

# PYGAME OVER

Insert coins to learn with Python

Jerônimo Medina Madruga - Tchelinux Porto Alegre 2019

# Atenção:

Slides atualizados desta apresentação, contendo gifs e outras firulas podem ser acessados em:

<http://bit.ly/pygameover>



**Quem é Jerônimo?**



## Jerônimo Medina Madruga

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**Como vai funcionar a palestra?**



## Four Rules Of An UnConference

Whoever come are the right people.

Whatever happens is the only thing that could have

Whenever it starts is the right time.

When it's over, it's over

**Qual a ideia da palestra?**

# DATA VISUALIZATION WITH JAVASCRIPT

Building Hypermedia APIs with HTML5 and Node.js  
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High Performance JavaScript

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PHP: The Good Parts

# RUBY WIZARDRY

# Pro JavaScript™ Design Patterns

Companion  
eBook  
Available

LIMIT VALUE OF J

1    4    2    5    8    9



PASS - 1

I = 0

J VARIES FROM 0 TO 5

COMPARES THE ADJACENT ELEMENTS

SWAPS THEM

```
VOID BUBBLESORT(INT ARR[], INT N)
{
```

```
    INT I, J;
```

```
    FOR (I = 0; I < N-1; I++)
```

```
        FOR (J = 0; J < N-I-1; J++)
```

```
            IF (ARR[J] > ARR[J+1])
```

```
                SWAP(&ARR[J], &ARR[J+1]);
```

}



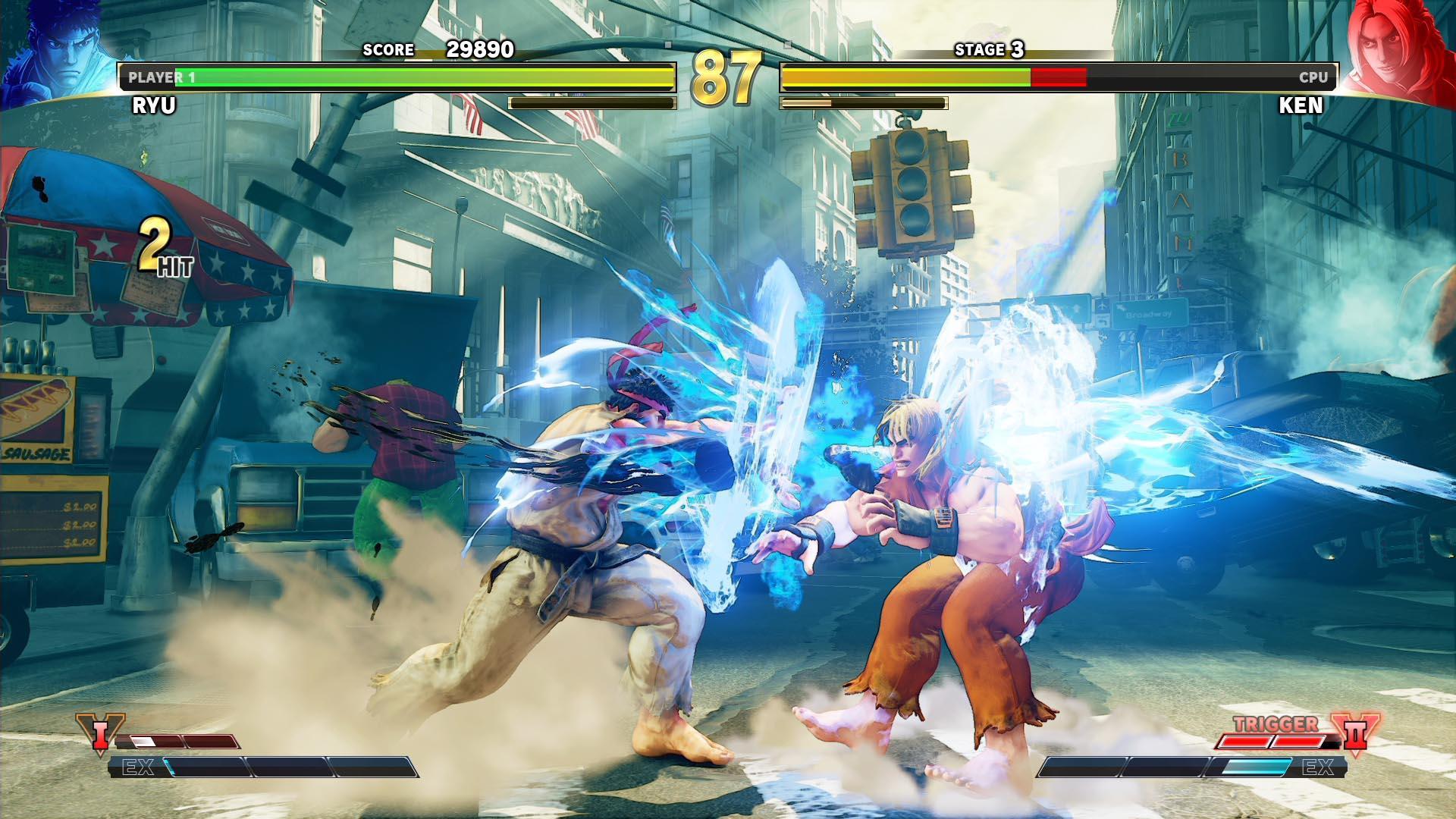
Your PC ran into a problem and needs to restart. We're just  
collecting some error info, and then we'll restart for you.





