

# ETOP

Erlang top

# Opis

Erlang Top - narzędzie do prezentacji informacji o erlangowych procesach, podobne do bashowego „top”

# Uruchamianie

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1. Jeden z dwóch skryptów:

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- > getop (getop.bat dla windows) – etop w wersji graficznej

domyślne miejsce pliku na dysku:

`/usr/lib/erlang/lib/observer-1.3.1.2/priv/bin`

`(C:\Program Files\erl5.10.3\lib\observer-1.3.1.1\priv\bin dla Windows)`

# Uruchamianie

## 1. Jeden z dwóch skryptów:

- > etop (etop.bat dla windows) – etop w wersji tekstowej
- > getop (getop.bat dla windows) – etop w wersji graficznej

domyślne miejsce pliku na dysku:

`/usr/lib/erlang/lib/observer-1.3.1.2/priv/bin`

`(C:\Program Files\erl5.10.3\lib\observer-1.3.1.1\priv\bin dla Windows)`

## 2. W uruchomionym Shellu:

`etop:start()`.

# Parametry uruchomienia



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- node (atom)

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- node (atom)
- setcookie (atom)

# Parametry uruchomienia

- ⦿ node (atom)
- ⦿ setcookie (atom)
- ⦿ lines (integer)

# Parametry uruchomienia

- ◉ node (atom)
- ◉ setcookie (atom)
- ◉ lines (integer)
- ◉ interval (integer)

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- ◉ node (atom)
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- ◉ node (atom)
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- ◉ sort ( runtime | reductions | memory | msg\_q )

# Parametry uruchomienia

- ◉ node (atom)
- ◉ setcookie (atom)
- ◉ lines (integer)
- ◉ interval (integer)
- ◉ accumulate (boolean)
- ◉ sort ( runtime | reductions | memory | msg\_q )
- ◉ tracing ( on | off )

# Parametry uruchomienia

- ◉ node (atom)
- ◉ setcookie (atom)
- ◉ lines (integer)
- ◉ interval (integer)
- ◉ accumulate (boolean)
- ◉ sort ( runtime | reductions | memory | msg\_q )
- ◉ tracing ( on | off )

np.

```
getop -node testnode@myhost -setcookie MyCookie
```

```
etop -node testnode@myhost -lines 5 -interval 1
```

```
getop -node testnode@myhost accumulate true
```



# Funkcje

# Funkcje

- **start()** -> ok

- **start(Options)** -> ok

Options = [Option]

Option = {Key, Value}

Key = atom()

Value = term()

Kluczem może być również **output** (graphical | text)

# Funkcje

- **start()** -> ok

- **start(Options)** -> ok

Options = [Option]

Option = {Key, Value}

Key = atom()

Value = term()

Kluczem może być również **output** (graphical | text)

- **help()** -> ok

# Funkcje

⦿ **config(Key,Value) -> Result**

Result = ok | {error,Reason}

Key = lines | interval | accumulate | sort

Value = term()

# Funkcje

- ◉ **config(Key, Value) -> Result**

Result = ok | {error, Reason}

Key = lines | interval | accumulate | sort

Value = term()

- ◉ **dump(File) -> Result**

Result = ok | {error, Reason}

File = string()

# Funkcje

- ◉ **config(Key, Value) -> Result**

Result = ok | {error, Reason}

Key = lines | interval | accumulate | sort

Value = term()

- ◉ **dump(File) -> Result**

Result = ok | {error, Reason}

File = string()

