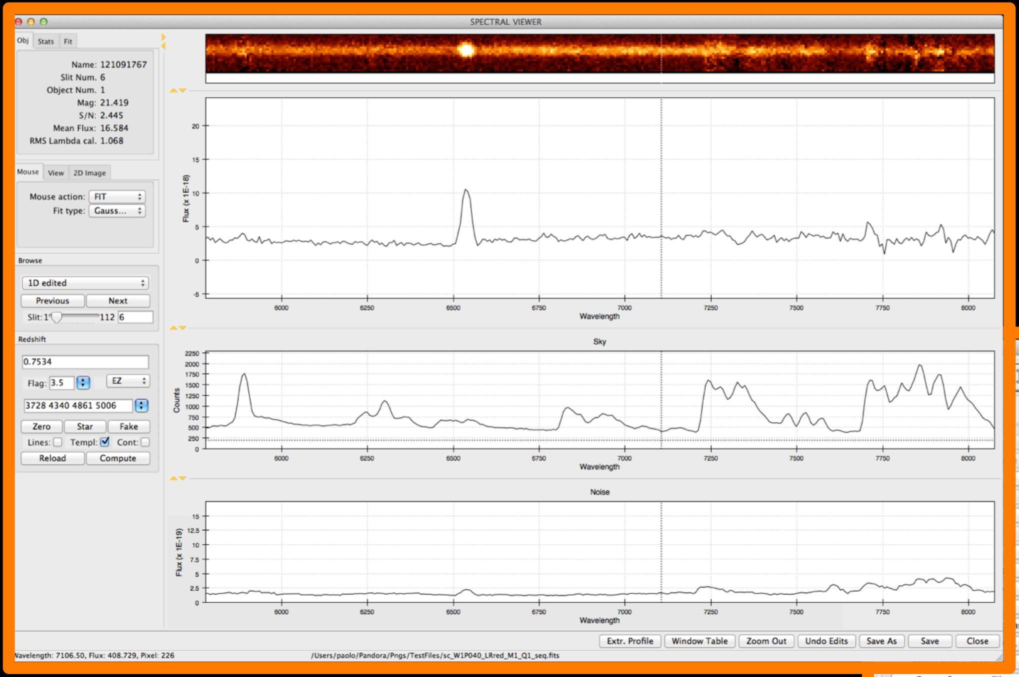
bugbusters

disinfestatori di software

Paolo Franzetti

Astrosiesta – 9/4/2015

una doverosa premessa



Name: 121091767
Slit Num. 6
Object Num. 1
Mag: 21.419
S/N: 2.445
Mean Flux: 16.584
RMS Lambda cal. 1.068

Mouse action: FIT
Fit type: Gauss...

1D edited

Slit: 1 112 6

0.7534

Flag: 3.5 EZ

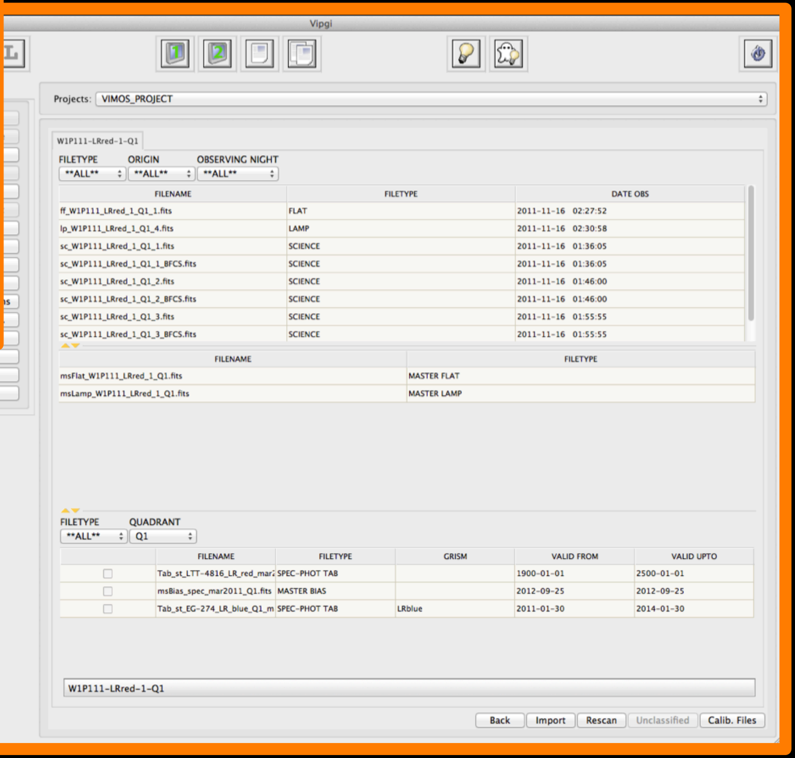
3728 4340 4861 5006

Lines: □ Templ: ☑ Cont: □

Wavelength: 7106.50, Flux: 408.729, Pixel: 226 /Users/paolo/Pandora/Pngs/TestFiles/sc_W1P040_LRed_M1_Q1_seq.fits

pandora.ez

pandora.vipgi



Projects: VIMOS_PROJECT

FILETYPE **ALL** ORIGIN **ALL** OBSERVING NIGHT **ALL**

FILENAME	FILETYPE	DATE OBS
ff_W1P111_LRred_1_Q1_1.fits	FLAT	2011-11-16 02:27:52
lp_W1P111_LRred_1_Q1_4.fits	LAMP	2011-11-16 02:30:58
sc_W1P111_LRred_1_Q1_1.fits	SCIENCE	2011-11-16 01:36:05
sc_W1P111_LRred_1_Q1_1_BFCS.fits	SCIENCE	2011-11-16 01:36:05
sc_W1P111_LRred_1_Q1_2.fits	SCIENCE	2011-11-16 01:46:00
sc_W1P111_LRred_1_Q1_2_BFCS.fits	SCIENCE	2011-11-16 01:46:00
sc_W1P111_LRred_1_Q1_3.fits	SCIENCE	2011-11-16 01:55:55
sc_W1P111_LRred_1_Q1_3_BFCS.fits	SCIENCE	2011-11-16 01:55:55

FILENAME	FILETYPE
msFlat_W1P111_LRred_1_Q1.fits	MASTER FLAT
msLamp_W1P111_LRred_1_Q1.fits	MASTER LAMP

FILETYPE **ALL** QUADRANT Q1

	FILENAME	FILETYPE	GRISM	VALID FROM	VALID UPTO
□	Tab_st_LTT-4816_LR_red_mar2	SPEC-PHOT TAB		1900-01-01	2500-01-01
□	msBias_spec_mar2011_Q1.fits	MASTER BIAS		2012-09-25	2012-09-25
□	Tab_st_EG-274_LR_blue_Q1_m	SPEC-PHOT TAB	LRblue	2011-01-30	2014-01-30

W1P111-LRred-1-Q1

il nemico

cos’è un *bug*

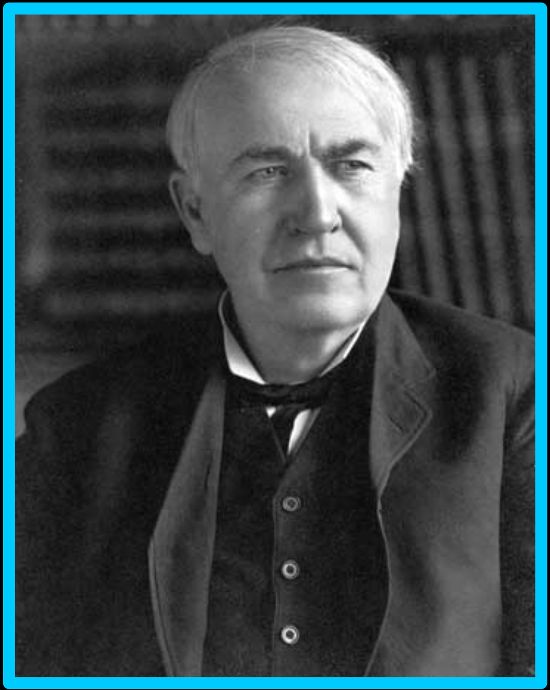
wikipedia dixit il nemico

a software bug is an **error**, **flaw**, **failure**, or **fault** in a computer program or system that causes it to produce an incorrect or unexpected result, or to behave in unintended ways

etimologia il nemico

It has been just so in all of my inventions. The first step is an intuition, and comes with a burst, then difficulties arise - this thing gives out and then that bugs - as such little faults and difficulties are called - show themselves and months of intense watching, study and labor are requisite before commercial success or failure is certainly reached

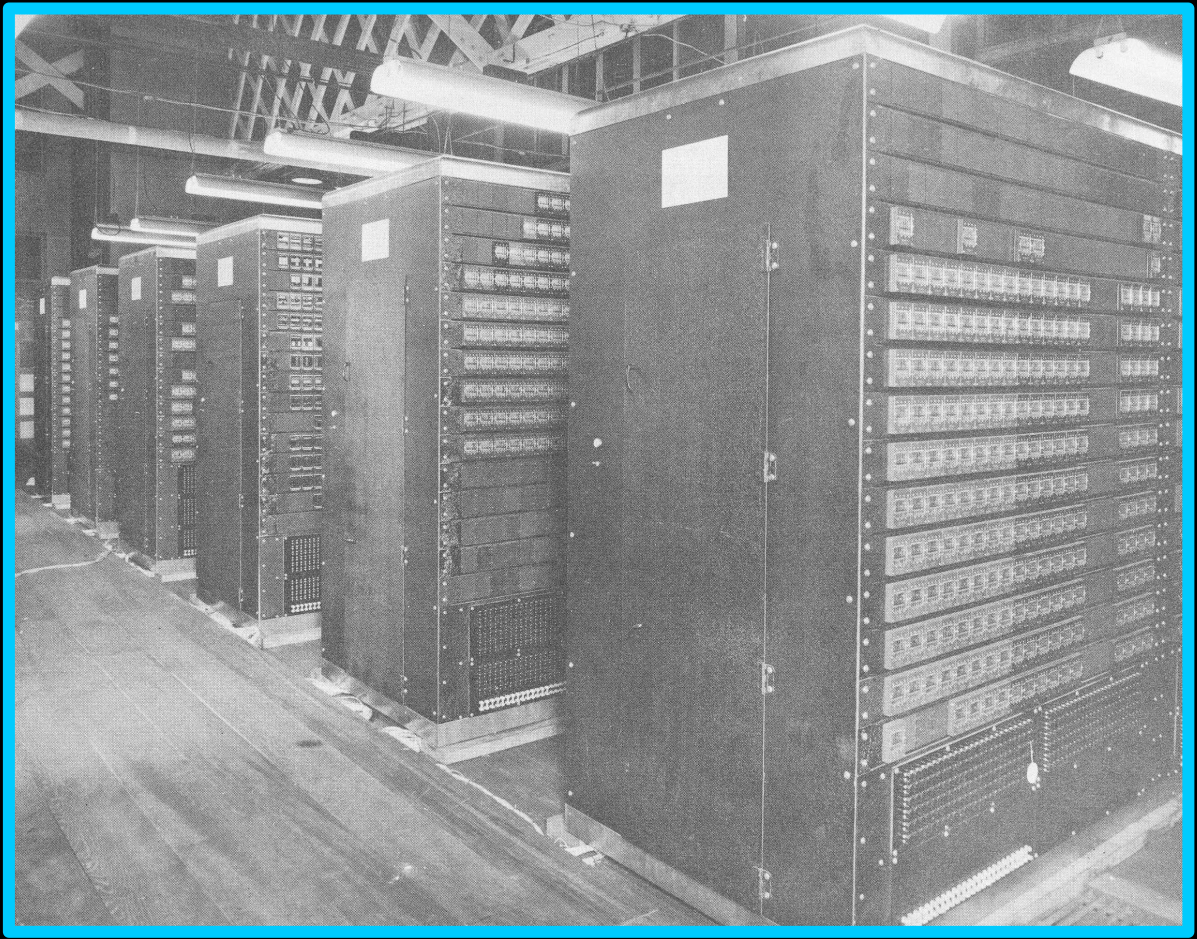
Thomas Edison, 1878



etimologia il nemico

Grace Murray Hopper, 1947

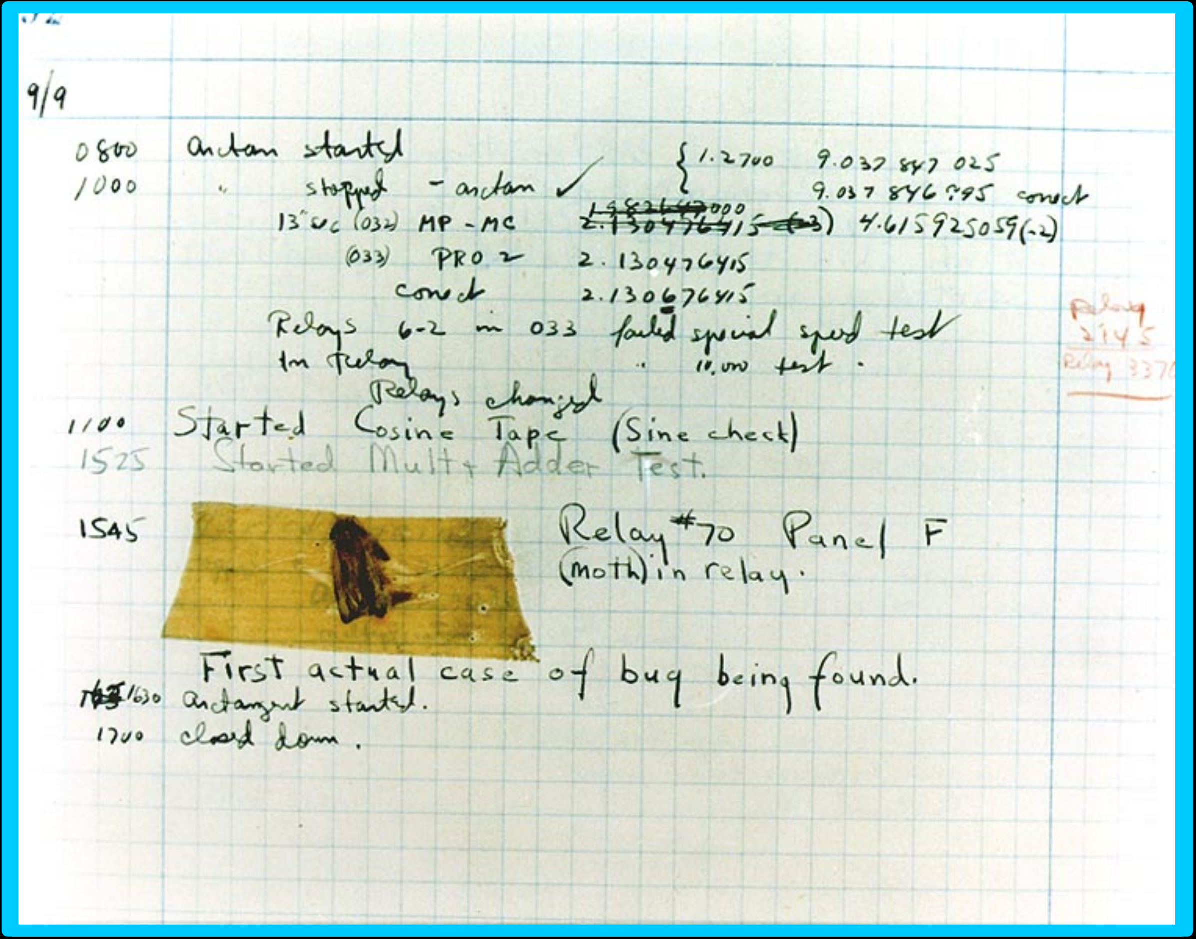
Harvard Mark I
(16 x 2.4 x 0.61 m, 4500 kg)



etimologia il nemico

Grace Murray Hopper, 1947

Harvard Mark I
(16 x 2.4 x 0.61 m, 4500 kg)



9/9

0800 Arctan started

1000 " stopped - arctan ✓ {1.2700 9.037 847 025
9.037 846 995 correct

13" uc (032) MP - MC ~~1.982147000~~ ~~2.130476415 (-3)~~ 4.615925059(-2)

(033) PRO 2 2.130476415

correct 2.130676415

Relays 6-2 in 033 failed special speed test
in relay " 10,000 test .