Global  
Net





SCORE 29890

STAGE 3

PLAYER 1

CPU

RYU

KEN

87

2  
HIT

\$1.00  
\$2.00  
\$3.00

TRIGGER V  
EX

I  
EX

22:18 4 7 6 71  
FPS: 60

31 18



STFUxGTFO

13

Dracovix

14

Trundle Bot

13

Ryze Bot

14



1868 / 1868

725 / 725





## RafaelJeffman

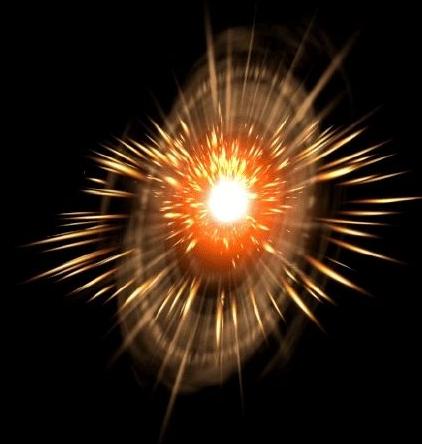
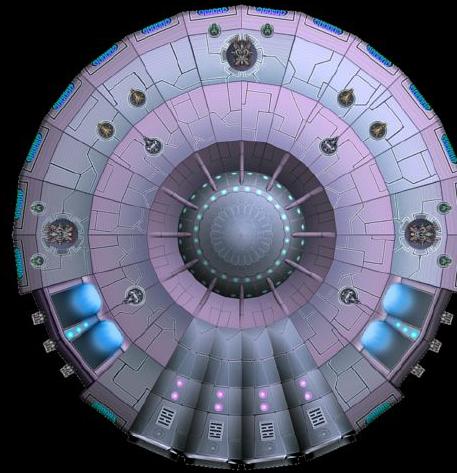
Sou **fotógrafo** e professor na **Faculdade Senac Porto Alegre**, onde ministro as disciplinas relacionadas a desenvolvimento orientado a objetos, algoritmos e estruturas de dados, e jogos digitais, e na **FADERGS**, onde leciono Roteirização de Jogos, *Game Design*, Desenvolvimento para a Web, e Linguagens Formais.

Meus principais interesses de pesquisa incluem o uso de aprendizado de máquinas aplicado a percepção do mundo (principalmente reconhecimento de voz e visão computacional), sistemas móveis e embarcados, linguagens de programação e seu aprendizado, e robótica autônoma.





