

# Cakechecker - Eclipse/PyChecker Integration

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# Python

```
>>> class MyClass:
...     def __init__(self):
...         "Constructor"
...         self.text = "Hello World!"
...
...     def myFunction(self):
...         "My Function"
...         print self.text
...
>>> var = MyClass()
>>> var.myFunction()
Hello World!
```

# PyChecker

- ★ Ferramenta para achar erros em código Python.
- ★ Erros: Compilador em linguagens menos dinâmicas.
- ★ Parecido com Lint.
- ★ Pode apontar *warnings* incorretos.

# Objetivos

- ★ Desenvolvimento de uma IDE (*Integrated Development Environment*) para Python para a Plataforma Eclipse.
- ★ Estudo das IDE's de Python.
- ★ Plugins de Python para o Eclipse:
  - pe4eclipse
  - pydev
  - pyeclipse
  - pythoneclipse
  - **TruStudio Python**

# TruStudio

- ★ Xored Software
- ★ Funcionalidades:
  - *Syntax Highlighting*
  - Indentação
- ★ Colaboração

# Resultados

- ★ Estudo da Plataforma Eclipse, TruStudio Python Plugin e seus pontos de extensão.
- ★ Implementação do Cakechecker:
  - launcher** execução, *parsing* e marcadores.
  - incremental project builder** *resource delta visitor*.
  - preference page** configuração.
  - nature** associação do *builder* ao projeto.
  - new project wizard** criação de novos projetos.
- ★ Compatibilidade com o TruStudio.
- ★ Plugin independente e *Pyecclipse Editor*.

Resource - import24.py - Eclipse Platform

File Edit Navigate Search Project Run Window Help

Navigator

- test
  - .project
  - import24.py
  - test20.py

Outline

Tasks (4 items)

✓	!	Description	File	Line
	!	Base class (import24.Aaa) __init__() not called		
	!	Function return types are inconsistent	test20.py	line 21
	!	Function return types are inconsistent	test20.py	line 40

```

'doc'

class Aaa:
    def __init__(self):
        self.a = 1

class Bbb(Aaa):
    def __init__(self):
        self.b = 1

def func24():
    return 53

shadow = 5
  