Relays changed

1100 Started Cosine Tape (Sine check)

1525 Started Mult + Adder Test.

1545 Relay #70 Panel F
(moth) in relay.

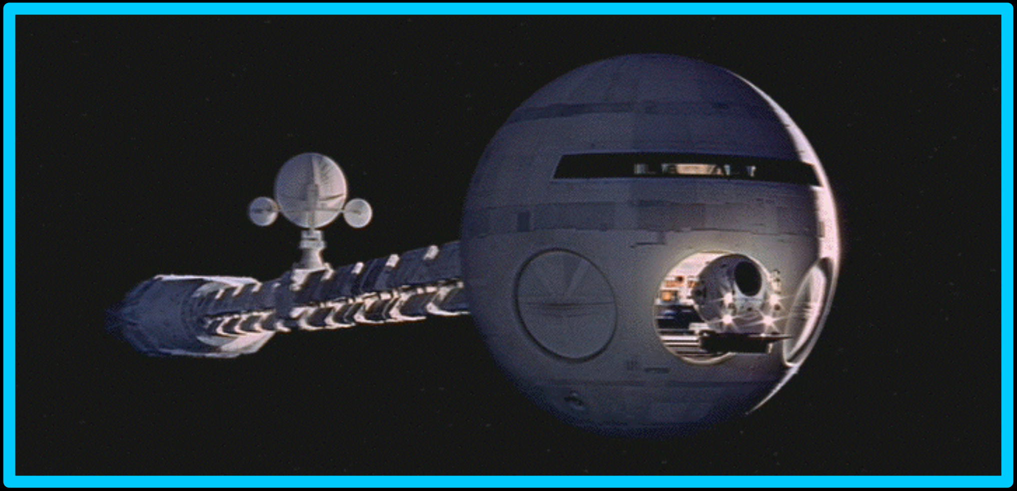
First actual case of bug being found.

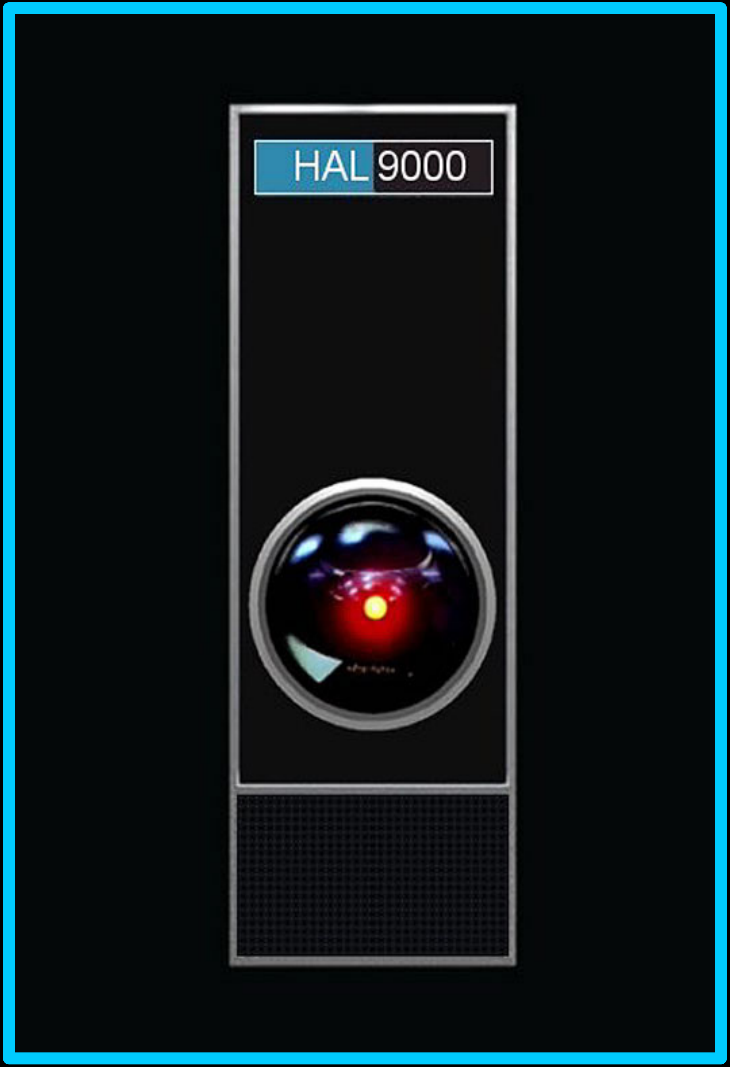
~~1600~~ 1630 Arctangent started.

1700 closed down .

Relay 2145
Relay 3370

sci-fi il nemico

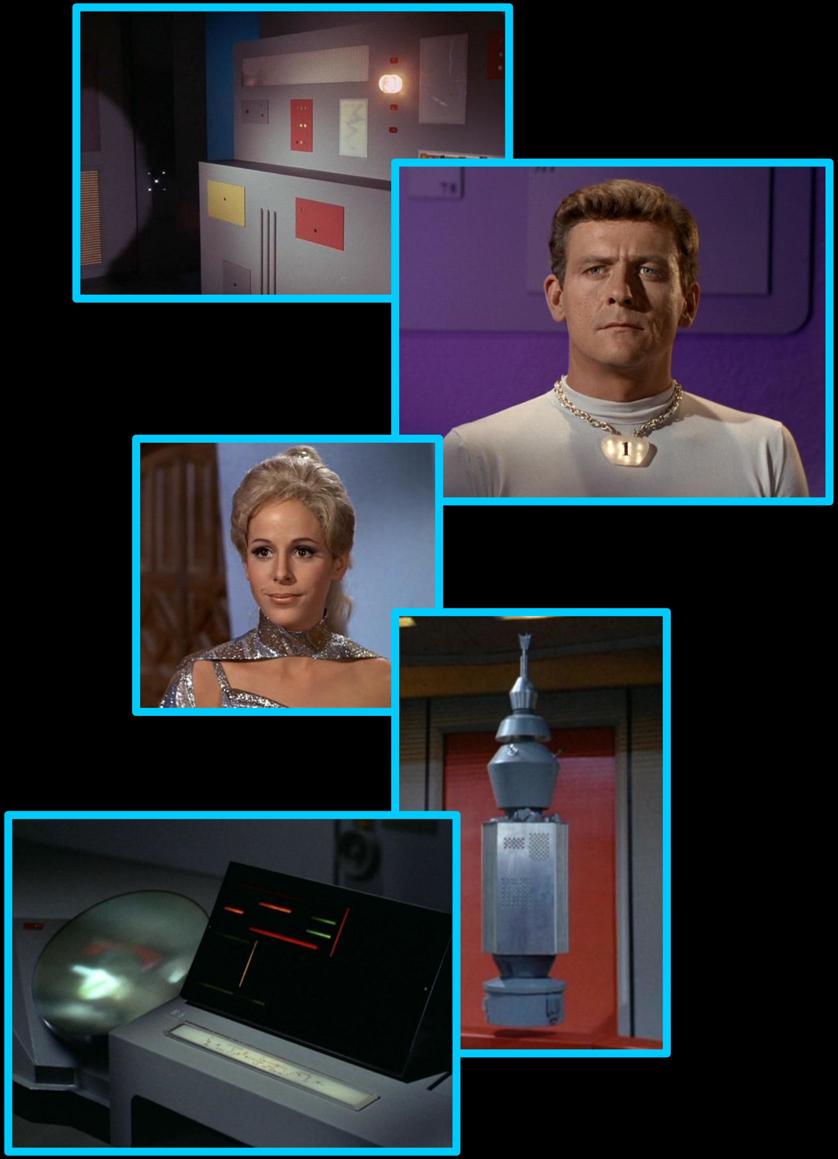




- Open the pod bay doors, HAL.
- I'm sorry, Dave. I'm afraid I can't do that.

sci-fi il nemico

“ You say you are lying, but if everything you say is a lie then you are telling the truth, but you cannot tell the truth because everything you say is a lie, but...
you lie, you tell the truth,
but you cannot for you...
Illogical! Illogical! Please explain! ”



l’esercito

in quanti modi si può sbagliare

i tipi l’esercito

Arithmetic bugs

- Division by zero.
- Arithmetic overflow or underflow.
- Loss of arithmetic precision due to rounding or numerically unstable algorithms.

Logic bugs

- Infinite loops and infinite recursion.
- Off-by-one error, counting one too many or too few when looping.

Syntax bugs

- Use of the wrong operator, such as performing assignment instead of equality test.

Resource bugs

- Null pointer dereference.
- Using an uninitialized variable.
- Using an otherwise valid instruction on the wrong data type.
- Access violations.
- Resource leaks, where a finite system resource become exhausted by repeated allocation without release.
- Buffer overflow, in which a program tries to store data past the end of allocated storage.
- Excessive recursion which — though logically valid — causes stack overflow.
- Use-after-free error, where a pointer is used after the system has freed the memory it references.
- Double free error.

Multi-threading programming bugs

- Deadlock, where task A can't continue until task B finishes, but at the same time, task B can't continue until task A finishes.
- Race condition, where the computer does not perform tasks in the order the programmer intended.
- Concurrency errors in critical sections, mutual exclusions and other features of concurrent processing.

Interfacing bugs

- Incorrect API usage.
- Incorrect protocol implementation.
- Incorrect hardware handling.
- Incorrect assumptions of a particular platform.

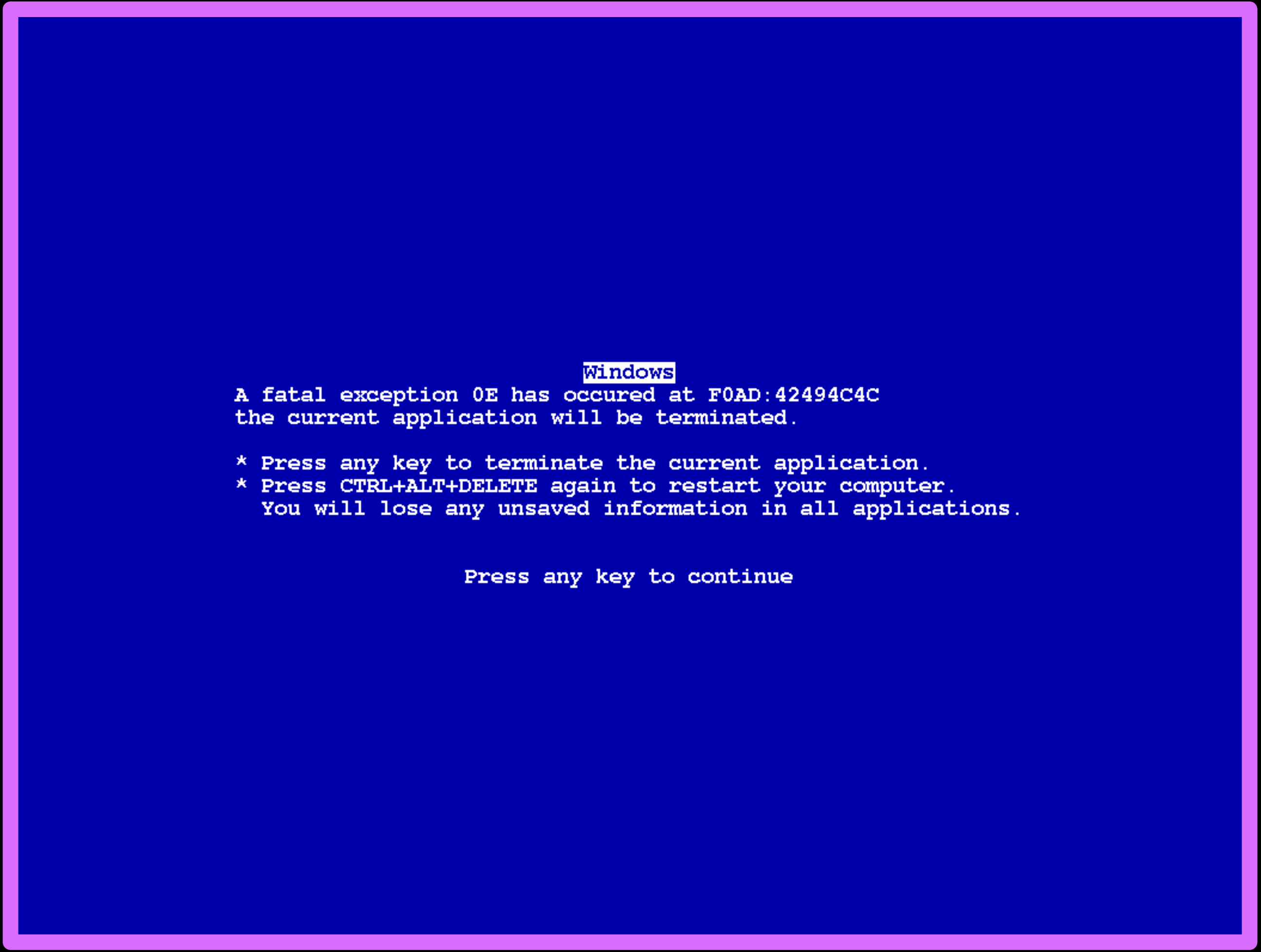
Performance bugs

- Too high computational complexity of algorithm.
- Random disk or memory access.

