# 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);

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## 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

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## 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);

}

}

//

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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());

}