```

Warning Properties

Description: Base class (import24.Aaa) \_\_init\_\_() not called

Creation Time: March 28, 2004 1:23:59 PM

Severity: Warning

On Resource: import24.py

In Folder: test

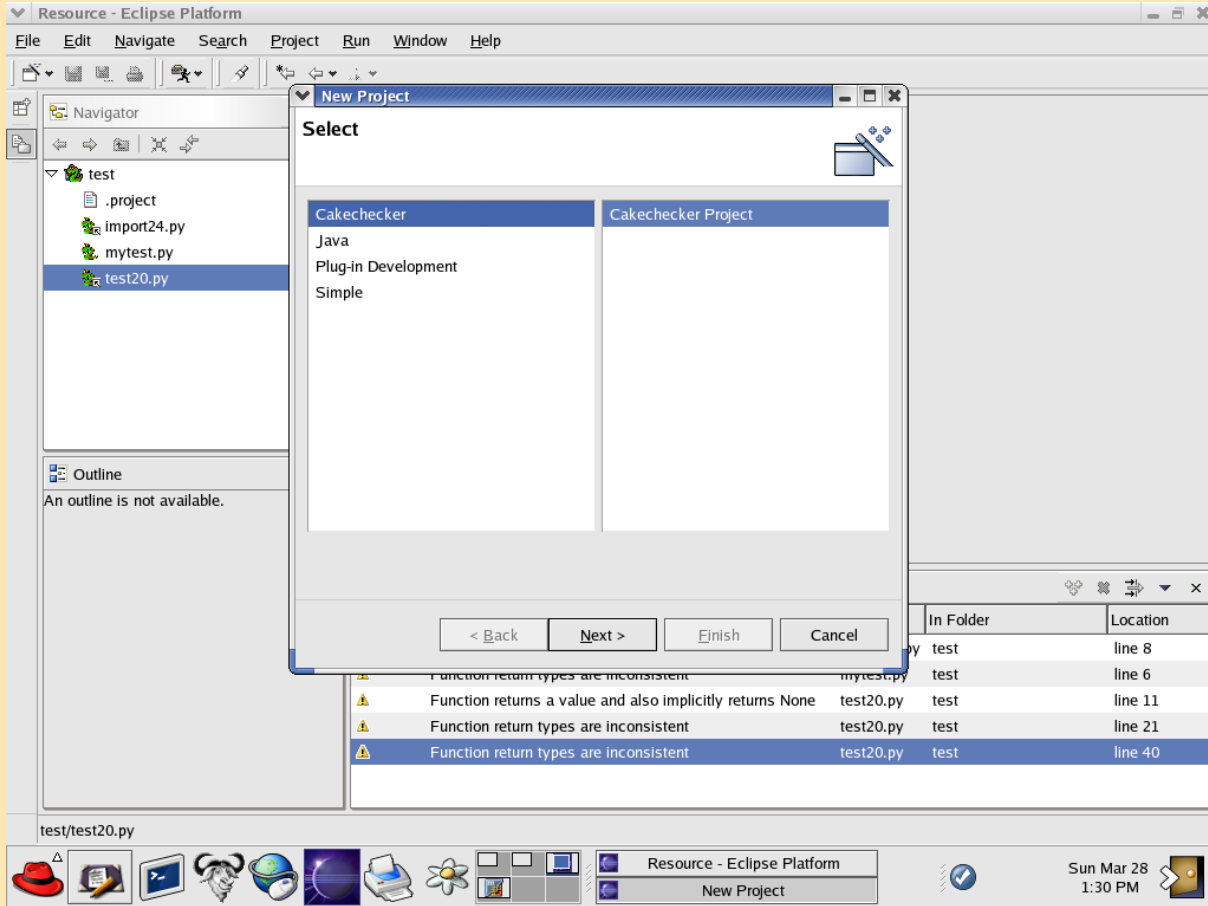
Location: line 8

Base class (import24.Aaa) \_\_init\_\_() not called

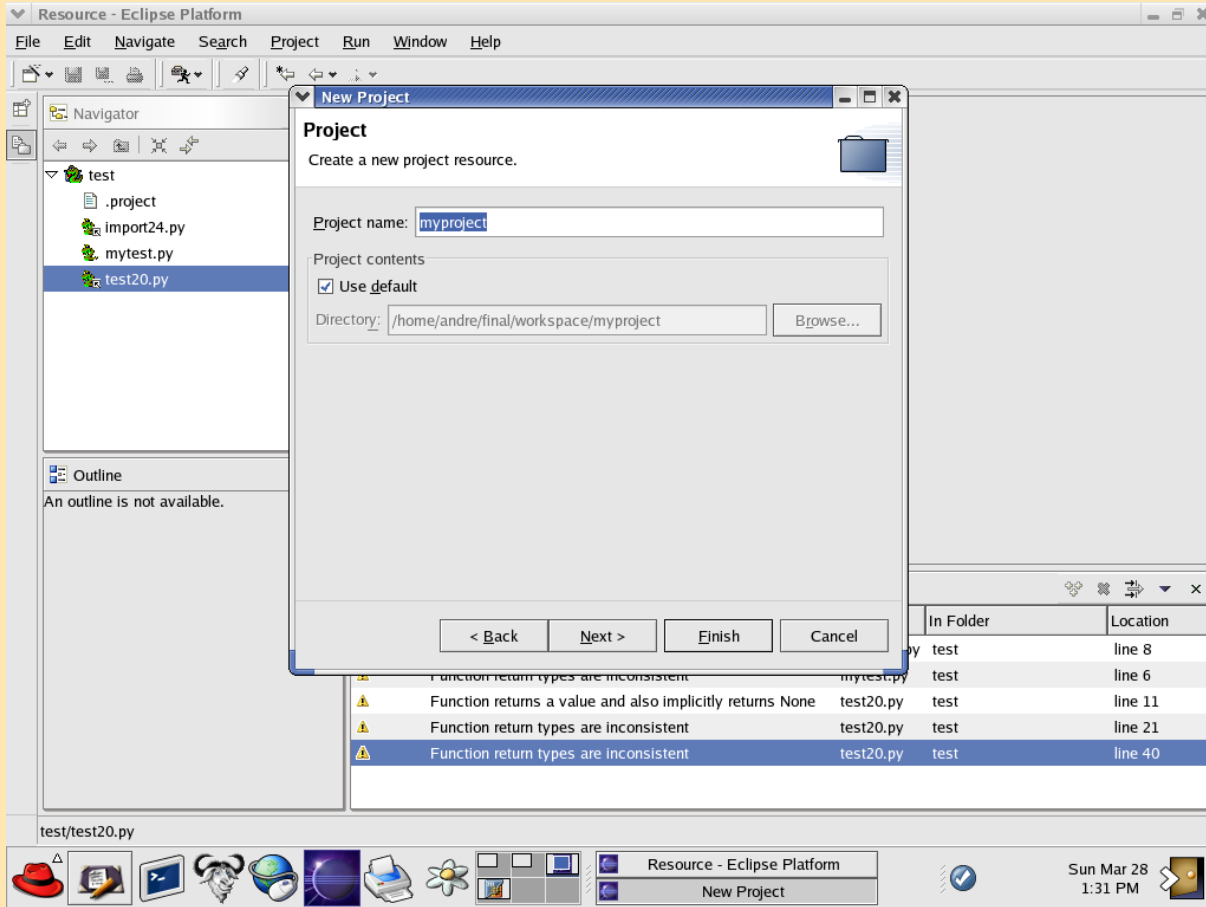
Resource - import24.py - Eclipse Platform