Teamworking bugs

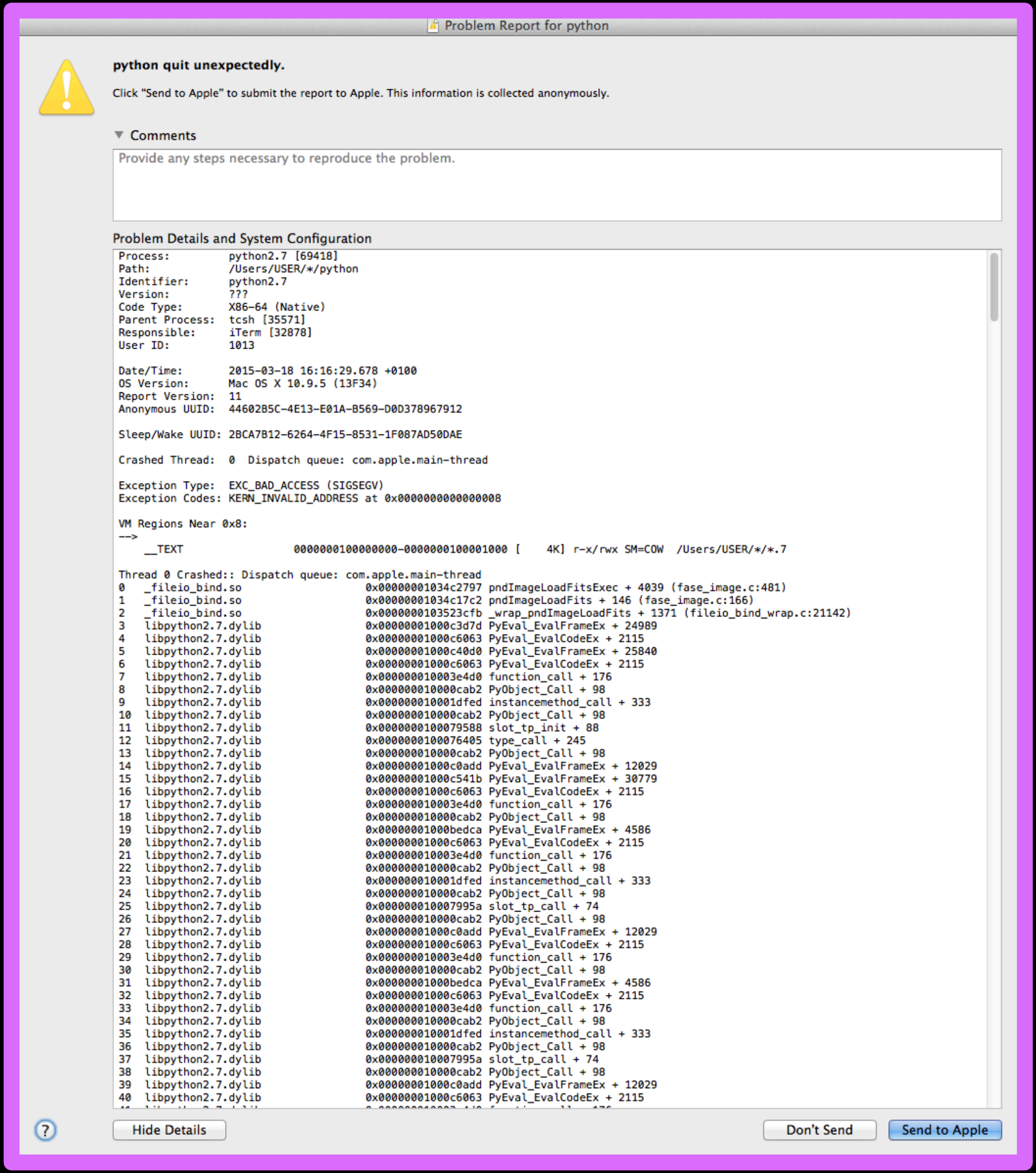
- Unpropagated updates.
- Comments out of date or incorrect: many programmers assume the comments accurately describe the code.
- Differences between documentation and the actual product.

segmentation fault l’esercito



```
                              Windows
A fatal exception 0E has occured at F0AD:42494C4C
the current application will be terminated.

* Press any key to terminate the current application.
* Press CTRL+ALT+DELETE again to restart your computer.
  You will lose any unsaved information in all applications.


                 Press any key to continue
```

segmentation fault l'esercito



python quit unexpectedly.

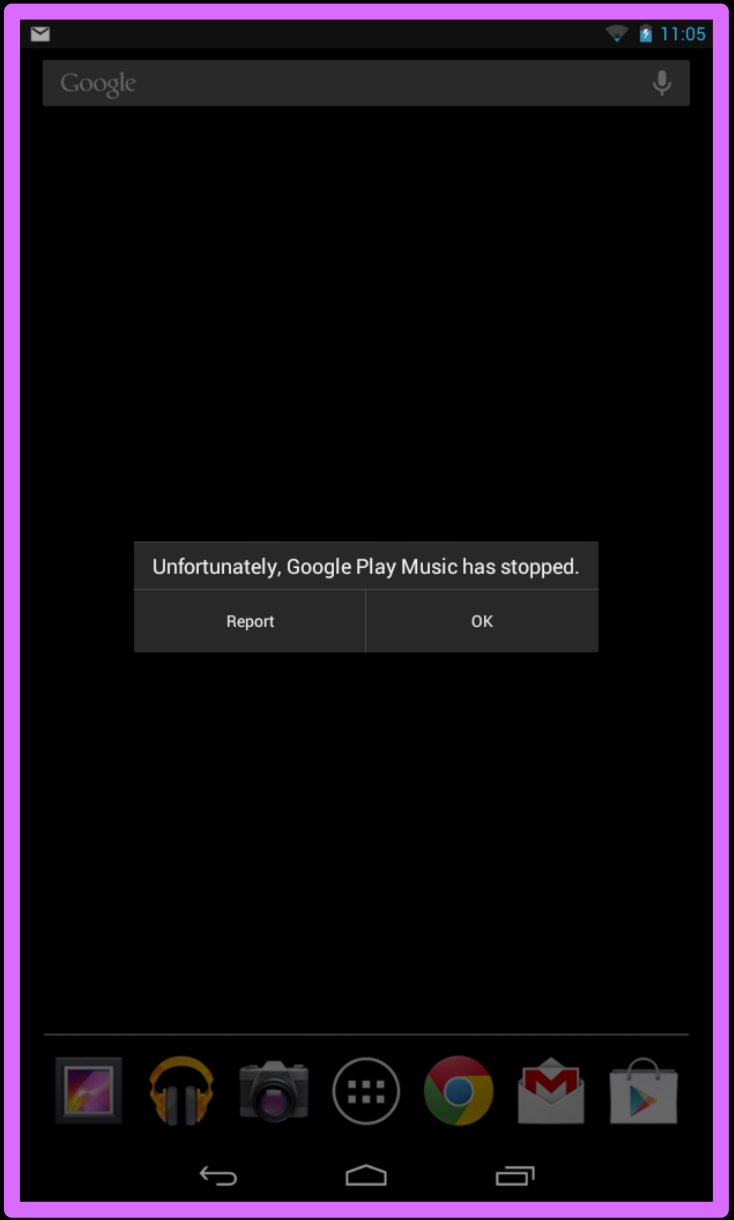
Click "Send to Apple" to submit the report to Apple. This information is collected anonymously.

Provide any steps necessary to reproduce the problem.

Problem Details and System Configuration

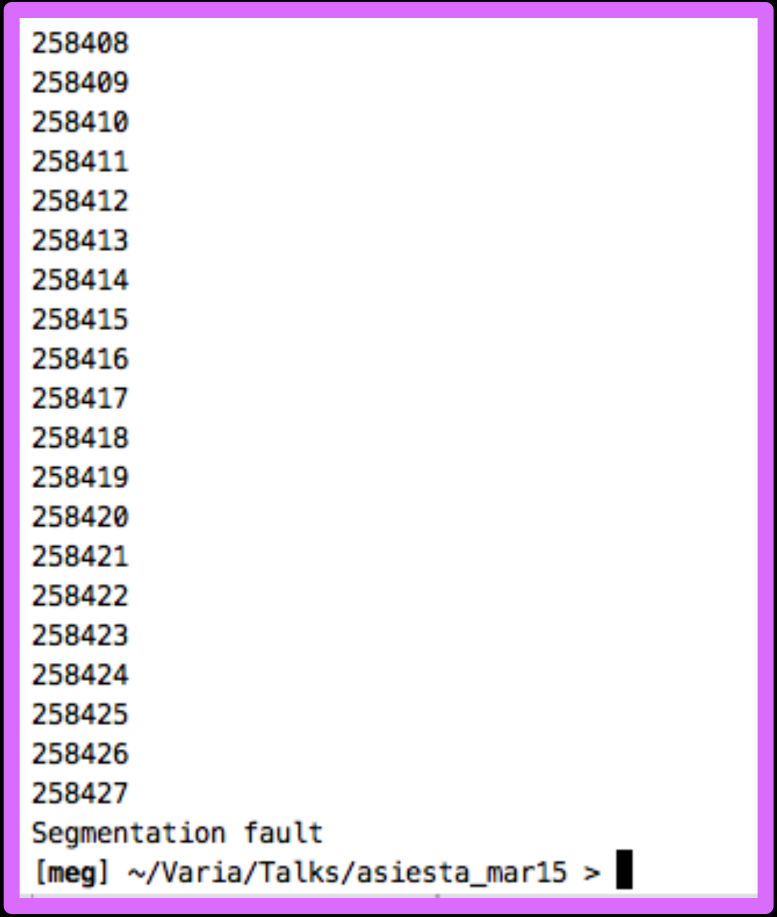
```
Process:         python2.7 [69418]
Path:            /Users/USER/*/python
Identifier:      python2.7
Version:         ???
Code Type:       X86-64 (Native)
Parent Process:  tcsh [35571]
Responsible:     iTerm [32878]
User ID:         1013

Date/Time:       2015-03-18 16:16:29.678 +0100
OS Version:      Mac OS X 10.9.5 (13F34)
Report Version:  11
Anonymous UUID:  44602B5C-4E13-E01A-B569-D0D378967912

Sleep/Wake UUID: 2BCA7B12-6264-4F15-8531-1F087AD50DAE

Crashed Thread:  0  Dispatch queue: com.apple.main-thread

Exception Type:  EXC_BAD_ACCESS (SIGSEGV)
Exception Codes: KERN_INVALID_ADDRESS at 0x0000000000000008

VM Regions Near 0x8:
-->
    __TEXT                 0000000100000000-0000000100001000 [    4K] r-x/rwx SM=COW  /Users/USER/*/*.7

Thread 0 Crashed:: Dispatch queue: com.apple.main-thread
0   _fileio_bind.so               0x00000001034c2797 pndImageLoadFitsExec + 4039 (fase_image.c:481)
1   _fileio_bind.so               0x00000001034c17c2 pndImageLoadFits + 146 (fase_image.c:166)
2   _fileio_bind.so               0x0000000103523cfb _wrap_pndImageLoadFits + 1371 (fileio_bind_wrap.c:21142)
3   libpython2.7.dylib            0x00000001000c3d7d PyEval_EvalFrameEx + 24989
4   libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
5   libpython2.7.dylib            0x00000001000c40d0 PyEval_EvalFrameEx + 25840
6   libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
7   libpython2.7.dylib            0x000000010003e4d0 function_call + 176
8   libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
9   libpython2.7.dylib            0x000000010001dfed instancemethod_call + 333
10  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
11  libpython2.7.dylib            0x0000000100079588 slot_tp_init + 88
12  libpython2.7.dylib            0x0000000100076405 type_call + 245
13  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
14  libpython2.7.dylib            0x00000001000c0add PyEval_EvalFrameEx + 12029
15  libpython2.7.dylib            0x00000001000c541b PyEval_EvalFrameEx + 30779
16  libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
17  libpython2.7.dylib            0x000000010003e4d0 function_call + 176
18  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
19  libpython2.7.dylib            0x00000001000bedca PyEval_EvalFrameEx + 4586
20  libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
21  libpython2.7.dylib            0x000000010003e4d0 function_call + 176
22  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
23  libpython2.7.dylib            0x000000010001dfed instancemethod_call + 333
24  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
25  libpython2.7.dylib            0x000000010007995a slot_tp_call + 74
26  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
27  libpython2.7.dylib            0x00000001000c0add PyEval_EvalFrameEx + 12029
28  libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
29  libpython2.7.dylib            0x000000010003e4d0 function_call + 176
30  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
31  libpython2.7.dylib            0x00000001000bedca PyEval_EvalFrameEx + 4586
32  libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
33  libpython2.7.dylib            0x000000010003e4d0 function_call + 176
34  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
35  libpython2.7.dylib            0x000000010001dfed instancemethod_call + 333
36  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
37  libpython2.7.dylib            0x000000010007995a slot_tp_call + 74
38  libpython2.7.dylib            0x000000010000cab2 PyObject_Call + 98
39  libpython2.7.dylib            0x00000001000c0add PyEval_EvalFrameEx + 12029
40  libpython2.7.dylib            0x00000001000c6063 PyEval_EvalCodeEx + 2115
```

segmentation fault l'esercito

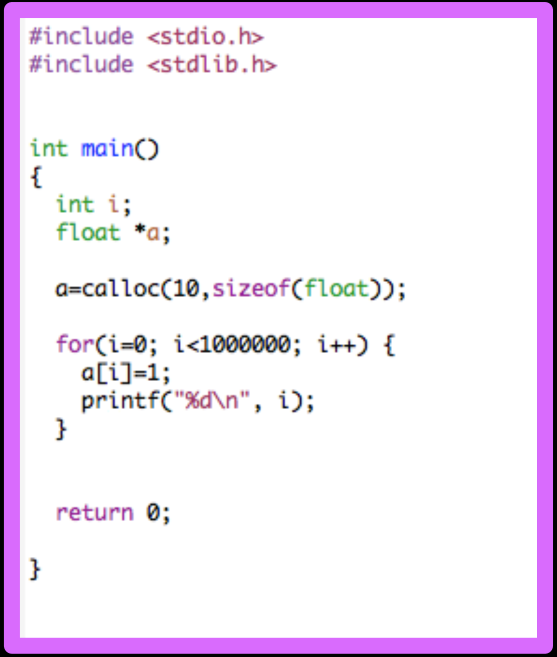


Unfortunately, Google Play Music has stopped.

