::digraph <name>
<graph_handle> gv::strictgraph <name>
<graph_handle> gv::strictdigraph <name>
```

New graph from a dot-syntax string or file

```
<graph_handle> gv::readstring <string>
<graph_handle> gv::read <string> filename
<graph_handle> gv::read <channel>
```

Add new subgraph to existing graph

```
<graph_handle> gv::graph <graph_handle> <name>
```

New nodes

Add new node to existing graph

```
<node_handle> gv::node <graph_handle> <name>
```

New edges

Add new edge between existing nodes

```
<edge_handle> gv::edge <tail_node_handle> <head_node_handle>
```

Add a new edge between an existing tail node, and a named head node which will be induced in the graph if it doesn't already exist

```
<edge_handle> gv::edge <tail_node_handle> <head_name>
```

Add a new edge between an existing head node, and a named tail node which will be induced in the graph if it doesn't already exist

```
<edge_handle> gv::edge <tail_name> <head_node_handle>
```

Add a new edge between named tail and head nodes which will be induced in the graph if they don't already exist

```
<edge_handle> gv::edge <graph_handle> <tail_name> <head_name>
```

Setting attribute values

Set value of named attribute of graph/node/edge - creating attribute if necessary

```
<string> gv::setv <graph_handle> <attr_name> <attr_value>
<string> gv::setv <node_handle> <attr_name> <attr_value>
<string> gv::setv <edge_handle> <attr_name> <attr_value>
```

Set value of existing attribute of graph/node/edge (using attribute handle)
 <string> **gv::setv** <graph_handle> <attr_handle> <attr_value>
 <string> **gv::setv** <node_handle> <attr_handle> <attr_value>
 <string> **gv::setv** <edge_handle> <attr_handle> <attr_value>

Getting attribute values

Get value of named attribute of graph/node/edge
 <string> **gv::getv** <graph_handle> <attr_name>
 <string> **gv::getv** <node_handle> <attr_name>
 <string> **gv::getv** <edge_handle> <attr_name>

Get value of attribute of graph/node/edge (using attribute handle)
 <string> **gv::getv** <graph_handle> <attr_handle>
 <string> **gv::getv** <node_handle> <attr_handle>
 <string> **gv::getv** <edge_handle> <attr_handle>

Obtain names from handles

<string> **gv::nameof** <graph_handle>
 <string> **gv::nameof** <node_handle>
 <string> **gv::nameof** <attr_handle>

Find handles from names

<graph_handle> **gv::findsubg** <graph_handle> <name>
 <node_handle> **gv::findnode** <graph_handle> <name>
 <edge_handle> **gv::findedge** <tail_node_handle> <head_node_handle>
 <attr_handle> **gv::findattr** <graph_handle> <name>
 <attr_handle> **gv::findattr** <node_handle> <name>
 <attr_handle> **gv::findattr** <edge_handle> <name>

Misc graph navigators returning handles

<node_handle> **gv::headof** <edge_handle>
 <node_handle> **gv::tailof** <edge_handle>
 <graph_handle> **gv::graphof** <graph_handle>
 <graph_handle> **gv::graphof**