

Std

Std means GLib

Hello world

```
print ("hello, world\n");  
//If you don't need to allocate memory in the heap then main is not needed
```

User Input

```
stdout.printf (@"Your name is : $(stdin.read_line ())");
```

Mathematics

```
stdout.printf ("Please enter the radius of a circle: ");  
double radius = double.parse (stdin.read_line ());  
stdout.printf ("Circumference: %g\n", 2 * Math.PI * radius);  
stdout.printf ("sin(pi/2) = %g\n", Math.sin (Math.PI / 2));
```

Random Numbers

```
var rand = Random.int_range (1, 49);  
Copied!
```

Reading and Writing Text File Content

```
// Writing  
string content = "hello, world";  
FileUtils.set_contents ("data.txt", content);  
// Reading  
string read;  
FileUtils.get_contents ("data.txt", out read);
```

Spawning Processes

```
string output;  
Process.spawn_command_line_sync ("ls", ref output); // now output is result of ls
```

Timer

```
Timer timer = new Timer ();  
stdout.printf (@"$ (timer.elapsed()) sec elapsed");// 0 sec elapsed
```

Copied!

OS Specific

```
Environment.get_current_dir();
Environment.get_real_name();
Environment.get_system_config_dirs();
Environment.get_user_config_dir();
Environment.get_application_name();
Environment.get_home_dir();
...
//Windows specific
Win32.is_nt_based();
Win32.OSType.SERVER;//enum
Win32.get_windows_version();
Win32.getlocale();
Win32.get_package_installation_directory_of_module(hmodule);//hmodule is pointer
...
//Linux specific
Linux.Network.ifMap.port;
Linux. anything from linux.h;
```

Network

Get Twitter Status

Soup Library

```
using Soup;
void main () {
// add your twitter username
string username = "gnome";
// format the URL to use the username as the filename
string url = "http://twitter.com/users/%s.xml".printf (username);
// create an HTTP session to twitter
var session = new Soup.Session ();
var message = new Soup.Message ("GET", url);
// send the HTTP request and wait for response
session.send_message (message);
// output the XML result to stdout
stdout.write (message.response_body.data);
} // to run: vala --pkg libsoup-2.4 filename
```

GIO (Vala standart input output library)

Async Server Example

```
bool on_incoming_connection (SocketConnection conn) {
    stdout.printf ("Got incoming connection\n");
    // Process the request asynchronously
    process_request.begin (conn); // u can call .begin on async funcs
    return true;
}
// Note the async keyword
async void process_request (SocketConnection conn) {
    try {
        var dis = new DataInputStream (conn.input_stream);
        var dos = new DataOutputStream (conn.output_stream);
        string req = yield dis.read_line_async (Priority.HIGH_IDLE);
        dos.put_string ("Got: %s\n".printf (req));
    } catch (Error e) {
        stderr.printf ("%s\n", e.message);
    }
}
void main () {
    try {
        var srv = new SocketService ();
        srv.add_inet_port (3333, null);
        srv.incoming.connect (on_incoming_connection);
        srv.start ();
        new MainLoop ().run ();
    } catch (Error e) {
        stderr.printf ("%s\n", e.message);
    }
}
//
```

Copied!

Connect to localhost via netcat or telnet on port 3333 and issue a command ending with a newline.
echo "blub" | nc localhost 3333

Signals with data (Qt like)

```
public class SignalTest: Object {
    public signal void sig_1(int a);
    string to_string(){ return "hello from SignalTest\n";}
}
//The first argument is always the object that caused the signal.
```

```

void main() {
var t1 = new SignalTest();
t1.sig_1.connect((t, a) => { print("@$a $t\n"); });
t1.sig_1(5);
}

```

Native Regular Expression Literals

```

string email = "tux@kernel.org";
if (/^[A-Z0-9._%+-]+@[A-Z0-9.-]+\.[A-Z]{2,4}$/i.match(email))
stdout.printf("Valid email address\n");
var r = /(foo|bar|cow)/;
var o = r.replace("this foo is great", -1, 0, "thing");
print(o);//this thing is great

```

Structs

Структуры выделяются на стеке Memory for structs is allocated on the Stack.

```

struct Klass{
int a;
int b;
public Klass(){print("Constructor\n");}
}
struct Sas: Klass{
public Sas.with_args(int _a = 2, int _b = 3){a = _a; b = _b;}
public int sum(){return base.a + base.b;}//base here mean Klass
}
void main () {
Sas sas = {5,6};
var sus = Sas() {a = 5,b = 6};
var ses = Sas.with_args(5,6);
prin(sas.sum(), " ",sus.sum(), " ",ses.sum());
}

```