- ◉ **stop() -> stop**

# Reprezentacja Tekstowa

=====					
test@laptop			22:45:00		
Load:	cpu	0	Memory:	total	15345
	procs	37		processes	4396
	runq	0		atom	258
				binary	468
				code	6600
				ets	281
=====					
Pid	Name or Initial Func	Time	Reds	Memory	MsgQ Current Function
-----					
<5322.30.0>	user_drv	1003	1970	29600	0 user_drv:server_loop
<5322.32.0>	group:server/3	624	1583	34520	0 group:more_data/5
<5322.49.0>	pong	340	111	11696	0 pingPong:pp/2
<5322.48.0>	ping	320	123	11696	0 timer:sleep/1
<5322.21.0>	net_kernel	30	7	9024	0 gen_server:loop/6
<5322.0.0>	init	0	0	18576	0 init:loop/1
<5322.3.0>	erl_prim_loader	0	0	109224	0 erl_prim_loader:loop
<5322.6.0>	error_logger	0	0	6992	0 gen_event:fetch_msg/
<5322.7.0>	application_controll	0	0	235376	0 gen_server:loop/6
<5322.9.0>	application_master:i	0	0	6992	0 application_master:m
=====					

# Nagłówki

```
=====
test@laptop                               22:45:00
Load:  cpu          0                      Memory: total      15345    binary      468
        procs       37                    processes  4396    code        6600
        runq        0                      atom        258    ets         281
=====
Pid      Name or Initial Func  Time  Reds  Memory  MsgQ  Current Function
-----
<5322.30.0> user_drv              1003  1970  29600   0 user_drv:server_loop
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<5322.49.0> pong                 340    111  11696   0 pingPong:pp/2
<5322.48.0> ping                 320    123  11696   0 timer:sleep/1
<5322.21.0> net_kernel           30     7    9024    0 gen_server:loop/6
<5322.0.0> init                 0     0    18576   0 init:loop/1
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<5322.6.0> error_logger         0     0    6992    0 gen_event:fetch_msg/
<5322.7.0> application_controll 0     0  235376   0 gen_server:loop/6
<5322.9.0> application_master:i 0     0    6992    0 application_master:m
=====
```



# Nagłówki

## ● Load

```
=====
test@laptop                               22:45:00
Load:  cpu          0                      Memory: total      15345  binary      468
        procs       37                    processes  4396  code        6600
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=====

Pid      Name or Initial Func  Time  Reds  Memory  MsgQ  Current Function
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<5322.30.0> user_drv              1003  1970  29600   0 user_drv:server_loop
<5322.32.0> group:server/3        624   1583  34520   0 group:more_data/5
<5322.49.0> pong                  340    111  11696   0 pingPong:pp/2
<5322.48.0> ping                  320    123  11696   0 timer:sleep/1
<5322.21.0> net_kernel            30     7    9024   0 gen_server:loop/6
<5322.0.0> init                  0     0    18576   0 init:loop/1
<5322.3.0> erl_prim_loader       0     0  109224   0 erl_prim_loader:loop
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<5322.7.0> application_controll  0     0  235376   0 gen_server:loop/6
<5322.9.0> application_master:i  0     0    6992   0 application_master:m
=====
```

# Nagłówki

- Load
- Memory (KB)

```
=====
test@laptop                                     22:45:00
Load:  cpu          0                          Memory: total    15345  binary    468
      procs        37                        processes  4396   code      6600
      runq         0                         atom       258   ets       281
=====
Pid      Name or Initial Func  Time  Reds  Memory  MsgQ  Current Function
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<5322.30.0> user_drv                1003  1970  29600   0 user_drv:server_loop
<5322.32.0> group:server/3         624   1583  34520   0 group:more_data/5
<5322.49.0> pong                   340    111  11696   0 pingPong:pp/2
<5322.48.0> ping                   320    123  11696   0 timer:sleep/1
<5322.21.0> net_kernel              30     7    9024    0 gen_server:loop/6
<5322.0.0> init                    0     0    18576   0 init:loop/1
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=====
```