segmentation fault l’esercito

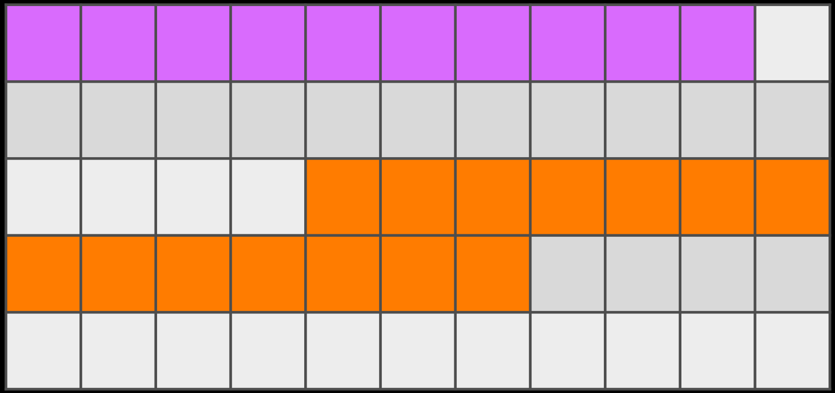


```
258408
258409
258410
258411
258412
258413
258414
258415
258416
258417
258418
258419
258420
258421
258422
258423
258424
258425
258426
258427
Segmentation fault
[meg] ~/Varia/Talks/asiesta_mar15 > 
```

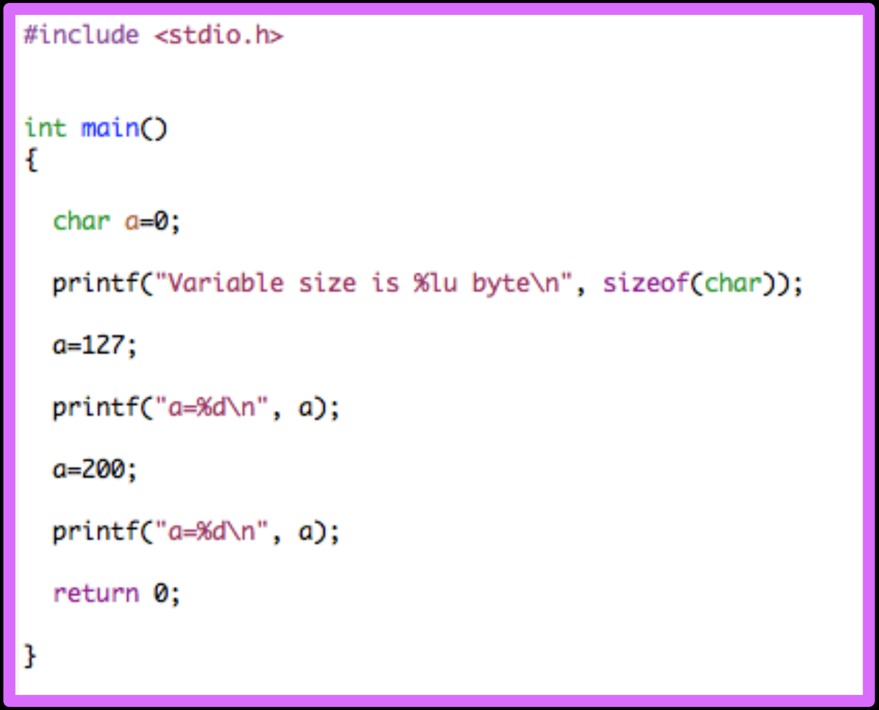


```c
#include <stdio.h>
#include <stdlib.h>


int main()
{
  int i;
  float *a;

  a=calloc(10,sizeof(float));

  for(i=0; i<1000000; i++) {
    a[i]=1;
    printf("%d\n", i);
  }


  return 0;

}
```

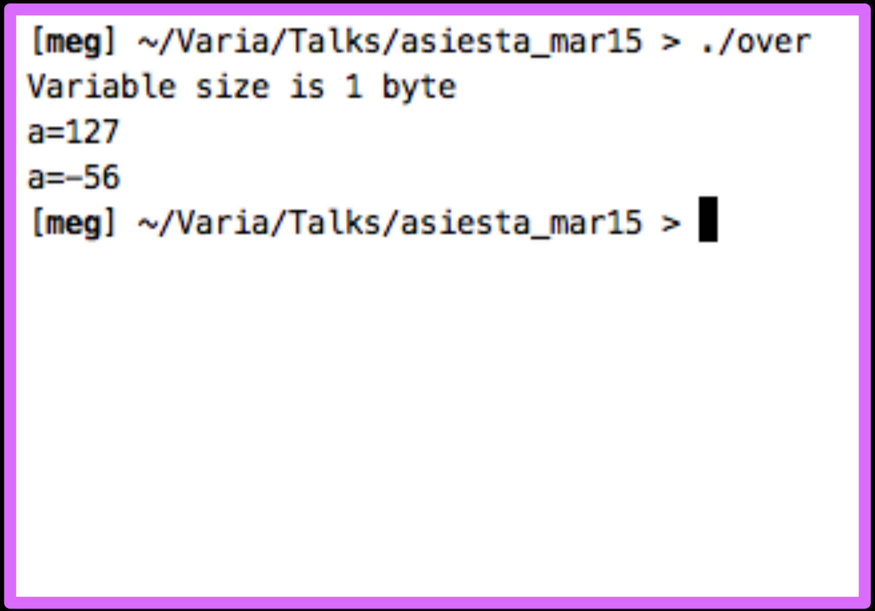
memoria



overflow l’esercito



```c
#include <stdio.h>


int main()
{

  char a=0;

  printf("Variable size is %lu byte\n", sizeof(char));

  a=127;

  printf("a=%d\n", a);

  a=200;

  printf("a=%d\n", a);

  return 0;

}
```



```
[meg] ~/Varia/Talks/asiesta_mar15 > ./over
Variable size is 1 byte
a=127
a=-56
[meg] ~/Varia/Talks/asiesta_mar15 > 
```

overflow l'esercito

June 4, 1996, Ariane 5 maiden flight.

Shortly after launch, the guidance software tried to convert the horizontal velocity (which was greater in the Ariane 5 than in the Ariane 4) from a 64-bit floating point number to a 16-bit signed integer, which caused an overflow error. The guidance system (and its backup, which had the same bug) then shut down, causing the rocket to veer off-course and, ultimately, self destruct 30 seconds after launch.

overflow l'esercito

June 4, 1996, Ariane 5 maiden flight.

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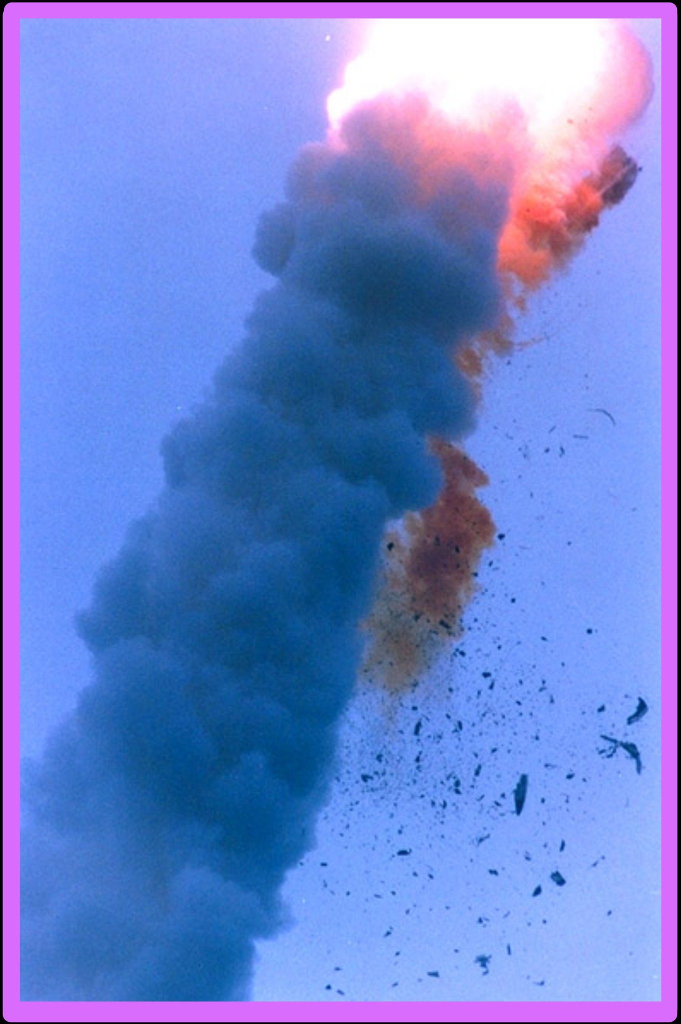
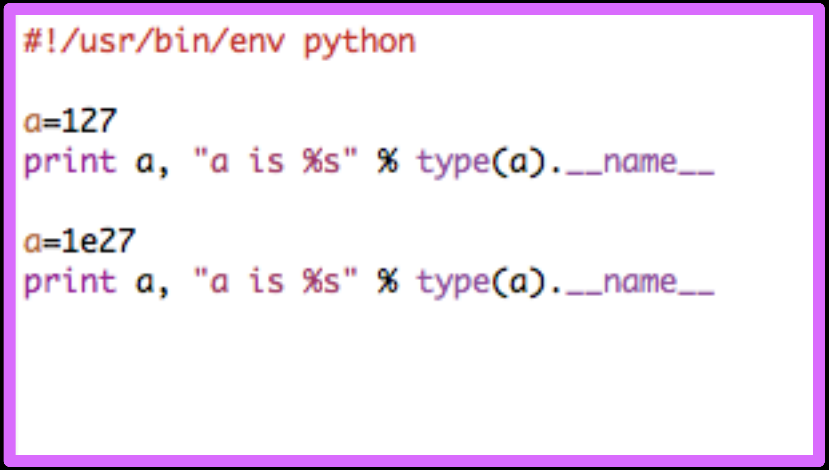
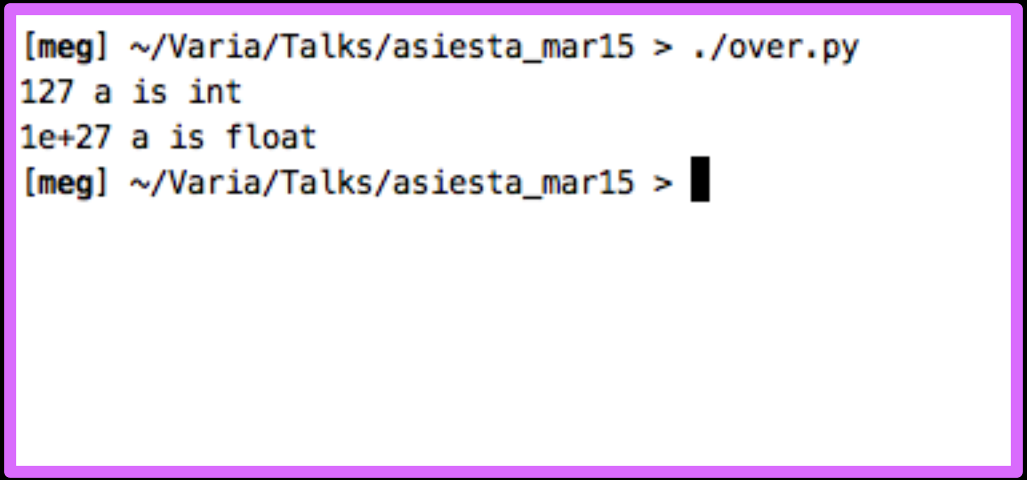


overflow l’esercito



```
#!/usr/bin/env python

a=127
print a, "a is %s" % type(a).__name__

a=1e27
print a, "a is %s" % type(a).__name__
```

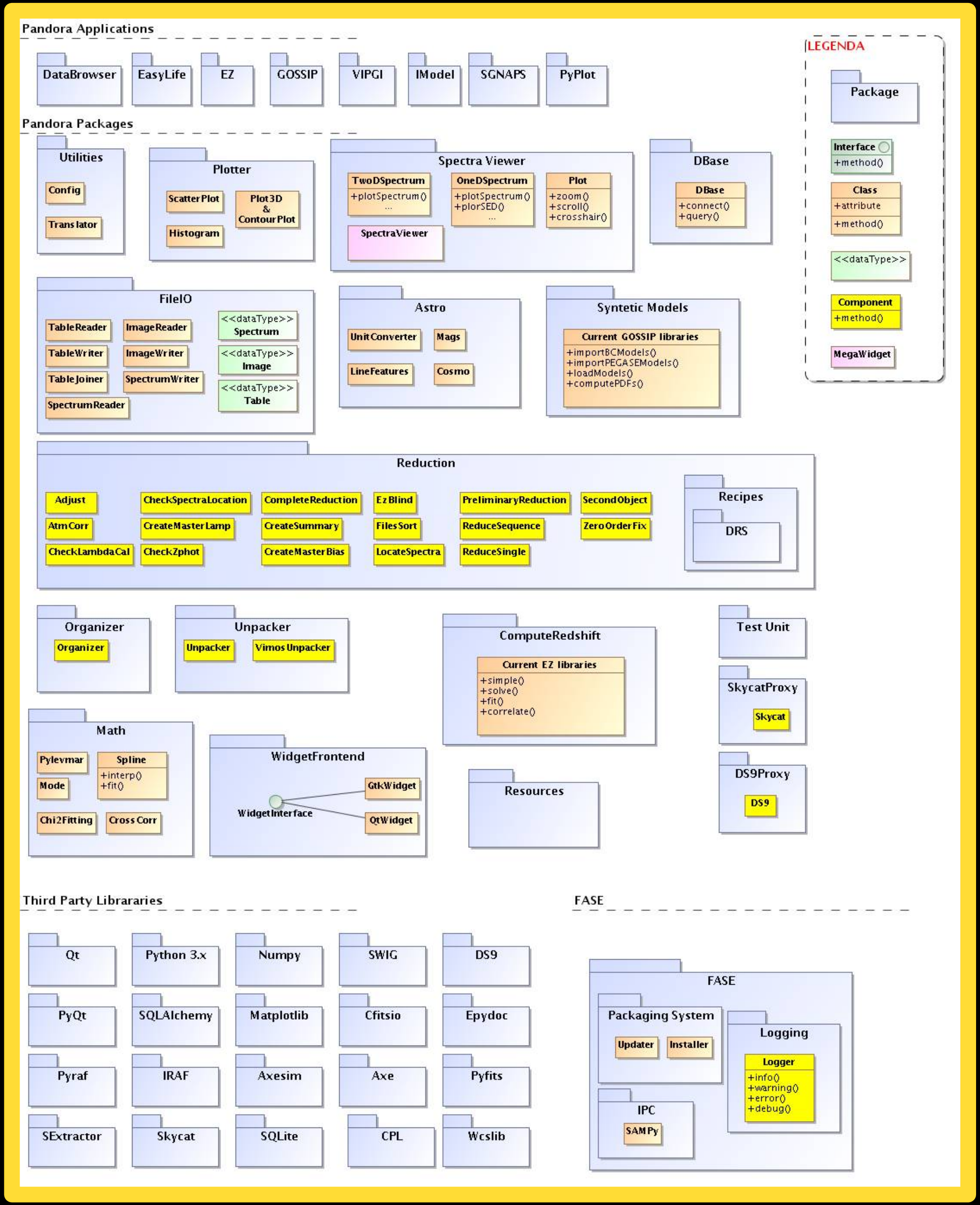


```
[meg] ~/Varia/Talks/asiesta_mar15 > ./over.py
127 a is int
1e+27 a is float
[meg] ~/Varia/Talks/asiesta_mar15 >
```