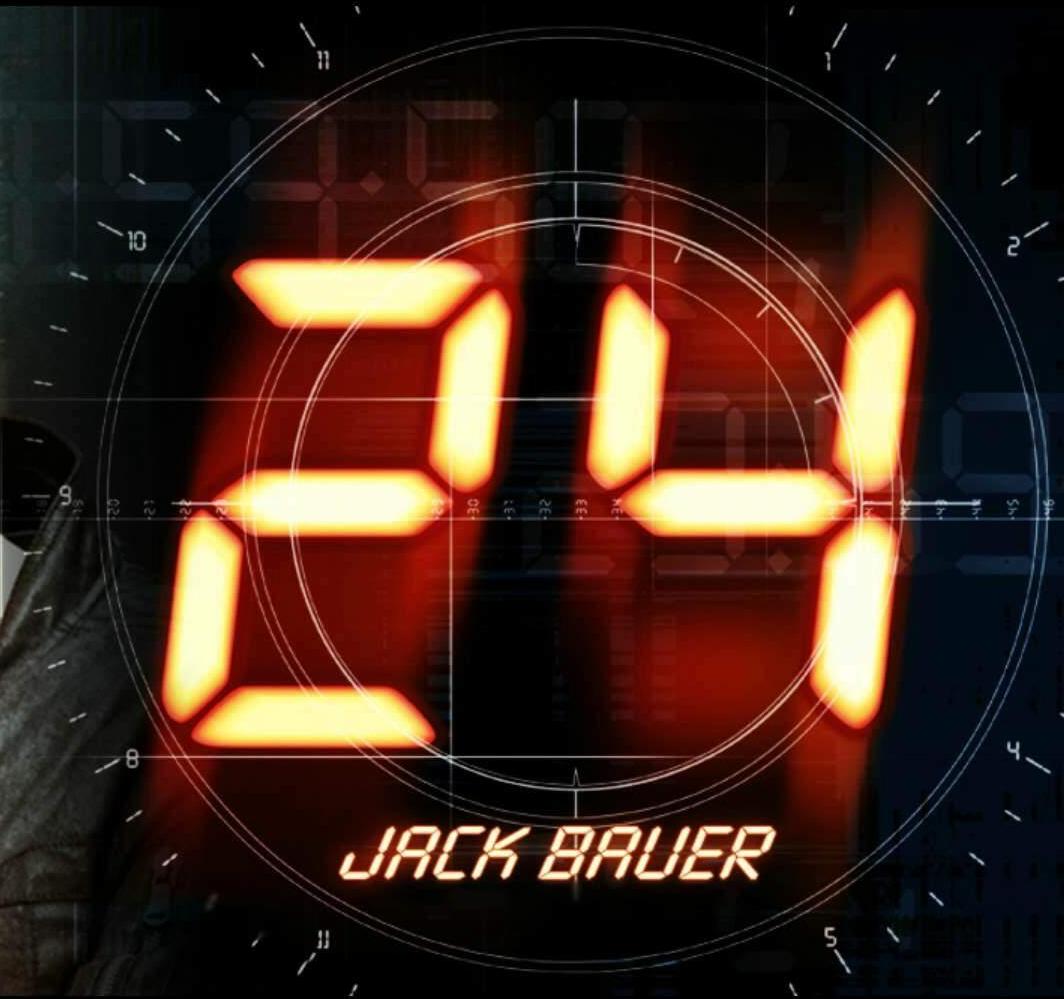
# Genesis





010

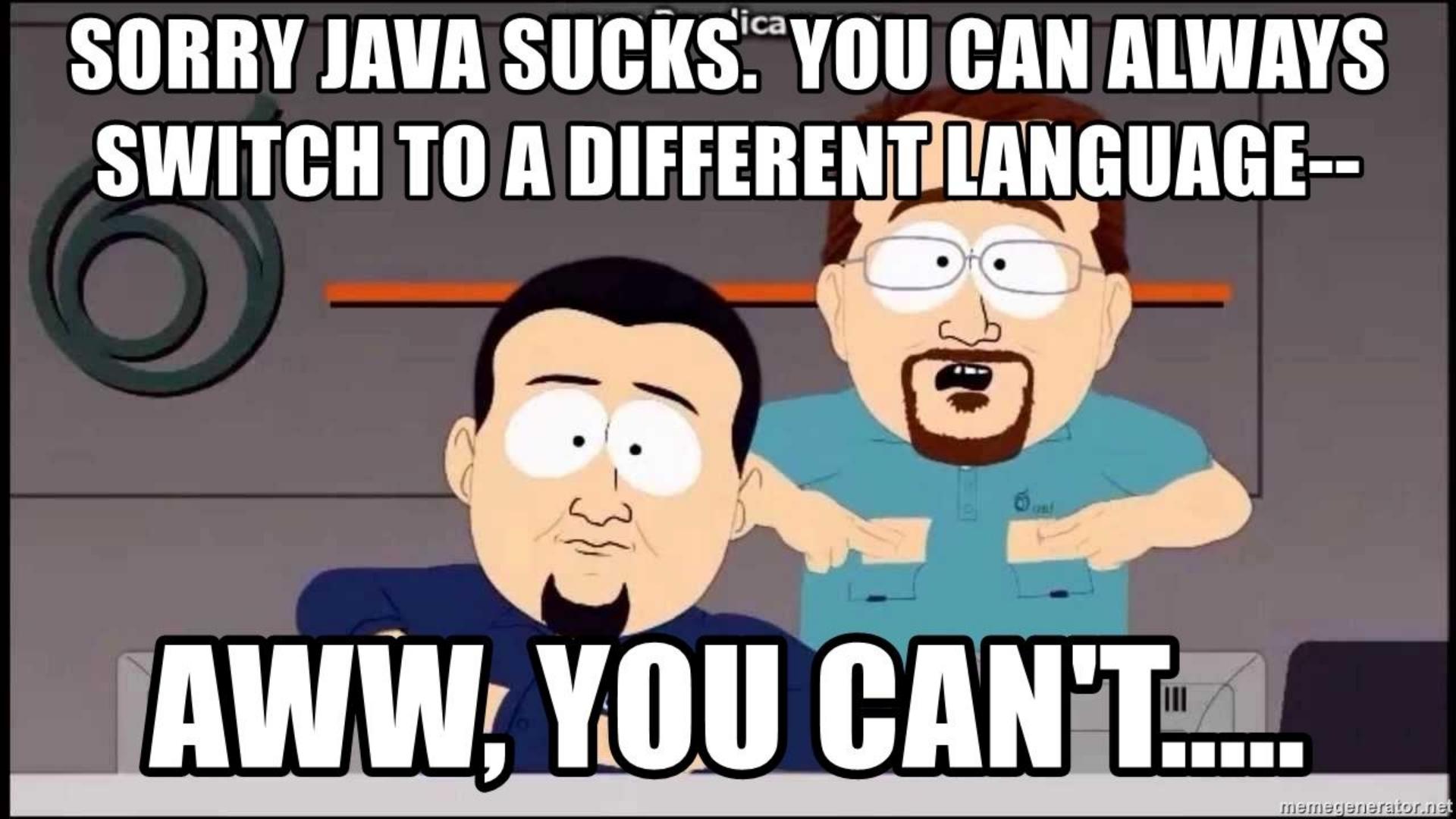
010



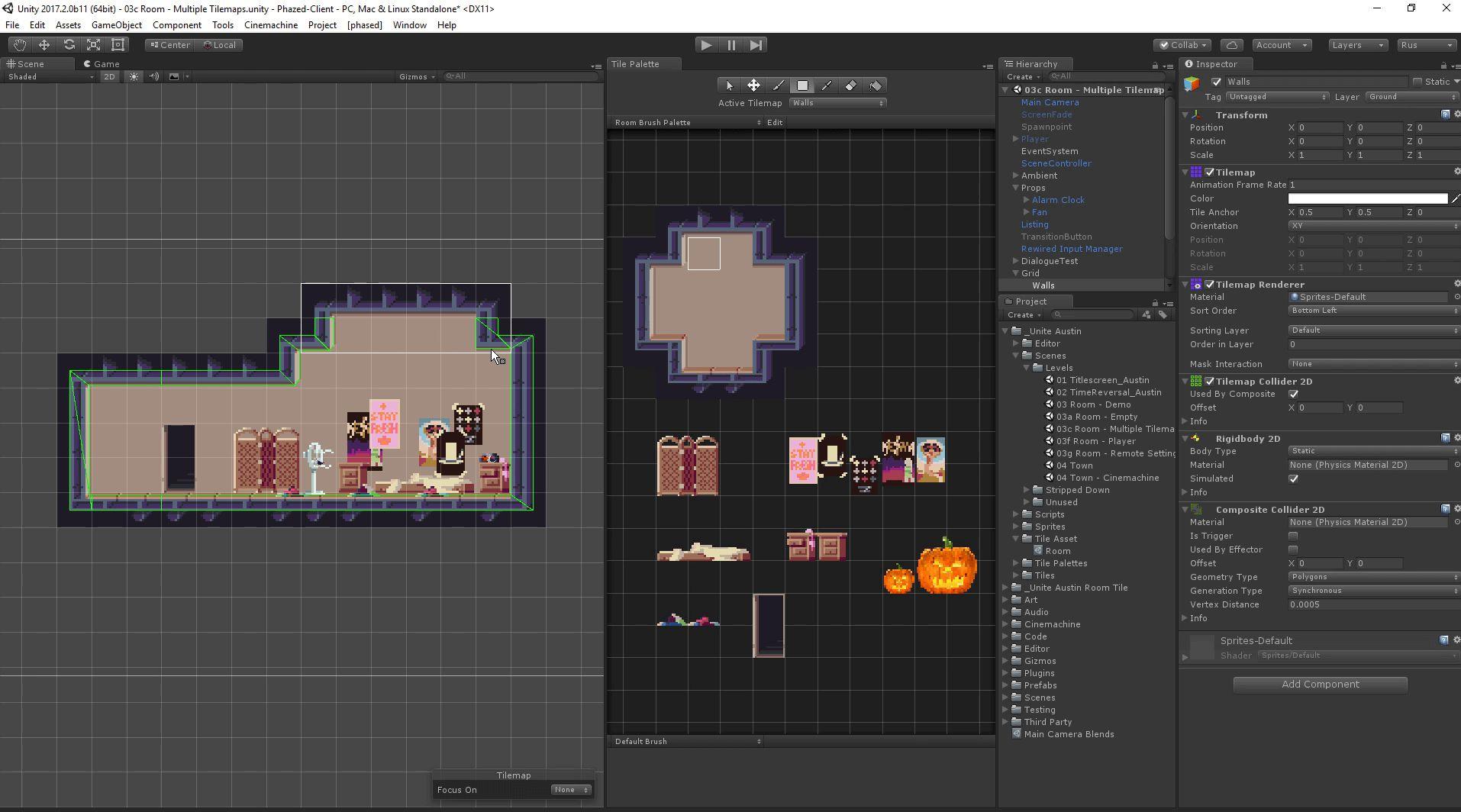


# Por que usar python?

**SORRY JAVA SUCKS. YOU CAN ALWAYS  
SWITCH TO A DIFFERENT LANGUAGE--**



**AWW, YOU CAN'T.....**





Structure

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Project Manager

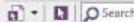


File

&lt;No Project Group&gt;

Project Manager Model View Data Explorer Multi-Device Preview

Tool Palette



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Design Projects

Unit Test

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C++-Builder Projects | ActiveX

Delphi Projects | Inheritable Items

**REST Debugger**

Embarcadero Technologies

**Request**

Method: **NONE** Username: Username-Key: Client-ID: Access-Token:  
Password: Password-Key: Client-Secret: Request-Token:

**Information**

The following components have been copied to the clipboard:  
TRESTClient, TRESTRequest, TRESTResponse,  
TRESTResponseDataSetAdapter, TFDMemTable

**Response**

https://api.stackexchange.com/2.2/questions?order=desc&sort=activity&tagged=delphi&site=stackexchange  
200 : OK - 4979 bytes of data returned. Timing: Pre: 0ms

Headers Body Tabular Data

Content is valid JSON JSON Root Element: **Items**  Nested  Apply

| tags   | owner  | is_answered | view_count | accepted_answer_id | answer_count | score | last_activity | creation_date | question_id | link  | title                                |
|--|--|-------------|------------|--------------------|--------------|-------|---------------|---------------|-------------|---|--------------------------------------|
| ["delphi", "identifier", "scancode"]                 | {"reputation": 16, "display_name": "delphidude", "profile_image": "https://www.gravatar.com/avatar/12345678901234567890123456789012.jpg?d=identicon", "user_id": 36632246}   | True        | 16         | 36632246           | 1            | -1    | 14606620      | 14606600      | 36631640    | http://stackexchange.com/questions/36631640/delphi-identifier-scancode              | How do I identify my Delphi version? |
| ["delphi", "indy", "wininet", "synapse"]             | {"reputation": 75, "display_name": "delphidude", "profile_image": "https://www.gravatar.com/avatar/12345678901234567890123456789012.jpg?d=identicon", "user_id": 36605590}   | False       | 75         | 36605590           | 0            | -2    | 14606580      | 14605590      | 36602332    | http://stackexchange.com/questions/36602332/delphi-indy-wininet-synapse             | Indy vs Synapse                      |