# Informacje o procesach

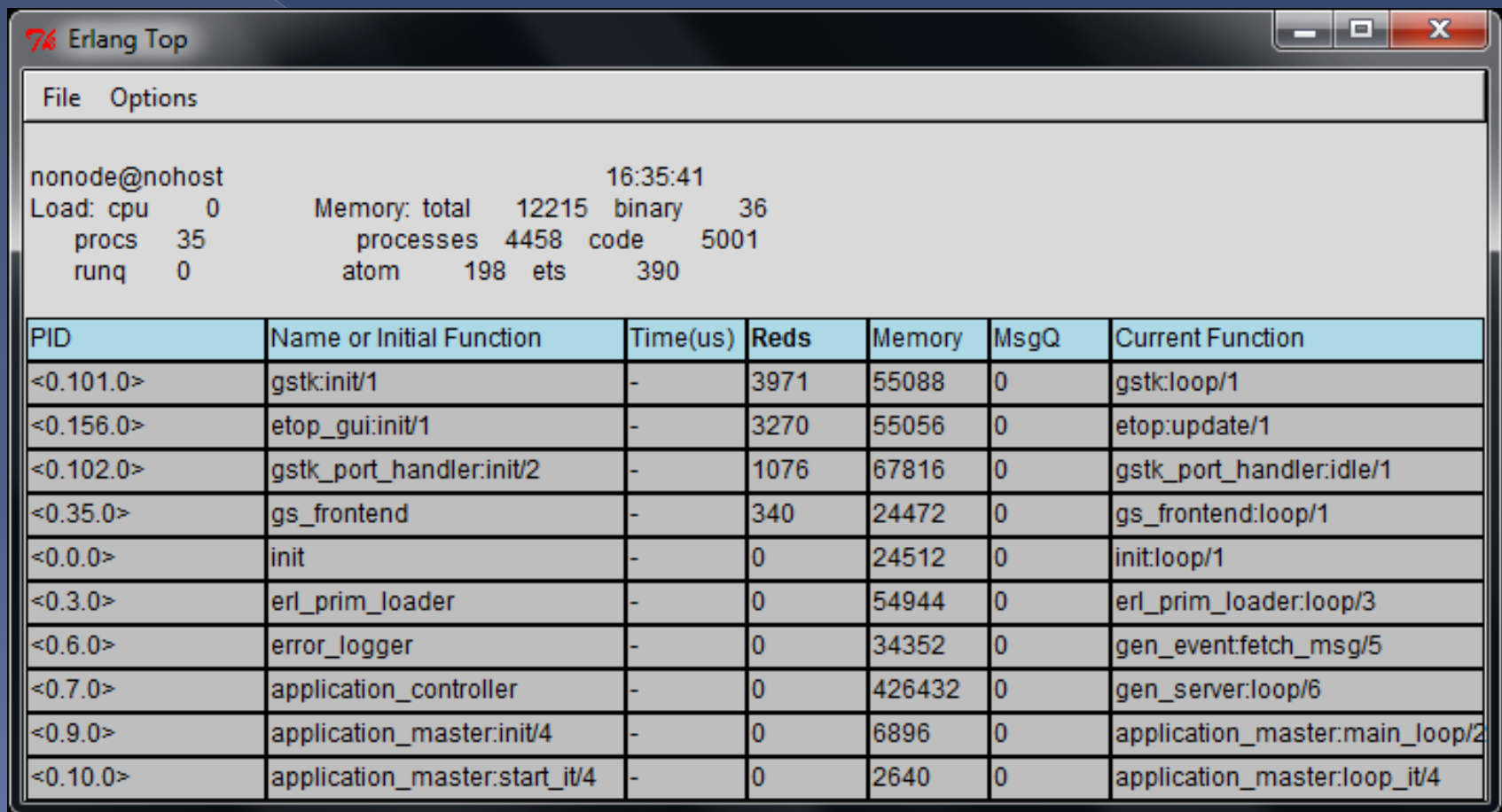
```
=====
test@laptop                               22:45:00
Load:  cpu          0                      Memory: total      15345    binary      468
        procs       37                    processes  4396    code        6600
        runq        0                      atom        258    ets         281
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Pid      Name or Initial Func  Time   Reds  Memory  MsgQ  Current Function
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<5322.30.0> user_drv              1003   1970   29600   0     user_drv:server_loop
<5322.32.0> group:server/3       624    1583   34520   0     group:more_data/5
<5322.49.0> pong                 340     111   11696   0     pingPong:pp/2
<5322.48.0> ping                 320     123   11696   0     timer:sleep/1
<5322.21.0> net_kernel           30       7    9024   0     gen_server:loop/6
<5322.0.0> init                 0        0   18576   0     init:loop/1
<5322.3.0> erl_prim_loader      0        0  109224   0     erl_prim_loader:loop
<5322.6.0> error_logger         0        0   6992   0     gen_event:fetch_msg/
<5322.7.0> application_controll 0        0  235376   0     gen_server:loop/6
<5322.9.0> application_master:i 0        0   6992   0     application_master:m
=====
```