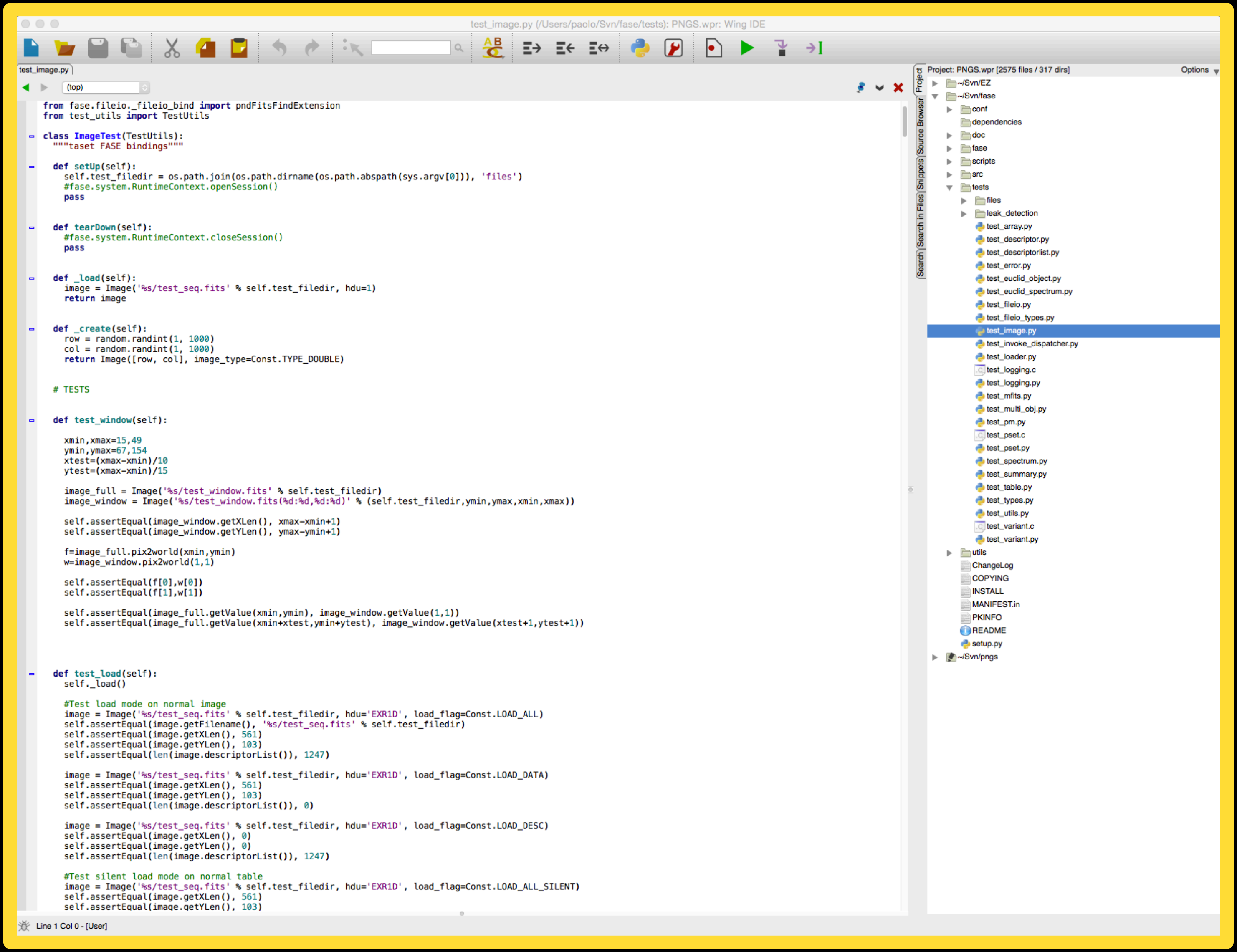
le armi

come combattere i *bugs*

progettazione le armi



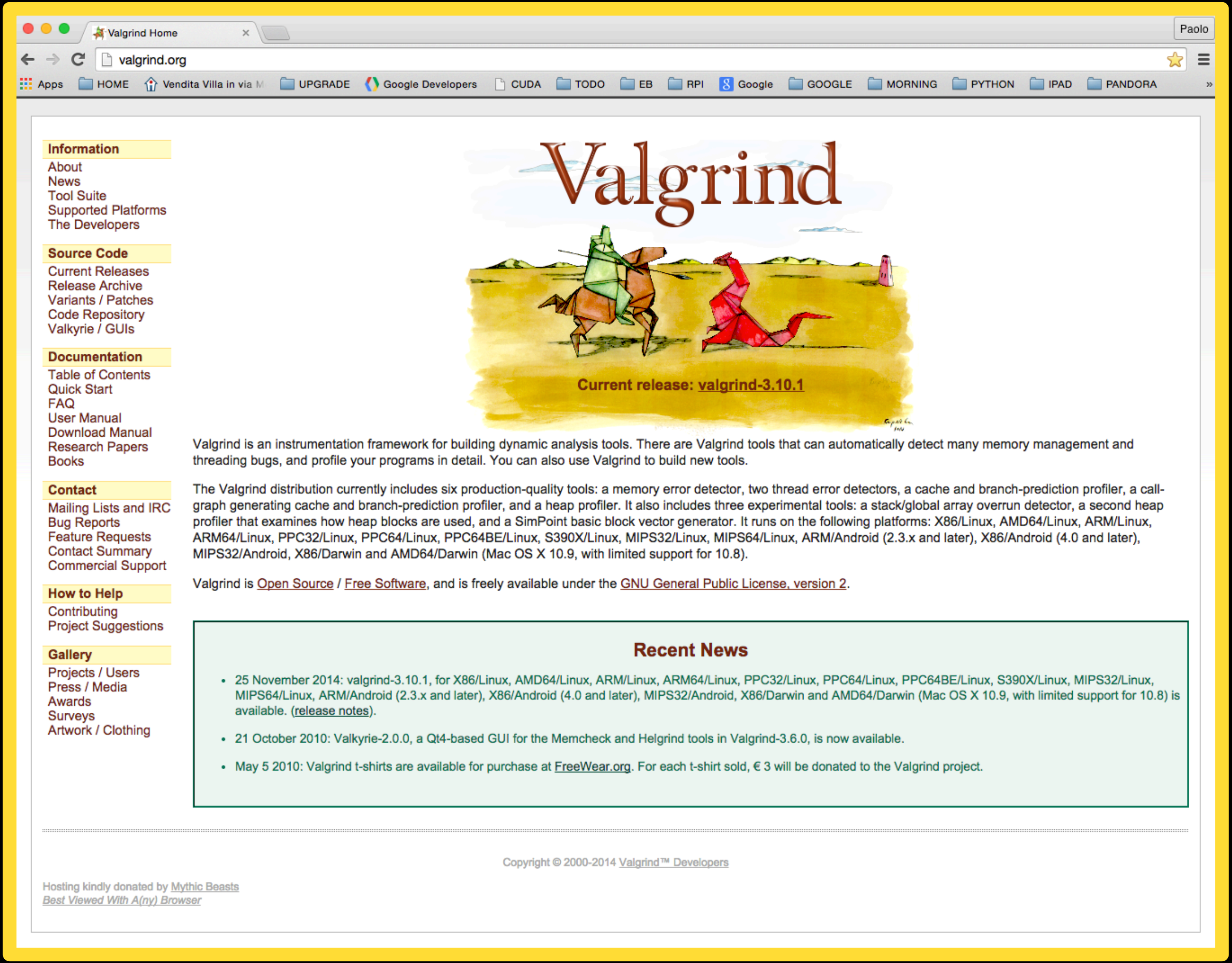
unit tests le armi



```
from fase.fileio._fileio_bind import pndFitsFindExtension
from test_utils import TestUtils

class ImageTest(TestUtils):
  """taset FASE bindings"""

  def setUp(self):
    self.test_filedir = os.path.join(os.path.dirname(os.path.abspath(sys.argv[0])), 'files')
    #fase.system.RuntimeContext.openSession()
    pass


  def tearDown(self):
    #fase.system.RuntimeContext.closeSession()
    pass


  def _load(self):
    image = Image('%s/test_seq.fits' % self.test_filedir, hdu=1)
    return image


  def _create(self):
    row = random.randint(1, 1000)
    col = random.randint(1, 1000)
    return Image([row, col], image_type=Const.TYPE_DOUBLE)


  # TESTS


  def test_window(self):

    xmin,xmax=15,49
    ymin,ymax=67,154
    xtest=(xmax-xmin)/10
    ytest=(xmax-xmin)/15

    image_full = Image('%s/test_window.fits' % self.test_filedir)
    image_window = Image('%s/test_window.fits(%d:%d,%d:%d)' % (self.test_filedir,ymin,ymax,xmin,xmax))

    self.assertEqual(image_window.getXLen(), xmax-xmin+1)
    self.assertEqual(image_window.getYLen(), ymax-ymin+1)

    f=image_full.pix2world(xmin,ymin)
    w=image_window.pix2world(1,1)

    self.assertEqual(f[0],w[0])
    self.assertEqual(f[1],w[1])

    self.assertEqual(image_full.getValue(xmin,ymin), image_window.getValue(1,1))
    self.assertEqual(image_full.getValue(xmin+xtest,ymin+ytest), image_window.getValue(xtest+1,ytest+1))



  def test_load(self):
    self._load()

    #Test load mode on normal image
    image = Image('%s/test_seq.fits' % self.test_filedir, hdu='EXR1D', load_flag=Const.LOAD_ALL)
    self.assertEqual(image.getFilename(), '%s/test_seq.fits' % self.test_filedir)
    self.assertEqual(image.getXLen(), 561)
    self.assertEqual(image.getYLen(), 103)
    self.assertEqual(len(image.descriptorList()), 1247)

    image = Image('%s/test_seq.fits' % self.test_filedir, hdu='EXR1D', load_flag=Const.LOAD_DATA)
    self.assertEqual(image.getXLen(), 561)
    self.assertEqual(image.getYLen(), 103)
    self.assertEqual(len(image.descriptorList()), 0)

    image = Image('%s/test_seq.fits' % self.test_filedir, hdu='EXR1D', load_flag=Const.LOAD_DESC)
    self.assertEqual(image.getXLen(), 0)
    self.assertEqual(image.getYLen(), 0)
    self.assertEqual(len(image.descriptorList()), 1247)

    #Test silent load mode on normal table
    image = Image('%s/test_seq.fits' % self.test_filedir, hdu='EXR1D', load_flag=Const.LOAD_ALL_SILENT)
    self.assertEqual(image.getXLen(), 561)
    self.assertEqual(image.getYLen(), 103)
```

```
Project: PNGS.wpr [2575 files / 317 dirs]
▶ ~/Svn/EZ
▼ ~/Svn/fase
    ▶ conf
      dependencies
    ▶ doc
    ▶ fase
    ▶ scripts
    ▶ src
    ▼ tests
        ▶ files
        ▶ leak_detection
          test_array.py
          test_descriptor.py
          test_descriptorlist.py
          test_error.py
          test_euclid_object.py
          test_euclid_spectrum.py
          test_fileio.py
          test_fileio_types.py
          test_image.py
          test_invoke_dispatcher.py
          test_loader.py
          test_logging.c
          test_logging.py
          test_mfits.py
          test_multi_obj.py
          test_pm.py
          test_pset.c
          test_pset.py
          test_spectrum.py
          test_summary.py
          test_table.py
          test_types.py
          test_utils.py
          test_variant.c
          test_variant.py
    ▶ utils
      ChangeLog
      COPYING
      INSTALL
      MANIFEST.in
      PKINFO
      README
      setup.py
▶ ~/Svn/pngs
```

memory check le armi



Information
About
News
Tool Suite
Supported Platforms
The Developers

Source Code
Current Releases
Release Archive
Variants / Patches
Code Repository
Valkyrie / GUIs

Documentation
Table of Contents
Quick Start
FAQ
User Manual
Download Manual
Research Papers
Books

Contact
Mailing Lists and IRC
Bug Reports
Feature Requests
Contact Summary
Commercial Support

How to Help
Contributing
Project Suggestions

Gallery
Projects / Users
Press / Media
Awards
Surveys
Artwork / Clothing

Current release: valgrind-3.10.1

Valgrind is an instrumentation framework for building dynamic analysis tools. There are Valgrind tools that can automatically detect many memory management and threading bugs, and profile your programs in detail. You can also use Valgrind to build new tools.