| ["delphi", "indy", "natp"]                           | {"reputation": 8, "display_name": "delphidude", "profile_image": "https://www.gravatar.com/avatar/12345678901234567890123456789012.jpg?d=identicon", "user_id": 36631168}    | False       | 8          | 36631168           | 0            | 0     | 14606580      | 14606580      | 36631168    | http://stackexchange.com/questions/36631168/delphi-indy-natp                        | Indy vs NATP                         |
| ["delphi", "firemonkey", "vcl", "delphi-10-seattle"] | {"reputation": 52, "display_name": "delphidude", "profile_image": "https://www.gravatar.com/avatar/12345678901234567890123456789012.jpg?d=identicon", "user_id": 36630028}   | True        | 52         | 36630028           | 1            | -1    | 14606540      | 14605000      | 36585316    | http://stackexchange.com/questions/36585316/delphi-firemonkey-vcl-delphi-10-seattle | FMX vs VCL                           |
| ["delphi", "paradox"]                                | {"reputation": 15047, "display_name": "delphidude", "profile_image": "https://www.gravatar.com/avatar/12345678901234567890123456789012.jpg?d=identicon", "user_id": 9487934} | True        | 15047      | 9487934            | 4            | 6     | 14606480      | 13104300      | 6658234     | http://stackexchange.com/questions/6658234/delphi-paradox                           | Paradox                              |

< ... >

Proxy-server disabled

Open Click By the Party  
Open Click By the Party  
Open Click By the Party

**Delphi C++**

Open Project Open Project  
Watch Video Watch Video

**Share Sheet**

Take a photo and use a standard action to open the Share Sheet to

Browser

My Rotating Cube

```
main.cpp (~Documents/openGL/08.10) - gedit
```

main.cpp x

```
void Draw(){
vec3 lpos,lint;
lpos=vec3(k0,l0,0);
lint=vec3(1,1,1);

glClearColor(0,0,0,0);
glClear(GL_COLOR_BUFFER_BIT|GL_DEPTH_BUFFER_BIT);
glUniformMatrix4fv(mvp,1,GL_FALSE,value_ptr(mat));
glUniformMatrix4fv(mvp2,1,GL_FALSE,value_ptr(camera));
glUniform3f(att[3], lpos.x,lpos.y,lpos.z);
glUniform3f(att[4], lint.x,lint.y,lint.z);

glEnableVertexAttribArray(att[0]);
 glBindBuffer(GL_ARRAY_BUFFER,vbo[0]);
glVertexAttribPointer(att[0],3,GL_FLOAT,GL_FALSE,0,0);

glEnableVertexAttribArray(att[1]);
 glBindBuffer(GL_ARRAY_BUFFER,vbo[1]);
glVertexAttribPointer(att[1],3,GL_FLOAT,GL_FALSE,0,0);

glEnableVertexAttribArray(att[2]);
 glBindBuffer(GL_ARRAY_BUFFER,vbo[4]);
glVertexAttribPointer(att[2],3,GL_FLOAT,GL_FALSE,0,0);

glBindBuffer(GL_ELEMENT_ARRAY_BUFFER,vbo[2]);
```