# Informacje o procesach

- Time
- Reds
- Memory (B)
- MsgQ
- Current function

```
=====
test@laptop                               22:45:00
Load:  cpu          0                      Memory: total      15345    binary      468
        procs       37                    processes  4396    code        6600
        runq        0                      atom        258    ets         281
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<5322.0.0> init                    0    0    18576   0    init:loop/1
<5322.3.0> erl_prim_loader         0    0  109224   0    erl_prim_loader:loop
<5322.6.0> error_logger            0    0    6992   0    gen_event:fetch_msg/
<5322.7.0> application_controll    0    0  235376   0    gen_server:loop/6
<5322.9.0> application_master:i    0    0    6992   0    application_master:m
=====
```

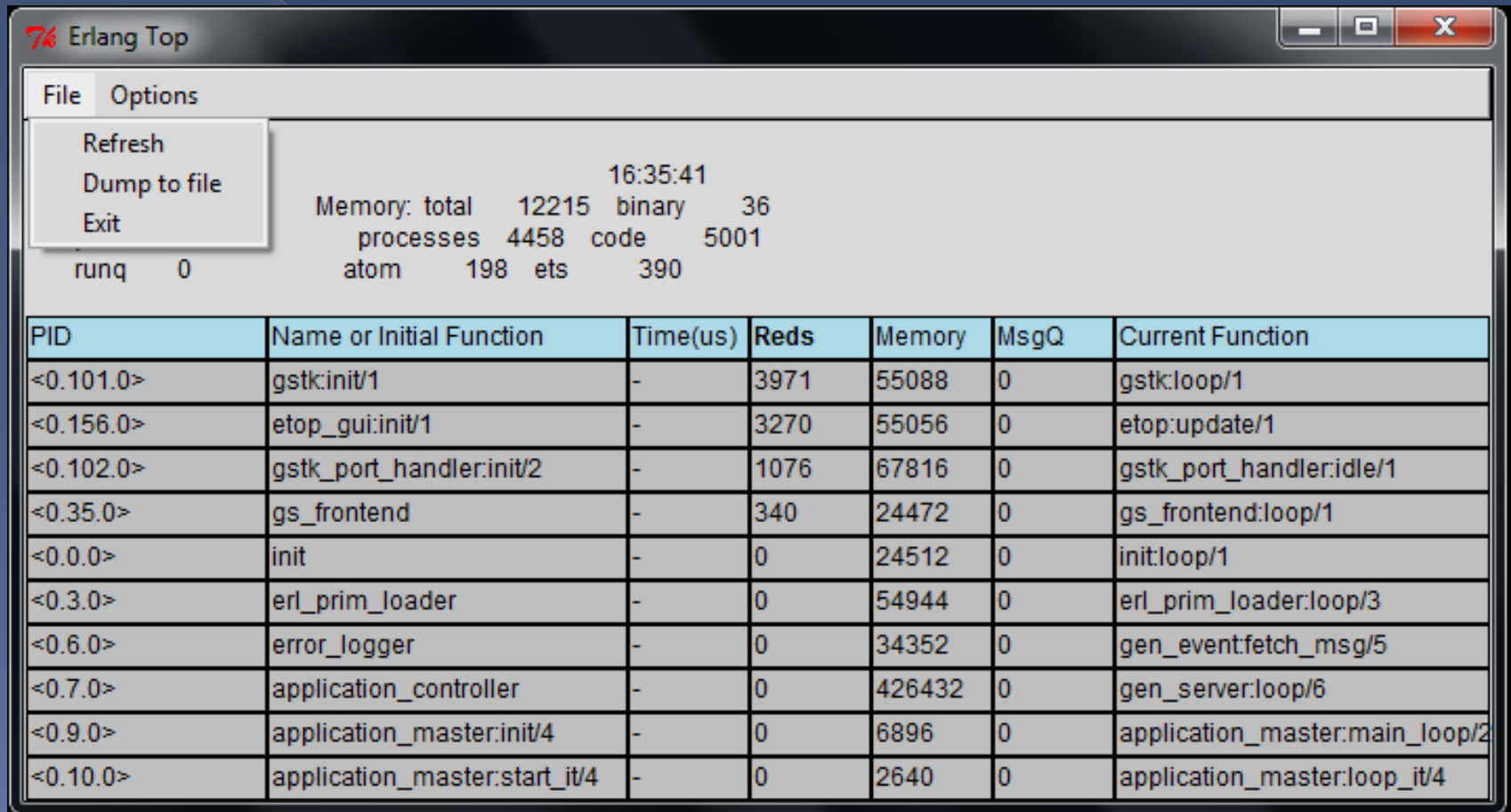
# Reprezentacja graficzna



The screenshot shows the 'Erlang Top' application window. At the top, it displays the node name 'nonode@nohost' and the time '16:35:41'. Below this, system statistics are shown: 'Load: cpu 0', 'procs 35', 'runq 0', 'Memory: total 12215', 'binary 36', 'processes 4458', 'code 5001', 'atom 198', and 'ets 390'. The main part of the window is a table listing running processes with columns for PID, Name or Initial Function, Time(us), Reds, Memory, MsgQ, and Current Function.

PID	Name or Initial Function	Time(us)	Reds	Memory	MsgQ	Current Function
<0.101.0>	gstk:init/1	-	3971	55088	0	gstk:loop/1
<0.156.0>	etop_gui:init/1	-	3270	55056	0	etop:update/1
<0.102.0>	gstk_port_handler:init/2	-	1076	67816	0	gstk_port_handler:idle/1
<0.35.0>	gs_frontend	-	340	24472	0	gs_frontend:loop/1
<0.0.0>	init	-	0	24512	0	init:loop/1
<0.3.0>	erl_prim_loader	-	0	54944	0	erl_prim_loader:loop/3
<0.6.0>	error_logger	-	0	34352	0	gen_event:fetch_msg/5
<0.7.0>	application_controller	-	0	426432	0	gen_server:loop/6
<0.9.0>	application_master:init/4	-	0	6896	0	application_master:main_loop/2
<0.10.0>	application_master:start_it/4	-	0	2640	0	application_master:loop_it/4