The Valgrind distribution currently includes six production-quality tools: a memory error detector, two thread error detectors, a cache and branch-prediction profiler, a call-graph generating cache and branch-prediction profiler, and a heap profiler. It also includes three experimental tools: a stack/global array overrun detector, a second heap profiler that examines how heap blocks are used, and a SimPoint basic block vector generator. It runs on the following platforms: X86/Linux, AMD64/Linux, ARM/Linux, ARM64/Linux, PPC32/Linux, PPC64/Linux, PPC64BE/Linux, S390X/Linux, MIPS32/Linux, MIPS64/Linux, ARM/Android (2.3.x and later), X86/Android (4.0 and later), MIPS32/Android, X86/Darwin and AMD64/Darwin (Mac OS X 10.9, with limited support for 10.8).

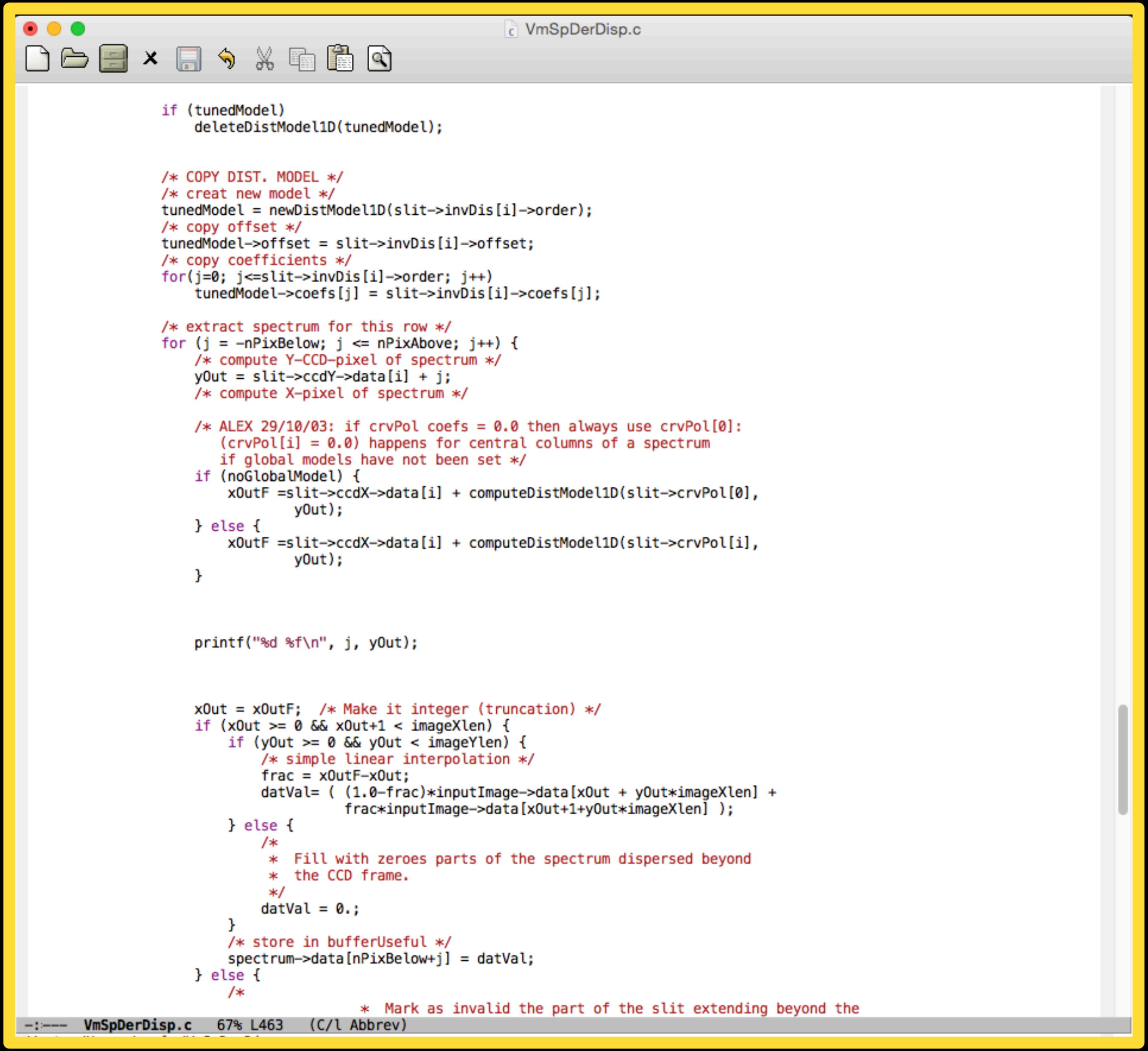
Valgrind is Open Source / Free Software, and is freely available under the GNU General Public License, version 2.

Recent News

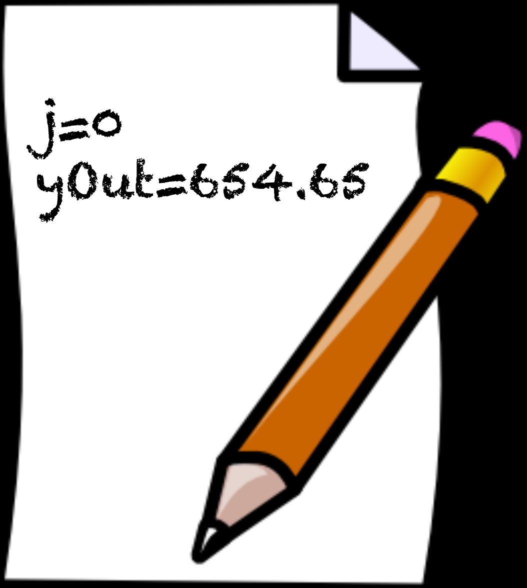
- 25 November 2014: valgrind-3.10.1, for X86/Linux, AMD64/Linux, ARM/Linux, ARM64/Linux, PPC32/Linux, PPC64/Linux, PPC64BE/Linux, S390X/Linux, MIPS32/Linux, MIPS64/Linux, ARM/Android (2.3.x and later), X86/Android (4.0 and later), MIPS32/Android, X86/Darwin and AMD64/Darwin (Mac OS X 10.9, with limited support for 10.8) is available. (release notes).
- 21 October 2010: Valkyrie-2.0.0, a Qt4-based GUI for the Memcheck and Helgrind tools in Valgrind-3.6.0, is now available.
- May 5 2010: Valgrind t-shirts are available for purchase at FreeWear.org. For each t-shirt sold, € 3 will be donated to the Valgrind project.

Hosting kindly donated by Mythic Beasts
Best Viewed With A(ny) Browser

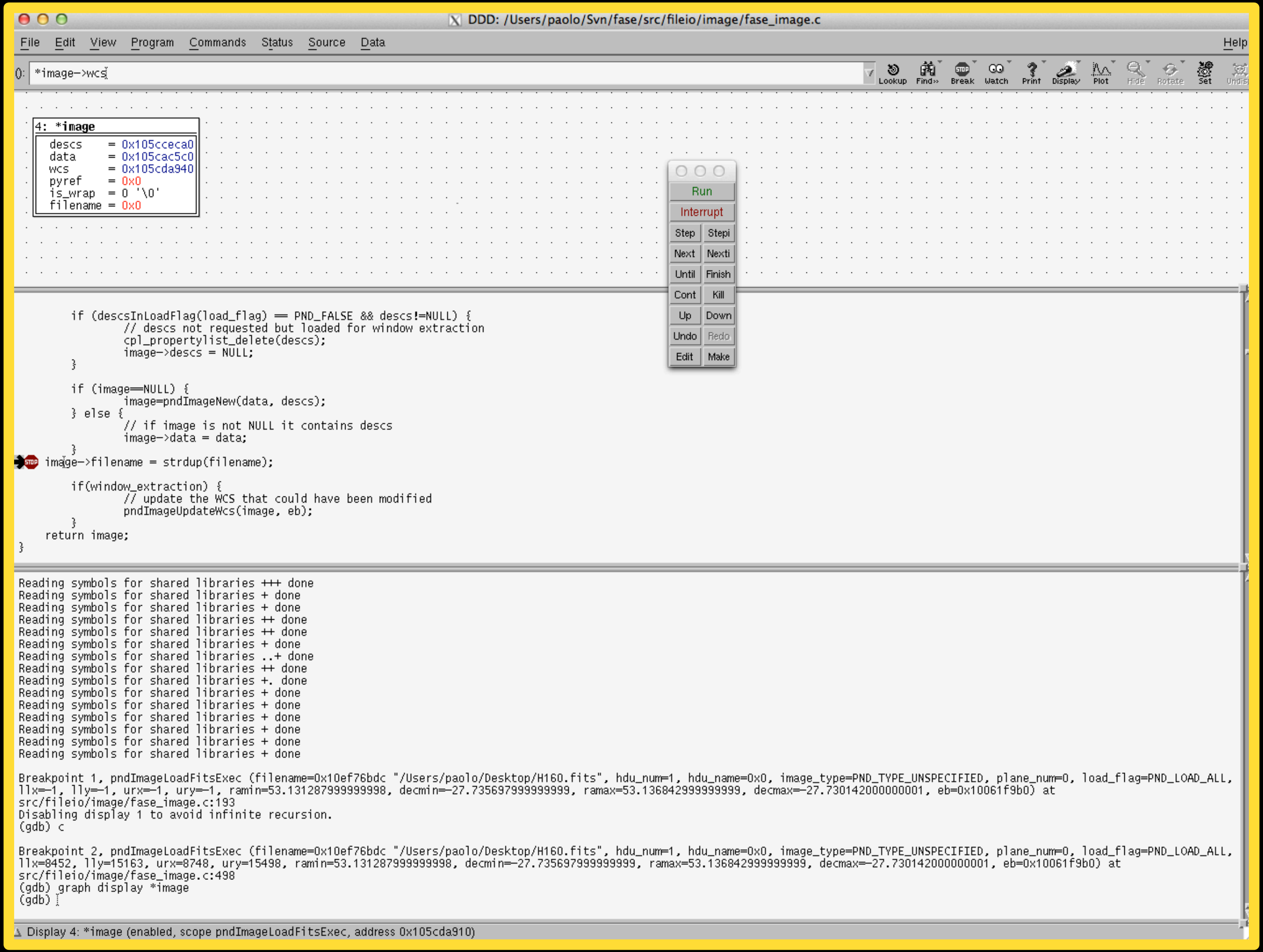
debugger le armi



```
if (tunedModel)
    deleteDistModel1D(tunedModel);


/* COPY DIST. MODEL */
/* creat new model */
tunedModel = newDistModel1D(slit->invDis[i]->order);
/* copy offset */
tunedModel->offset = slit->invDis[i]->offset;
/* copy coefficients */
for(j=0; j<=slit->invDis[i]->order; j++)
    tunedModel->coefs[j] = slit->invDis[i]->coefs[j];

/* extract spectrum for this row */
for (j = -nPixBelow; j <= nPixAbove; j++) {
    /* compute Y-CCD-pixel of spectrum */
    yOut = slit->ccdY->data[i] + j;
    /* compute X-pixel of spectrum */

    /* ALEX 29/10/03: if crvPol coefs = 0.0 then always use crvPol[0]:
       (crvPol[i] = 0.0) happens for central columns of a spectrum
       if global models have not been set */
    if (noGlobalModel) {
        xOutF =slit->ccdX->data[i] + computeDistModel1D(slit->crvPol[0],
                yOut);
    } else {
        xOutF =slit->ccdX->data[i] + computeDistModel1D(slit->crvPol[i],
                yOut);
    }



    printf("%d %f\n", j, yOut);



    xOut = xOutF;  /* Make it integer (truncation) */
    if (xOut >= 0 && xOut+1 < imageXlen) {
        if (yOut >= 0 && yOut < imageYlen) {
            /* simple linear interpolation */
            frac = xOutF-xOut;
            datVal= ( (1.0-frac)*inputImage->data[xOut + yOut*imageXlen] +
                      frac*inputImage->data[xOut+1+yOut*imageXlen] );
        } else {
            /*
             *  Fill with zeroes parts of the spectrum dispersed beyond
             *  the CCD frame.
             */
            datVal = 0.;
        }
        /* store in bufferUseful */
        spectrum->data[nPixBelow+j] = datVal;
    } else {
        /*
                        *  Mark as invalid the part of the slit extending beyond the
-:---  VmSpDerDisp.c   67% L463   (C/l Abbrev)
```