C++ Tab Width: 8 Ln 185, Col 1

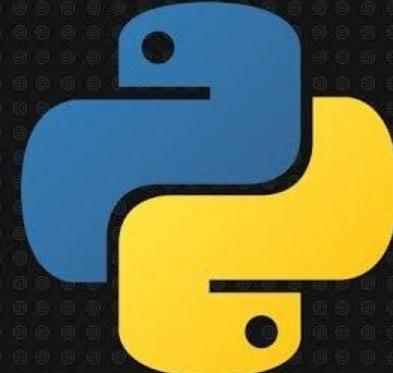
```
Setting up libntrack0 (016-1.2ubuntu2) ...
Setting up libntrack-qt4-1 (016-1.2ubuntu2) ...
Setting up kde-runtime (4:4.13.3-0ubuntu0.1) ...
update-alternatives: using /usr/lib/kde4/libexec/kdesu-distrib/kdesu to provide /etc/alternatives/kdesu to /usr/lib/kde4/libexec/kdesu (kdesu) in auto mode
/usr/lib/kde4/libexec/kdesu (kdesu) in auto mode
Setting up qapt-batch (2.1.70-0ubuntu4.2) ...
Setting up kubuntu-debug-installer (13.10ubuntu1) ...
Setting up kolourpaint4 (4:4.13.1-0ubuntu0.1) ...
Processing triggers for libc-bin (2.19-0ubuntu6) ...
cheshire@discord:~/Documents/openGL/tutorial5$
```

```
nire@discord:~/Documents/openGL/08.10$ ./m
nire@discord:~/Documents/openGL/08.10$ ./m
```



# Most popular languages on GitHub







# \* 3:36 PM

← QEdit - runner.py



```
47 tString="wspgm"
48 for i in range(smSize):
49     wNum=ord(tString[i])-97
50     aKey = ord(a[i])-97
51     decrypted = (wNum - aKey)%26
52     decrypted = chr(decrypted + 97)
53     pText+=decrypted
54     print("pText is",pText)
55     name=input("pause")
56     valid = checkWord(pText)
57     if(valid == True):
58         return True
59     else:
60         return False
```



# RUN PYTHON ON ANDROID

## Download

Download these documents

## Docs for other versions

[Python 2.7 \(stable\)](#)  
[Python 3.3 \(stable\)](#)  
[Python 3.5 \(in development\)](#)  
[Old versions](#)

## Other resources

[PEP Index](#)  
[Beginner's Guide](#)  
[Book List](#)  
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## Quick search

Enter search terms or a module, class or function name.

# Python 3.4.2 documentation

Welcome! This is the documentation for Python 3.4.2, last updated Oct 12, 2014.

## Parts of the documentation:

### [What's new in Python 3.4?](#)

*or all "What's new" documents since 2.0*

### [Tutorial](#)

*start here*

### [Library Reference](#)

*keep this under your pillow*

### [Language Reference](#)

*describes syntax and language elements*

### [Python Setup and Usage](#)

*how to use Python on different platforms*

### [Python HOWTOs](#)

*in-depth documents on specific topics*

## Indices and tables:

### [Installing Python Modules](#)

*installing from the Python Package Index & other sources*

### [Distributing Python Modules](#)

*publishing modules for installation by others*

### [Extending and Embedding](#)

*tutorial for C/C++ programmers*

### [Python/C API](#)

*reference for C/C++ programmers*

### [FAQs](#)

*frequently asked questions (with answers!)*



Cada comprimido contiene:  
Acido acetilsalicílico 400 mg. Acido  
acetilsalicílico 400 mg.  
Sulfato de cobre C1 240 mg.  
Para mayor información consultar  
el prospecto.