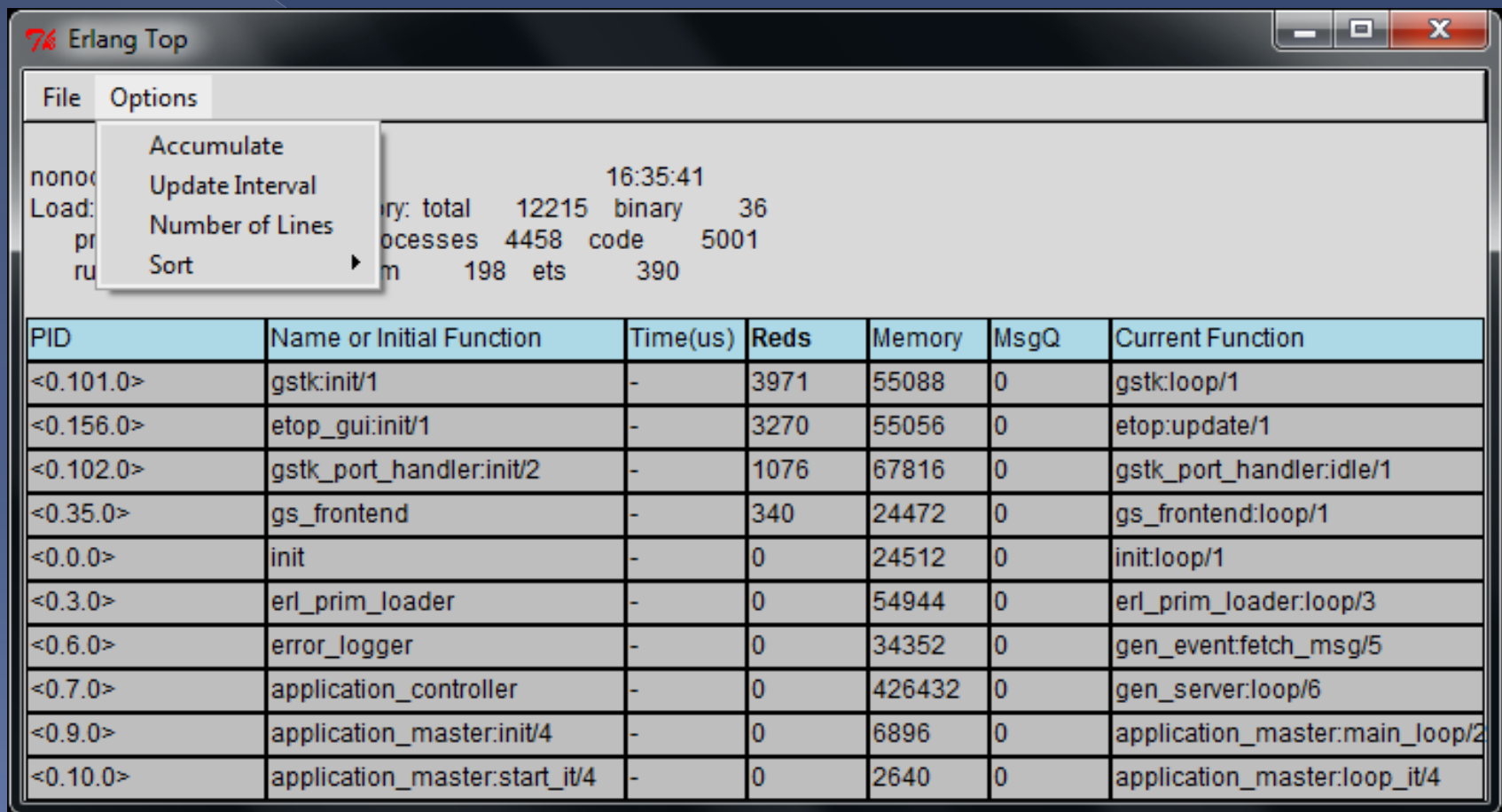
# Reprezentacja graficzna



The screenshot shows the Erlang Top GUI window. The title bar reads 'Erlang Top'. The menu bar has 'File' and 'Options'. The 'Options' menu is open, showing 'Refresh', 'Dump to file', and 'Exit'. The main area displays system statistics at 16:35:41: Memory: total 12215 binary 36, processes 4458 code 5001, atom 198 ets 390. Below this is a table with 7 columns: PID, Name or Initial Function, Time(us), Reds, Memory, MsgQ, and Current Function. The table lists 10 processes, including gstk:init/1, etop\_gui:init/1, gstk\_port\_handler:init/2, gs\_frontend, init, erl\_prim\_loader, error\_logger, application\_controller, application\_master:init/4, and application\_master:start\_it/4.

PID	Name or Initial Function	Time(us)	Reds	Memory	MsgQ	Current Function
<0.101.0>	gstk:init/1	-	3971	55088	0	gstk:loop/1
<0.156.0>	etop_gui:init/1	-	3270	55056	0	etop:update/1
<0.102.0>	gstk_port_handler:init/2	-	1076	67816	0	gstk_port_handler:idle/1
<0.35.0>	gs_frontend	-	340	24472	0	gs_frontend:loop/1
<0.0.0>	init	-	0	24512	0	init:loop/1
<0.3.0>	erl_prim_loader	-	0	54944	0	erl_prim_loader:loop/3
<0.6.0>	error_logger	-	0	34352	0	gen_event:fetch_msg/5
<0.7.0>	application_controller	-	0	426432	0	gen_server:loop/6
<0.9.0>	application_master:init/4	-	0	6896	0	application_master:main_loop/2
<0.10.0>	application_master:start_it/4	-	0	2640	0	application_master:loop_it/4