Warning Properties

Sun Mar 28 1:24 PM







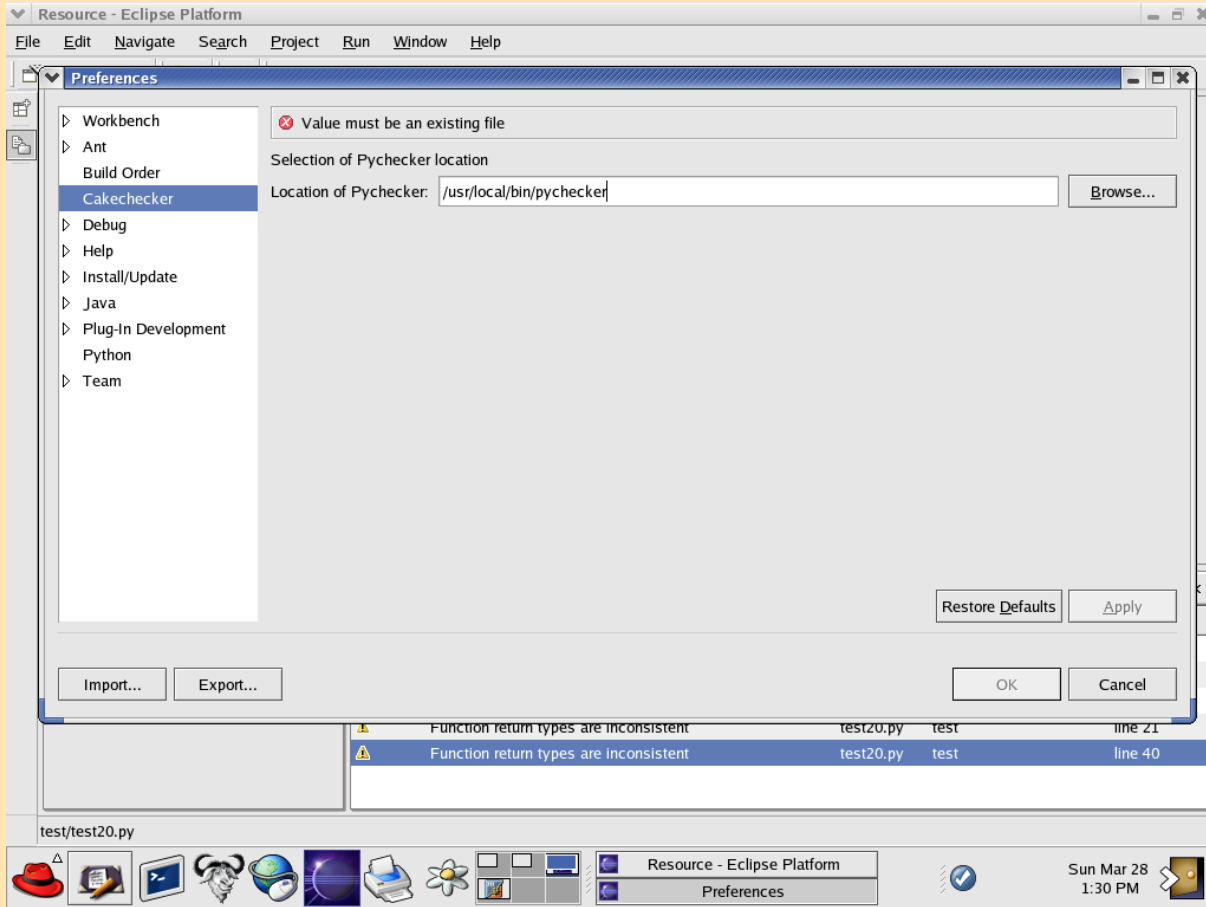
The screenshot shows the Eclipse IDE interface. The main editor displays the following Python code:

```
Resource - test20.py - Eclipse Platform
File Edit Navigate Search Project Run Window Help
test20.py x
|this test will fail unless -r/--returnvalues is used|
def func0(x):
    'should not be a warning'
    return 0
def func1(x):
    'should be a warning implicit/explicit'
    if x == 0 :
        return 1
def func2(x):
    'should not be a warning'
    if x == 0 :
        return
def func3(x):
    'should be a warning'
    if x == 0 :
        return 1
```

The Tasks view (3 items) shows the following warnings:

✓	!	Description	Resource	In Folder	Location
	!	Function returns a value and also implicitly returns None	test20.py	test	line 11
	!	Function return types are inconsistent	test20.py	test	line 21
	!	Function return types are inconsistent	test20.py	test	line 40

At the bottom of the IDE, the status bar shows "Resource - test20.py - Eclipse Platform" and the system clock displays "Sun Mar 28 1:15 PM".



## Discussão

- ★ IDE para Python.
- ★ Aprendizado.
- ★ Bicycle Repair Man.

# Bibliography

1. **Cakechecker:**

<http://www.linux.ime.usp.br/~kowal/eclipse/cakechecker>

2. **Eclipse.org:**

<http://www.eclipse.org>

3. **Eclipse Year at IME USP:**

<http://eclipse.ime.usp.br>

4. **Pychecker:**

<http://pychecker.sourceforge.net>

5. **Python.org:**

<http://www.python.org>

6. **TruStudio (Xored Software):**

<http://www.xored.com>