# ASPIRINA® C

400 mg / 240 mg

comprimidos efervescentes

# **comprimidos**

## **Ácido acetilsalicílico/Ácido ascórbico**

**10 comprimidos efervescentes**



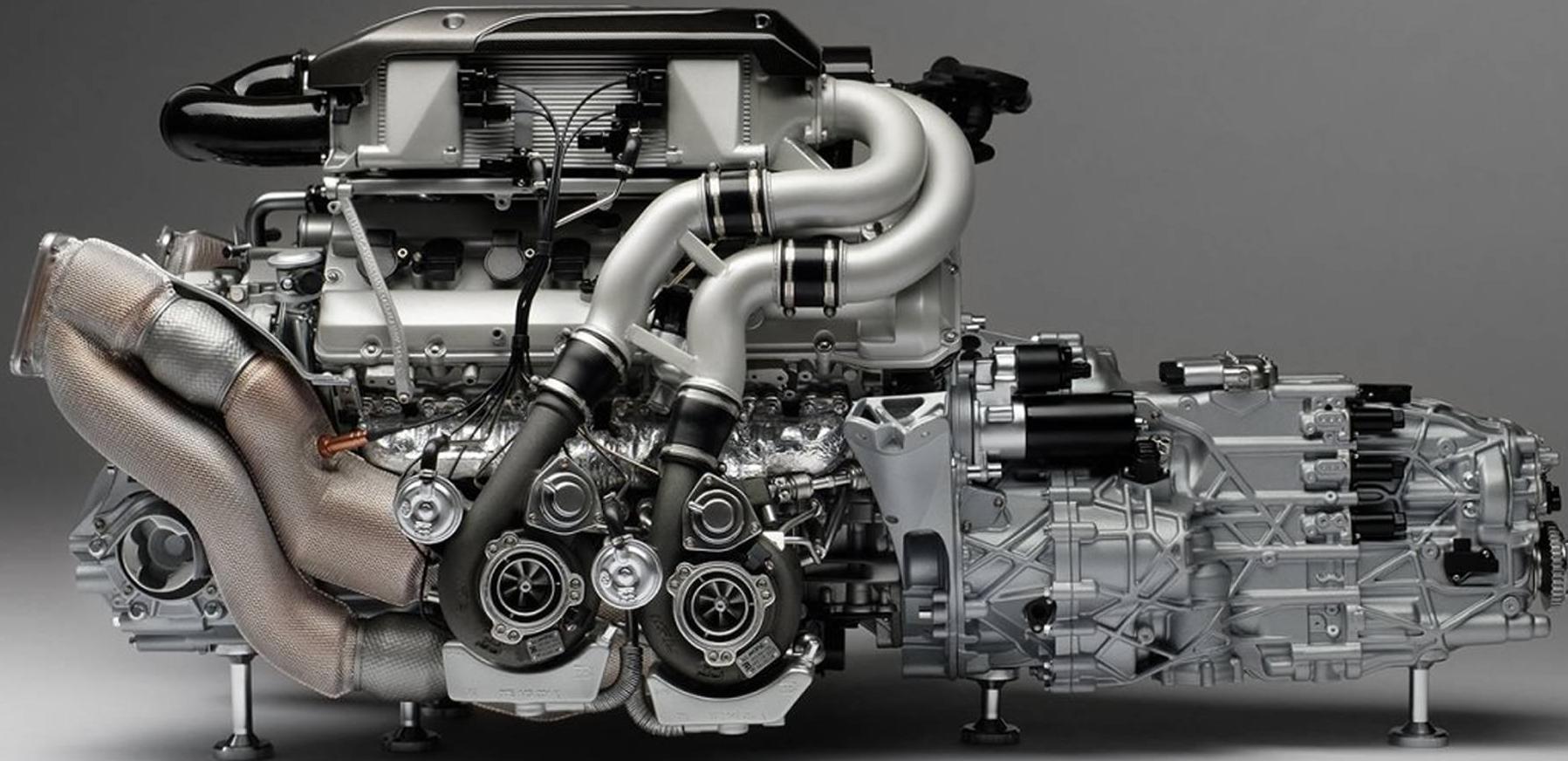
**Medicamento no sujeto a prescripción médica**

Bayer

712729.1-EFP

O que é esse tal de pygame?