debugger le armi



```
(): *image->wcs
```

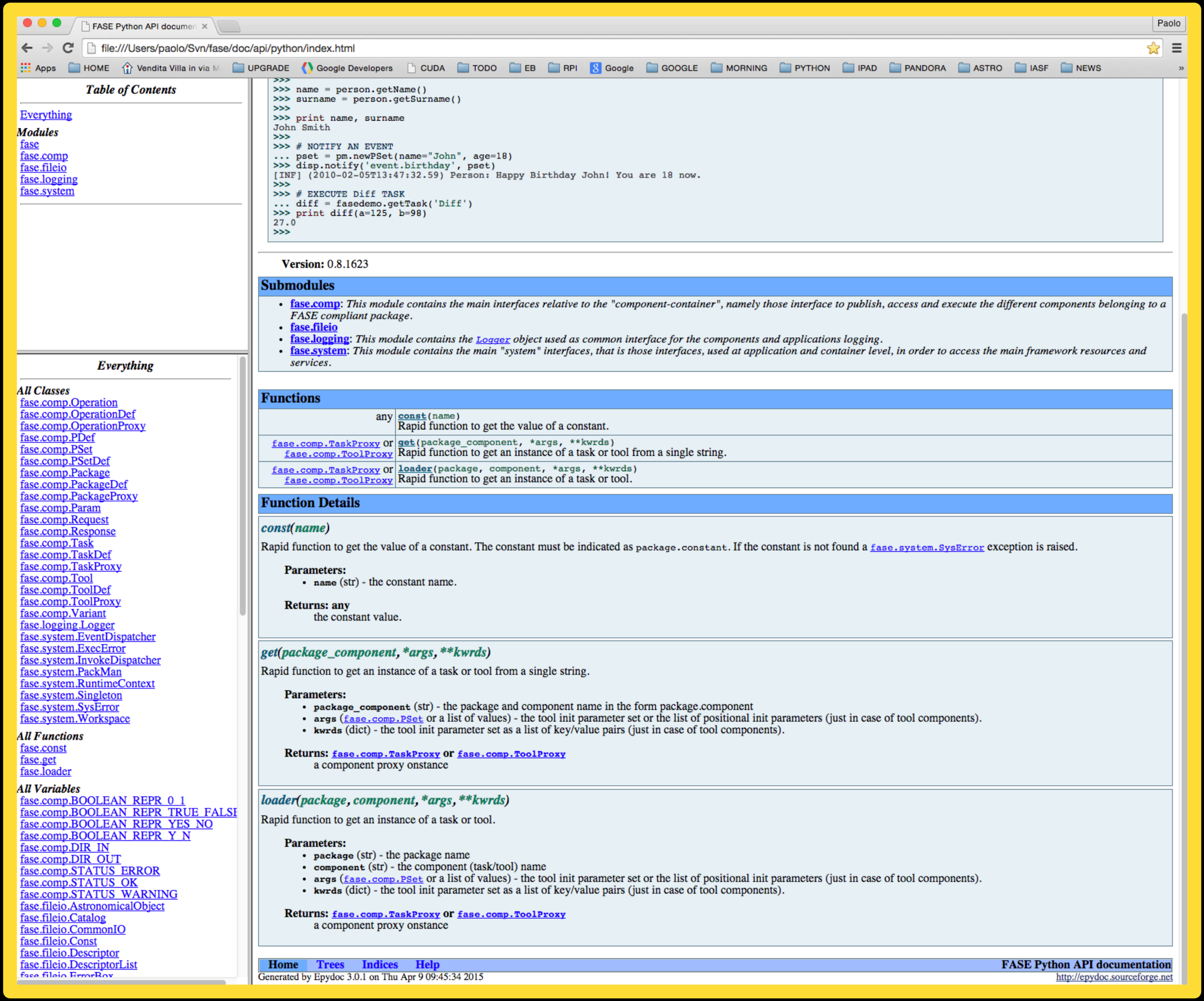
```
4: *image
  descs    = 0x105cceca0
  data     = 0x105cac5c0
  wcs      = 0x105cda940
  pyref    = 0x0
  is_wrap  = 0 '\0'
  filename = 0x0
```

```
        if (descsInLoadFlag(load_flag) == PND_FALSE && descs!=NULL) {
                // descs not requested but loaded for window extraction
                cpl_propertylist_delete(descs);
                image->descs = NULL;
        }

        if (image==NULL) {
                image=pndImageNew(data, descs);
        } else {
                // if image is not NULL it contains descs
                image->data = data;
        }
    image->filename = strdup(filename);

        if(window_extraction) {
                // update the WCS that could have been modified
                pndImageUpdateWcs(image, eb);
        }
    return image;
}
```

```
Reading symbols for shared libraries +++ done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done
Reading symbols for shared libraries ++ done
Reading symbols for shared libraries ++ done
Reading symbols for shared libraries + done
Reading symbols for shared libraries ..+ done
Reading symbols for shared libraries ++ done
Reading symbols for shared libraries +. done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done
Reading symbols for shared libraries + done

Breakpoint 1, pndImageLoadFitsExec (filename=0x10ef76bdc "/Users/paolo/Desktop/H160.fits", hdu_num=1, hdu_name=0x0, image_type=PND_TYPE_UNSPECIFIED, plane_num=0, load_flag=PND_LOAD_ALL,
llx=-1, lly=-1, urx=-1, ury=-1, ramin=53.131287999999998, decmin=-27.735697999999999, ramax=53.136842999999999, decmax=-27.730142000000001, eb=0x10061f9b0) at
src/fileio/image/fase_image.c:193
Disabling display 1 to avoid infinite recursion.
(gdb) c

Breakpoint 2, pndImageLoadFitsExec (filename=0x10ef76bdc "/Users/paolo/Desktop/H160.fits", hdu_num=1, hdu_name=0x0, image_type=PND_TYPE_UNSPECIFIED, plane_num=0, load_flag=PND_LOAD_ALL,
llx=8452, lly=15163, urx=8748, ury=15498, ramin=53.131287999999998, decmin=-27.735697999999999, ramax=53.136842999999999, decmax=-27.730142000000001, eb=0x10061f9b0) at
src/fileio/image/fase_image.c:498
(gdb) graph display *image
(gdb)
```

Display 4: *image (enabled, scope pndImageLoadFitsExec, address 0x105cda910)

documentazione le armi



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- fase.fileio
- fase.logging
- fase.system

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- fase.comp.OperationProxy
- fase.comp.PDef
- fase.comp.PSet
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- fase.fileio.Const
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- fase.fileio.ErrorBox

```
>>>
>>> name = person.getName()
>>> surname = person.getSurname()
>>>
>>> print name, surname
John Smith
>>>
>>> # NOTIFY AN EVENT
... pset = pm.newPSet(name="John", age=18)
>>> disp.notify('event.birthday', pset)
[INF] (2010-02-05T13:47:32.59) Person: Happy Birthday John! You are 18 now.
>>>
>>> # EXECUTE Diff TASK
... diff = fasedemo.getTask('Diff')
>>> print diff(a=125, b=98)
27.0
>>>
```

Version: 0.8.1623

Submodules

- **fase.comp**: *This module contains the main interfaces relative to the "component-container", namely those interface to publish, access and execute the different components belonging to a FASE compliant package.*
- **fase.fileio**
- **fase.logging**: *This module contains the `Logger` object used as common interface for the components and applications logging.*
- **fase.system**: *This module contains the main "system" interfaces, that is those interfaces, used at application and container level, in order to access the main framework resources and services.*

Functions

any	`const(name)` Rapid function to get the value of a constant.
`fase.comp.TaskProxy` or `fase.comp.ToolProxy`	`get(package_component, *args, **kwrds)` Rapid function to get an instance of a task or tool from a single string.
`fase.comp.TaskProxy` or `fase.comp.ToolProxy`	`loader(package, component, *args, **kwrds)` Rapid function to get an instance of a task or tool.

Function Details

const(name)

Rapid function to get the value of a constant. The constant must be indicated as `package.constant`. If the constant is not found a `fase.system.SysError` exception is raised.

Parameters:
- **`name`** (str) - the constant name.

Returns: any
the constant value.

*get(package_component, *args, **kwrds)*

Rapid function to get an instance of a task or tool from a single string.

Parameters:
- **`package_component`** (str) - the package and component name in the form package.component
- **`args`** (`fase.comp.PSet` or a list of values) - the tool init parameter set or the list of positional init parameters (just in case of tool components).
- **`kwrds`** (dict) - the tool init parameter set as a list of key/value pairs (just in case of tool components).

Returns: `fase.comp.TaskProxy` or `fase.comp.ToolProxy`
a component proxy onstance

*loader(package, component, *args, **kwrds)*

Rapid function to get an instance of a task or tool.

Parameters:
- **`package`** (str) - the package name
- **`component`** (str) - the component (task/tool) name
- **`args`** (`fase.comp.PSet` or a list of values) - the tool init parameter set or the list of positional init parameters (just in case of tool components).
- **`kwrds`** (dict) - the tool init parameter set as a list of key/value pairs (just in case of tool components).

Returns: `fase.comp.TaskProxy` or `fase.comp.ToolProxy`
a component proxy onstance

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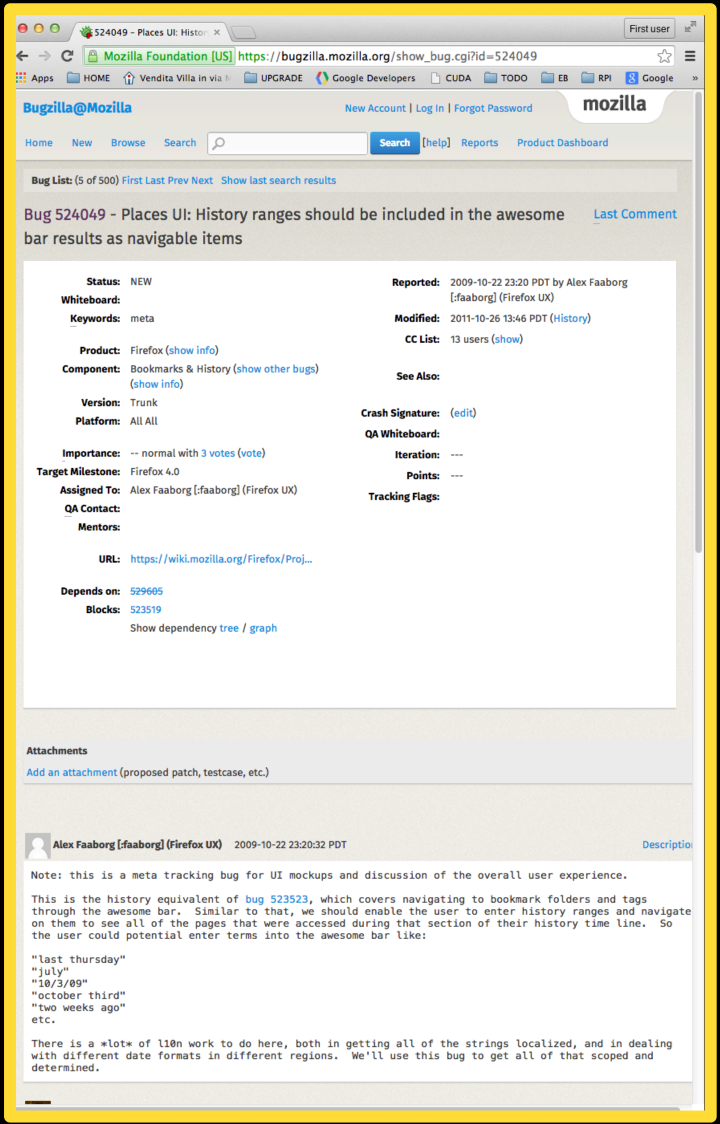
tracking le armi



Bug List: (5 of 500) First Last Prev Next Show last search results

Bug 524049 - Places UI: History ranges should be included in the awesome bar results as navigable items

Last Comment

Status: NEW
Whiteboard:
Keywords: meta

Product: Firefox (show info)
Component: Bookmarks & History (show other bugs) (show info)
Version: Trunk
Platform: All All

Importance: -- normal with 3 votes (vote)
Target Milestone: Firefox 4.0
Assigned To: Alex Faaborg [:faaborg] (Firefox UX)
QA Contact:
Mentors:

URL: https://wiki.mozilla.org/Firefox/Proj...

Depends on: ~~529605~~
Blocks: 523519
Show dependency tree / graph

Reported: 2009-10-22 23:20 PDT by Alex Faaborg [:faaborg] (Firefox UX)
Modified: 2011-10-26 13:46 PDT (History)
CC List: 13 users (show)

See Also:

Crash Signature: (edit)
QA Whiteboard:
Iteration: ---
Points: ---
Tracking Flags:

Attachments

Add an attachment (proposed patch, testcase, etc.)

Alex Faaborg [:faaborg] (Firefox UX) 2009-10-22 23:20:32 PDT Descriptio

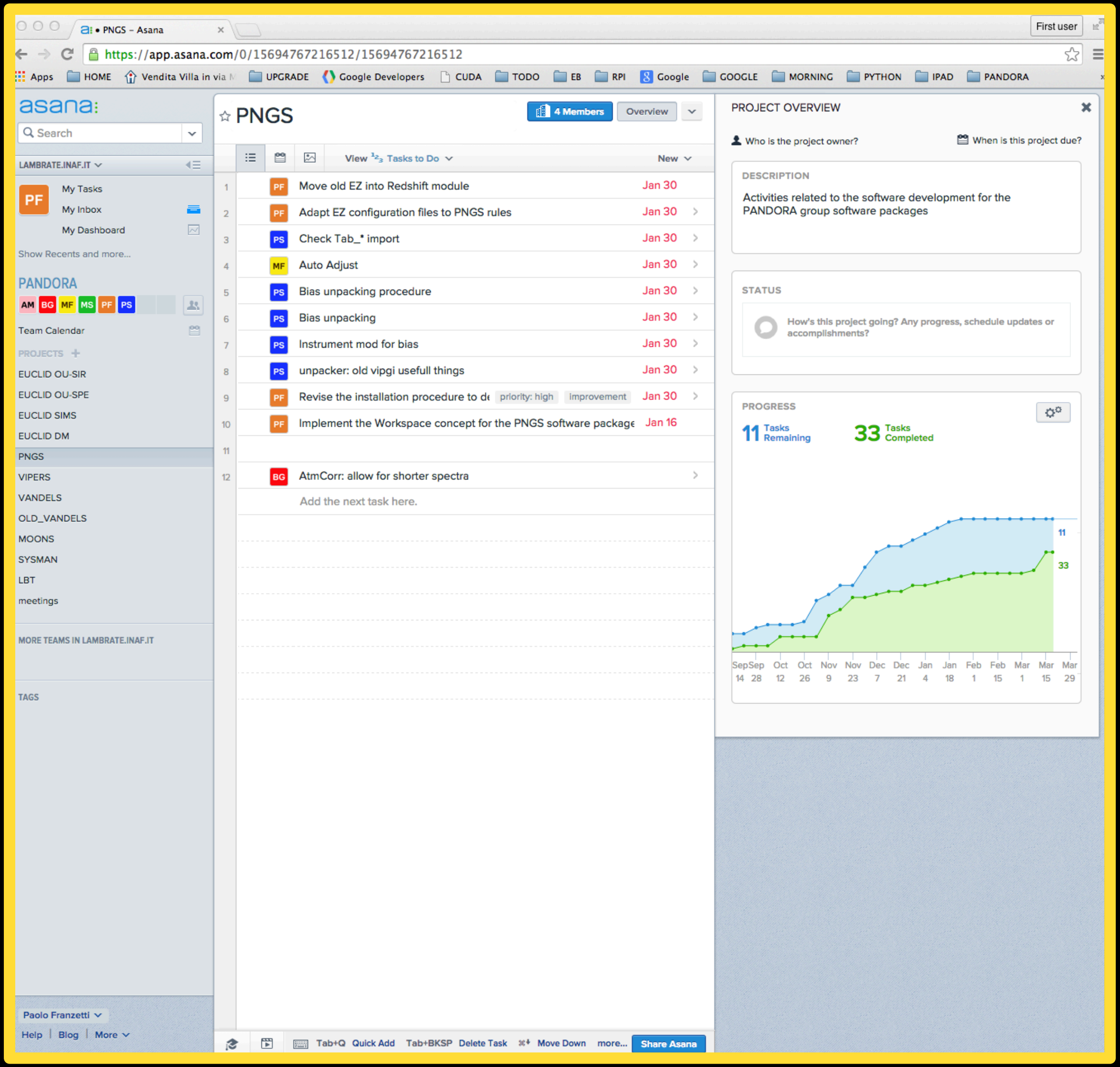
```
Note: this is a meta tracking bug for UI mockups and discussion of the overall user experience.

This is the history equivalent of bug 523523, which covers navigating to bookmark folders and tags
through the awesome bar.  Similar to that, we should enable the user to enter history ranges and navigate
on them to see all of the pages that were accessed during that section of their history time line.  So
the user could potential enter terms into the awesome bar like:

"last thursday"
"july"
"10/3/09"
"october third"
"two weeks ago"
etc.

There is a *lot* of l10n work to do here, both in getting all of the strings localized, and in dealing
with different date formats in different regions.  We'll use this bug to get all of that scoped and
determined.
```

tracking le armi



1	PF	Move old EZ into Redshift module	Jan 30
2	PF	Adapt EZ configuration files to PNGS rules	Jan 30
3	PS	Check Tab_* import	Jan 30
4	MF	Auto Adjust	Jan 30
5	PS	Bias unpacking procedure	Jan 30
6	PS	Bias unpacking	Jan 30
7	PS	Instrument mod for bias	Jan 30
8	PS	unpacker: old vipgi usefull things	Jan 30
9	PF	Revise the installation procedure to de priority: high improvement	Jan 30
10	PF	Implement the Workspace concept for the PNGS software package	Jan 16
11			
12	BG	AtmCorr: allow for shorter spectra	
		Add the next task here.	