# Reprezentacja graficzna



The screenshot shows the Erlang Top application window. The title bar reads "Erlang Top". Below the title bar is a menu bar with "File" and "Options". The "Options" menu is open, showing a list of options: "Accumulate", "Update Interval", "Number of Lines", and "Sort". The main area of the window displays system statistics and a table of running processes.

Statistics displayed:

- nonoc
- Load:
- pr
- ru
- 16:35:41
- ry: total 12215 binary 36
- ocesses 4458 code 5001
- m 198 ets 390

PID	Name or Initial Function	Time(us)	Reds	Memory	MsgQ	Current Function
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<0.156.0>	etop_gui:init/1	-	3270	55056	0	etop:update/1
<0.102.0>	gstk_port_handler:init/2	-	1076	67816	0	gstk_port_handler:idle/1
<0.35.0>	gs_frontend	-	340	24472	0	gs_frontend:loop/1
<0.0.0>	init	-	0	24512	0	init:loop/1
<0.3.0>	erl_prim_loader	-	0	54944	0	erl_prim_loader:loop/3
<0.6.0>	error_logger	-	0	34352	0	gen_event:fetch_msg/5
<0.7.0>	application_controller	-	0	426432	0	gen_server:loop/6
<0.9.0>	application_master:init/4	-	0	6896	0	application_master:main_loop/2
<0.10.0>	application_master:start_it/4	-	0	2640	0	application_master:loop_it/4

# Przykład uruchomienia



# Przykład uruchomienia

Erlang:

```
erl -sname test
```

```
(test@laptop)1> c("pingPong.erl").
```

```
(test@laptop)2> pingPong:start().
```

```
(test@laptop)3> pingPong:play(100).
```

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```
erl -sname test
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```
(test@laptop)1> c("pingPong.erl").
```

```
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```

```
(test@laptop)3> pingPong:play(100).
```

Etop:

```
./etop -node test@laptop
```

# Przykład uruchomienia

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```
erl -sname test
```

```
(test@laptop)1> c("pingPong.erl").
```

```
(test@laptop)2> pingPong:start().
```

```
(test@laptop)3> pingPong:play(100).
```

Etop:

```
./etop -node test@laptop
```

```
=====
test@laptop
Load:  cpu      0      Memory:  total      15345      binary      468
      procs    37      processes  4396      code        6600
      runq     0      atom       258      ets         281

Pid      Name or Initial Func      Time      Reds      Memory      MsgQ      Current Function
-----
<5322.30.0>  user_drv                    1003      1970      29600      0      user_drv:server_loop
<5322.32.0>  group:server/3              624      1583      34520      0      group:more_data/5
<5322.49.0>  pong                        340      111      11696      0      pingPong:pp/2
<5322.48.0>  ping                        320      123      11696      0      timer:sleep/1
<5322.21.0>  net_kernel                  30       7       9024      0      gen_server:loop/6
<5322.0.0>   init                        0       0      18576      0      init:loop/1
<5322.3.0>   erl_prim_loader             0       0     109224      0      erl_prim_loader:loop
<5322.6.0>   error_logger                0       0      6992      0      gen_event:fetch_msg/
<5322.7.0>   application_controll        0       0     235376      0      gen_server:loop/6
<5322.9.0>   application_master:i        0       0      6992      0      application_master:m
=====
```

Autorzy:  
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Michał Furmanek

<https://github.com/gkonstanty/presentationOfEtop>

Źródła(dokumentacja):

<https://www.erlang.org/doc/man/etop.html>

[https://www.erlang.org/doc/apps/observer/etop\\_ug.html](https://www.erlang.org/doc/apps/observer/etop_ug.html)