pygame window



## Level 2

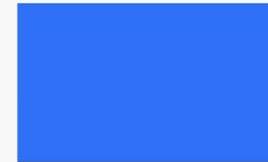
New Coins: 85

Extra Life: 3

Dodged: 10

# You Crashed

Play Again



Quit

SNAAAAKE



Game Over! Press any key to exit. Final score: 22

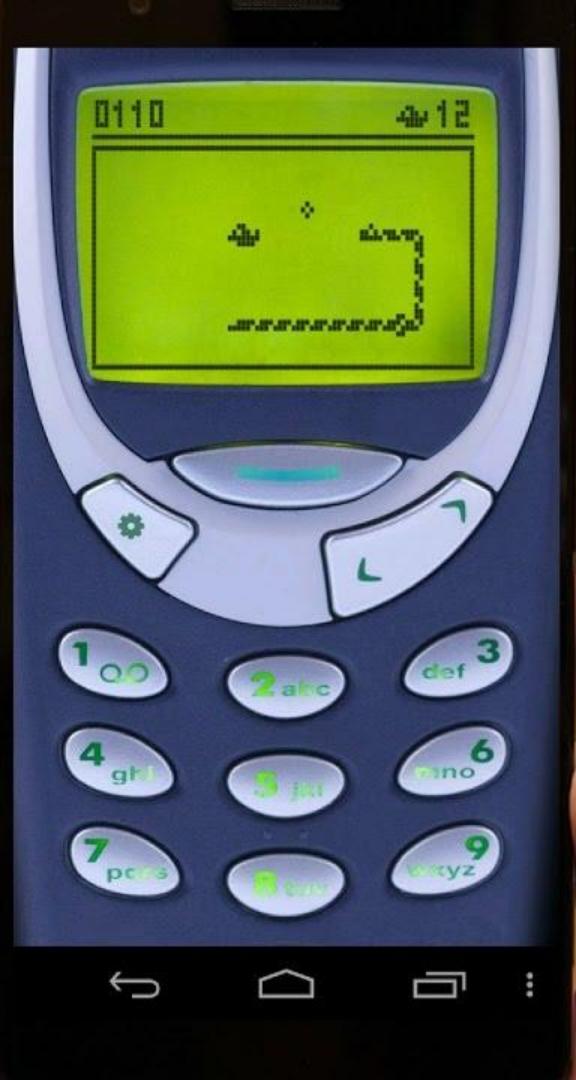
**apt-get install python-pygame**

**apt-get install python3-pygame**

**pip install pygame**

**Por que o jogo da cobrinha?**





---

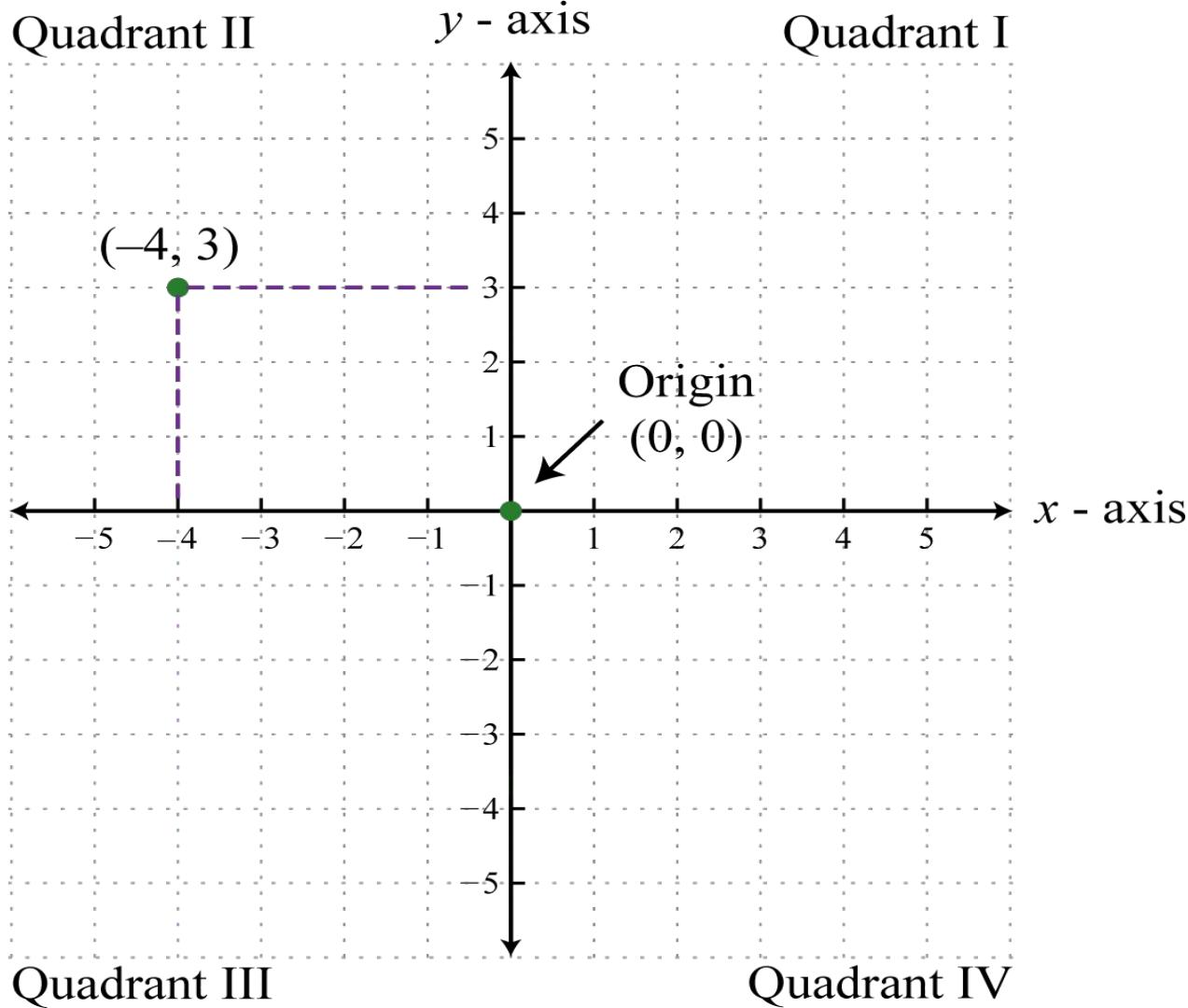
THE

# RULES

$A = [1; 0; 3]$   $\int_a^b f(g(x)) g'(x) dx = \int_{g(a)}^{g(b)} f(t) dt = [F(t)]_{g(a)}^{g(b)}$   $\{[x, y] \in M, 0 \leq z = f(x, y)\}$   $(\frac{\partial \varphi}{\partial x}, \frac{\partial \varphi}{\partial y}) = (\psi, v)$   
  
 $x_1 = \begin{pmatrix} 2p \\ -p \\ 0 \end{pmatrix}$   $G \sum [x, y, z] \in E_3 : \sin x \leq \frac{x}{y} = 1$   $\nabla F(A) = (F'_x(A), F'_y(A), F'_z(A))$   
 $M \subset \mathbb{C}$   $B[x, y] = \int_{[x_0, y_0]}^{[x, y]} \vec{f} dS$   $Y_{i+1} = Y_i + b_i K_2$   
 $x_1 = \begin{pmatrix} \alpha + \beta + \gamma \\ \alpha \\ \beta \end{pmatrix}$   $Df \in (\infty; 0) \cup (0; 1)$   $A+B+C=8$   $\Delta A = \left| \begin{array}{c} \frac{\partial^2 F}{\partial x^2}(A), \frac{\partial^2 f}{\partial x \partial y}(A) \\ \frac{\partial^2 F}{\partial y \partial x}(A), \frac{\partial^2 F}{\partial y^2}(A) \end{array} \right|$   
 $f(x) \geq 0$   $\int_{-1}^2 \left( \int_{x_2}^{x+2} xy dy \right) dx$   $3A-7B+2C=10.3$   $C = \begin{pmatrix} 0, 1 \\ 1, 0 \end{pmatrix}$   
  
 $S(f, D, V) = \|D\| = P_1 + P_2 + P_3$   $\frac{2x}{x^2 + 2y^2} = 2 \sum (P_2(x_i) - y_i)$   
  
 $m_A = \int (x_i) \Delta x_i \Delta y_i \Delta z_i$   
 $R_0 = \frac{\sqrt{1000}}{3\sqrt{\pi}} = \frac{10}{\sqrt[3]{\pi}} \approx 7$   $\frac{x^2}{16} - \frac{y^2}{9} = 1$   $X \in \mathbb{R}$   $\frac{\partial f}{\partial x}(A) = K$   
 $\frac{x^2 + y^2 + z^2 + 2^3 + xy - 6 = 0}{\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 0}$   
  
 $x \equiv 1 \quad y \equiv 1 \quad \{ \in M \}$   $\delta(p_z) = \sqrt{0.16} = 0.4$   $\Delta(A_2) = \begin{vmatrix} 0 & 2\sqrt{2} \\ 2\sqrt{2} & 0 \end{vmatrix}$   
  