DESCRIPTION

Activities related to the software development for the PANDORA group software packages

STATUS

How's this project going? Any progress, schedule updates or accomplishments?

la caccia

Ogni mattina allo IASF un bug si attiva
e sa che dovrà correre più del programmatore o verrà fissato.
Ogni mattina allo IASF, un programmatore timbra
e sa che dovrà correre più del bug o verrà licenziato.

Tecnologo anonimo

1 / scoperta la caccia

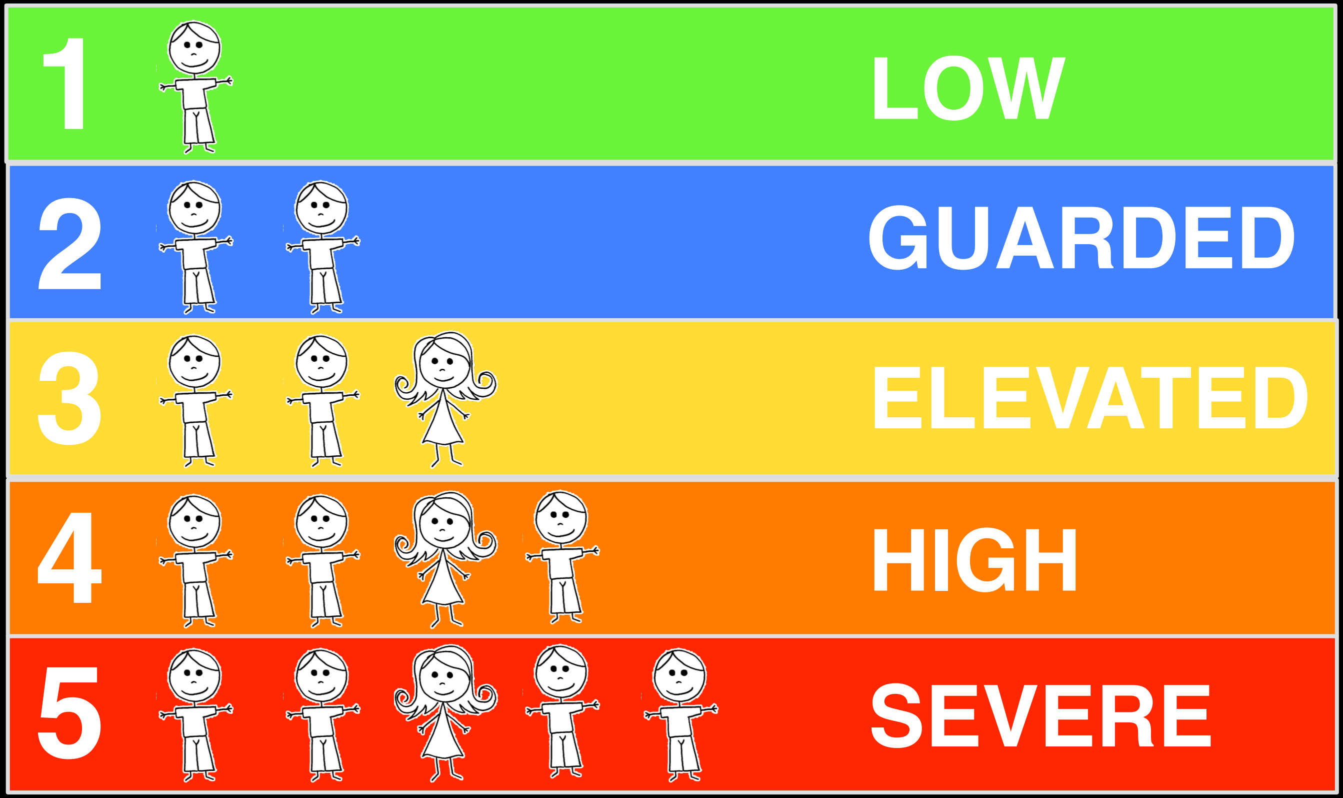
1. Scoperta
   - ✓ Subito prima di una release
   - ✓ 10 minuti dopo una release
   - ✓ Appena detto a Bianca: “OK funziona, provalo”

2 / incredulità la caccia

1. Scoperta
2. Incredulità
   - ✓ Come ha fatto a funzionare finora ?
   - ✓ È impossibile (L. Paioro)

3 / diffusione la caccia

1. Scoperta
2. Incredulità
3. Diffusione



1 LOW

2 GUARDED

3 ELEVATED

4 HIGH

5 SEVERE

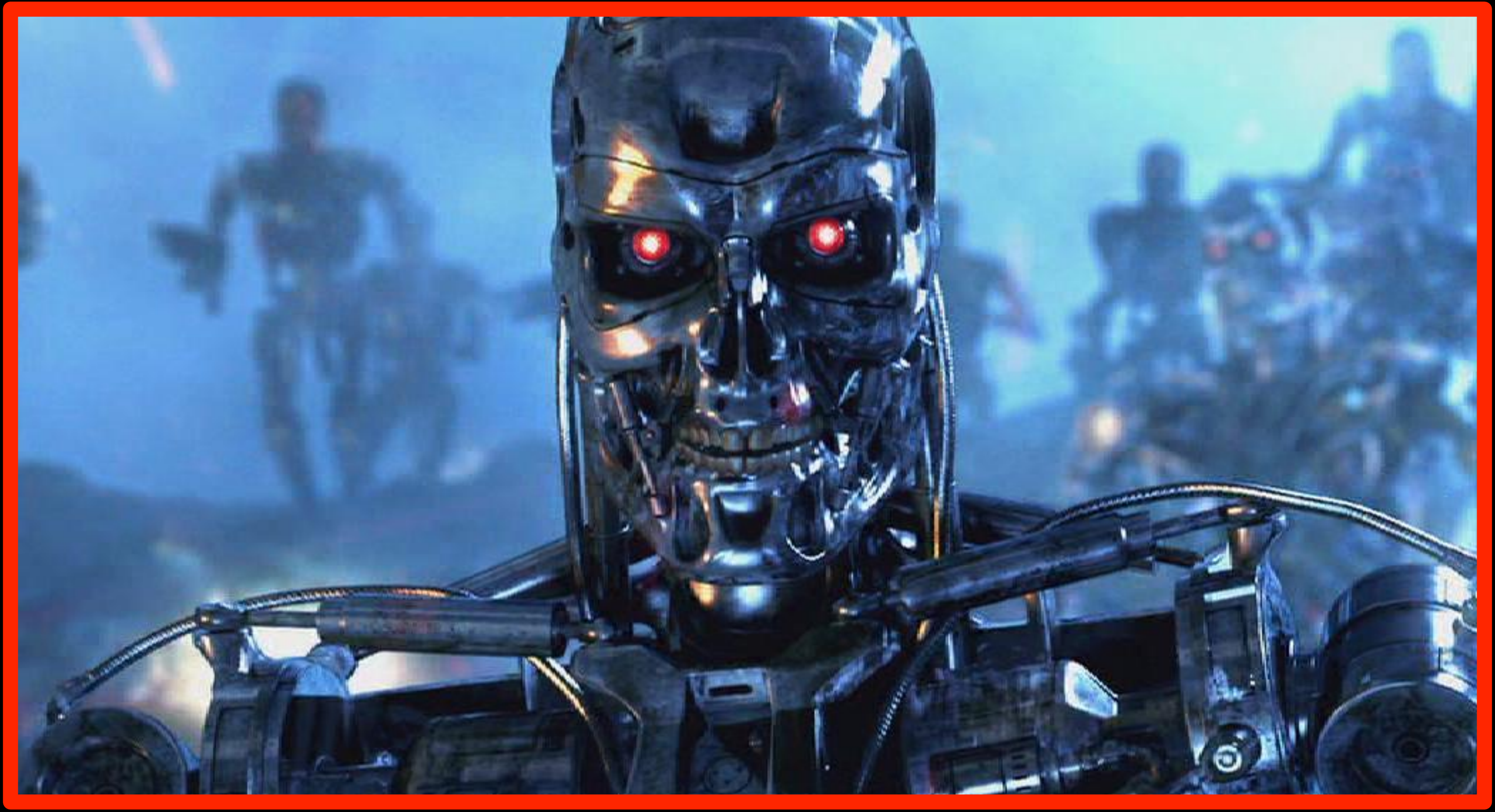
4 / pessimismo la caccia

1. Scoperta
2. Incredulità
3. Diffusione
4. Pessimismo
    - ✓ Non ne usciremo mai …

5 / soluzione la caccia

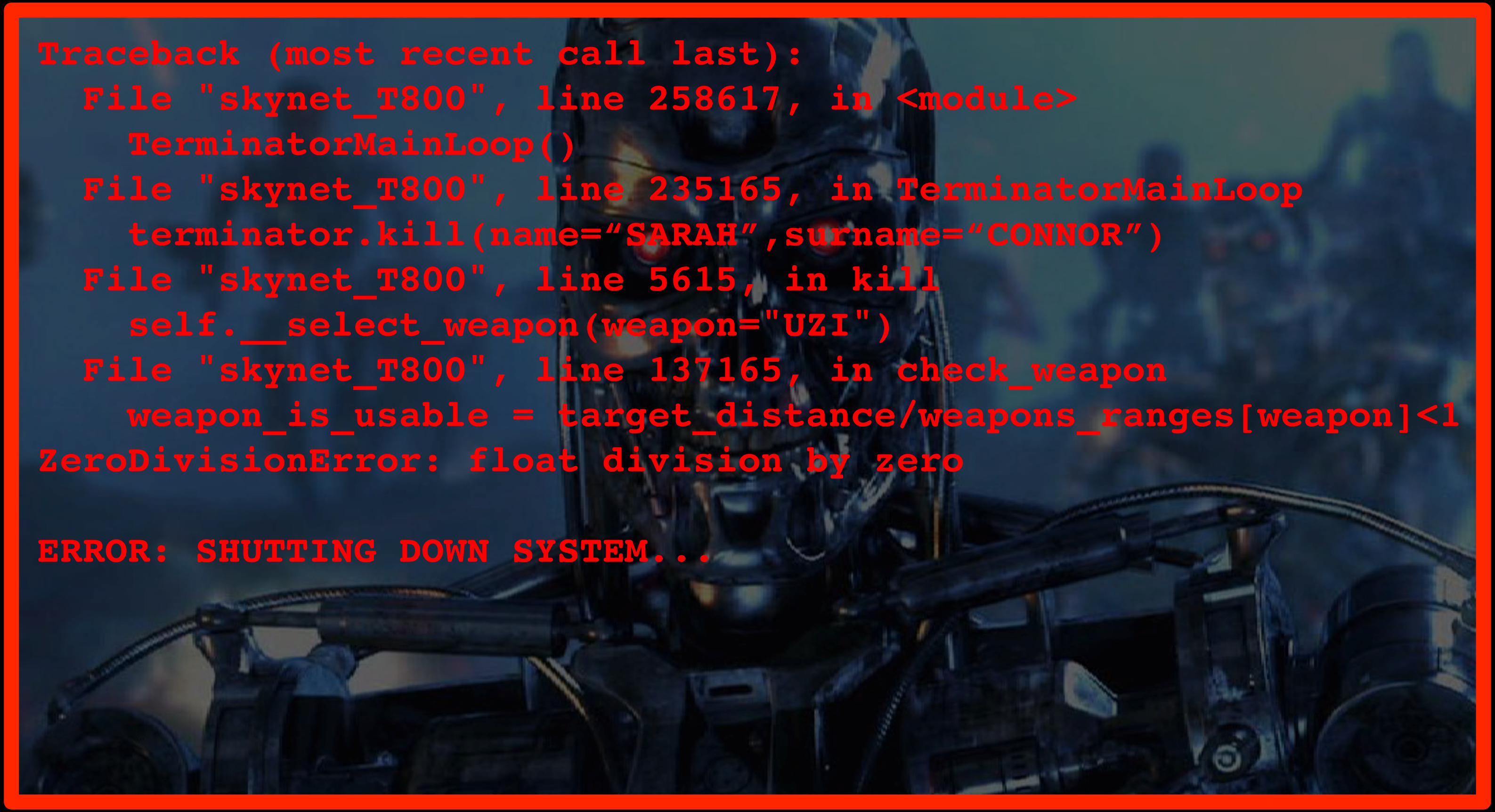
1. **Scoperta**
2. **Incredulità**
3. **Diffusione**
4. **Pessimismo**
5. **Soluzione**

concludendo



concludendo

… corri, nasconditi e aspetta



```
Traceback (most recent call last):
  File "skynet_T800", line 258617, in <module>
    TerminatorMainLoop()
  File "skynet_T800", line 235165, in TerminatorMainLoop
    terminator.kill(name=“SARAH”,surname=“CONNOR”)
  File "skynet_T800", line 5615, in kill
    self.__select_weapon(weapon="UZI")
  File "skynet_T800", line 137165, in check_weapon
    weapon_is_usable = target_distance/weapons_ranges[weapon]<1
ZeroDivisionError: float division by zero

ERROR: SHUTTING DOWN SYSTEM...
```