 $y = \sqrt[3]{x+1}$   $x = t \arctan y$   
 $\int R(x, \sqrt{\frac{ax+b}{cx+d}}) dx$   $\frac{\partial z}{\partial x} = 2, \frac{\partial z}{\partial y} = 0$   
  
 $e^2 - xy^2 = e$   $A[0; e; 1]$   $x^2 + y^2 + z^2 = 76$

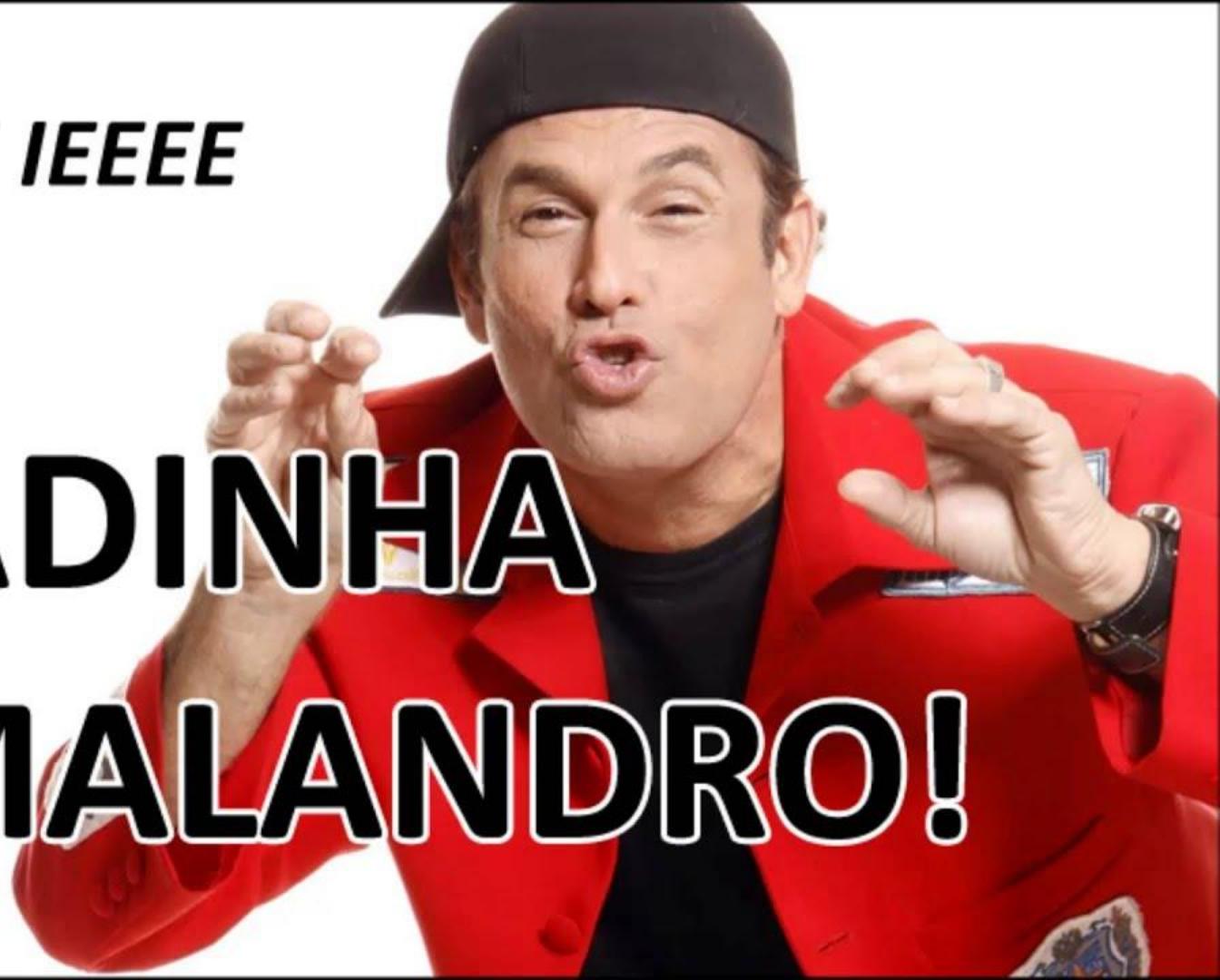


$$A = \begin{bmatrix} a_{11} & a_{12} & \cdots & a_{1n} \\ a_{21} & a_{22} & \cdots & a_{2n} \\ \vdots & \vdots & \vdots & \vdots \\ a_{m1} & a_{m2} & \cdots & a_{mn} \end{bmatrix}$$



*GLU GLU IE IEEEE*

**PEGADINHA  
DO MALANDRO!**



**Vamos ao código?**



**Querem cursos grátis?**

**<http://bit.ly/falecomonegao>**

**Contato:**

**[falecomonegao@coderkai.org](mailto:falecomonegao@coderkai.org)**

**Slides:**

**<https://www.slideshare.net/jmmadruga/>**







# Referências:

- <https://rafaeljeffman.com/>
- <https://github.com/rafasqj>
- <https://www.python.org/>
- <https://www.pygame.org/news>
- <https://www.youtube.com/channel/UC8butlSFwT-WI7EV0hUK0BQ>
- [https://www.youtube.com/channel/UC4JX40jDee\\_tINbkjycV4Sq](https://www.youtube.com/channel/UC4JX40jDee_tINbkjycV4Sq)
- <https://www.youtube.com/channel/UCaqc3TH-ZdPw7OTIIIndvSgQ>
- <https://www.youtube.com/channel/UCrUL8K81R4VBzm-KOYwrcxQ>
- <https://canberraqpн.github.io/static/doc/PygameCheatSheet.pdf>
- [http://www.cogsci.rpi.edu/~destem/igd/pygame\\_cheat\\_sheet.pdf](http://www.cogsci.rpi.edu/~destem/igd/pygame_cheat_sheet.pdf)