

Praktikum

Algoritma dan Pemrograman Komputer

Semester Ganjil 2010/2011

LAPORAN RESMI

NAMA :
NAP :
TANGGAL PRAKTIKUM :

Rijalul Fikri
2210 100 088
31 Desember 2010

Program Studi Teknik Komputer dan Telematika
Jurusan Teknik Elektro
Fakultas Teknologi Industri
Institut Teknologi Sepuluh Nopember



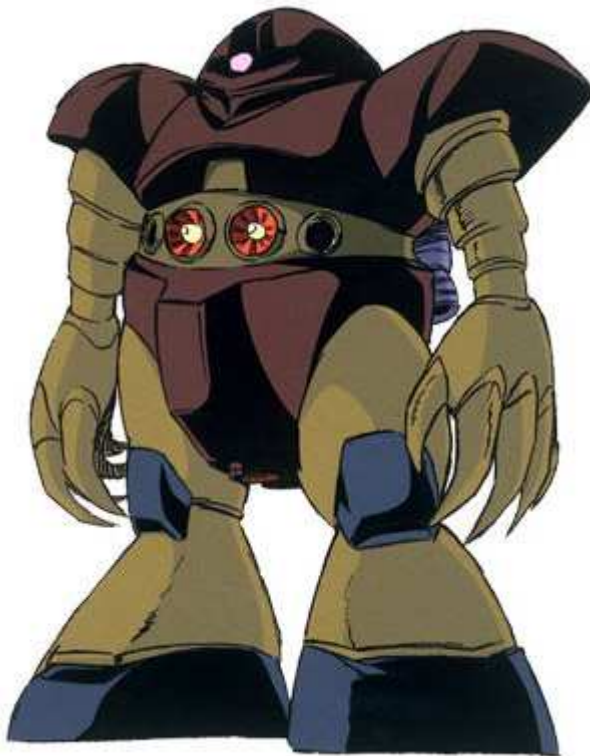
Praktikum

Algoritma dan Pemrograman Komputer

Semester Ganjil 2010/2011

Modul 1

Pengenalan IDE Python



Program studi Teknik Komputer dan Telematika
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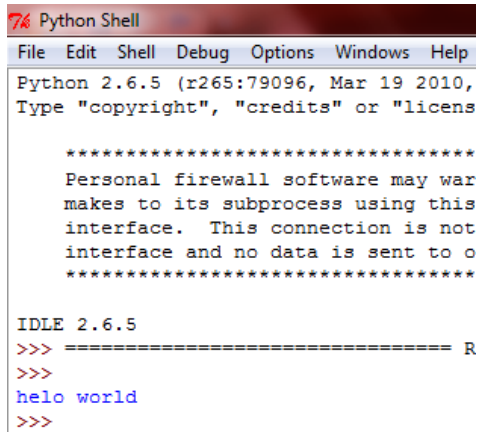
MODUL 1

1.1.1 INTEACTIVE SHELL

input

print "hello world"

output



```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010,
Type "copyright", "credits" or "licens

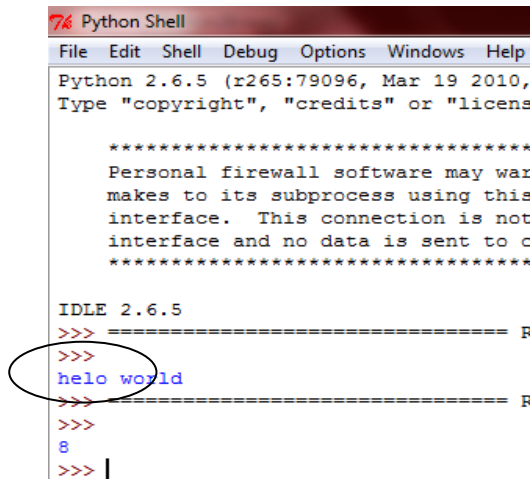
*****
Personal firewall software may war
makes to its subprocess using this
interface. This connection is not
interface and no data is sent to o
*****

IDLE 2.6.5
>>> ===== R
>>>
helo world
>>>
```

input

Print 5+3

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010,
Type "copyright", "credits" or "licens

*****
Personal firewall software may war
makes to its subprocess using this
interface. This connection is not
interface and no data is sent to c
*****

IDLE 2.6.5
>>> ===== F
>>>
helo world
>>> ===== F
>>>
8
>>> |
```

LATIHAN 1.1 : PROGRAM SEDRHANA

input

#Program 1

```

print "Praktikum Pemrograman Komputer"

print "Ini adalah program yang ditulis dengan bahasa pyhton"

print "Berikut Contoh Program Penambahan"

a=2

b=3

hasil = a + b

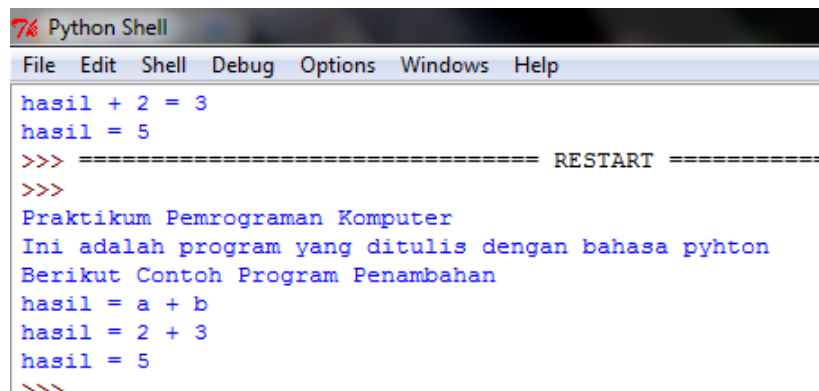
print "hasil = a + b"

print "hasil = %d+%d" % (a,b)

print "hasil = %d" % (hasil)

```

output



```

Python Shell
File Edit Shell Debug Options Windows Help
hasil + 2 = 3
hasil = 5
>>> ===== RESTART =====
>>>
Praktikum Pemrograman Komputer
Ini adalah program yang ditulis dengan bahasa pyhton
Berikut Contoh Program Penambahan
hasil = a + b
hasil = 2 + 3
hasil = 5
>>>

```

input

Print "hello, world!"

Print 2+2

a = 2*4

print a

output

```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
Praktikum Pemrograman Komputer
Ini adalah program yang ditulis dengan bahasa python
Berikut Contoh Program Penambahan
hasil = a = b
hasil + 2 = 3
hasil = 5
>>> ===== RESTART =====
>>>
hello, world!
4
8
>>>
```

LAIHAN MANDIRI : Munculkan Nama dan NRP

input

Print "Nama : Rijalul Fikri"

Print "NRP : 2210 100 088"

output

```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
Praktikum Pemrograman Komputer
Ini adalah program yang ditulis dengan bahasa python
Berikut Contoh Program Penambahan
hasil = a + b
hasil + 2 = 3
hasil = 5
>>> ===== RESTART =====
>>>
hello, world!
4
8
>>> ===== RESTART =====
>>>
Nama : Rijalul Fikri
NRP : 2210 100 088
>>>
```

LATIHAN 1. 2 : Deteksi Kesalaahn Sintak

input

print "PRAKTIKUM PEMROGRAMAN KOMPUTER"

print "Ini adalah program yang ditulis dengan Bahasa Python"

print "Berikut contoh program penambahan"

a := 2

b = 3

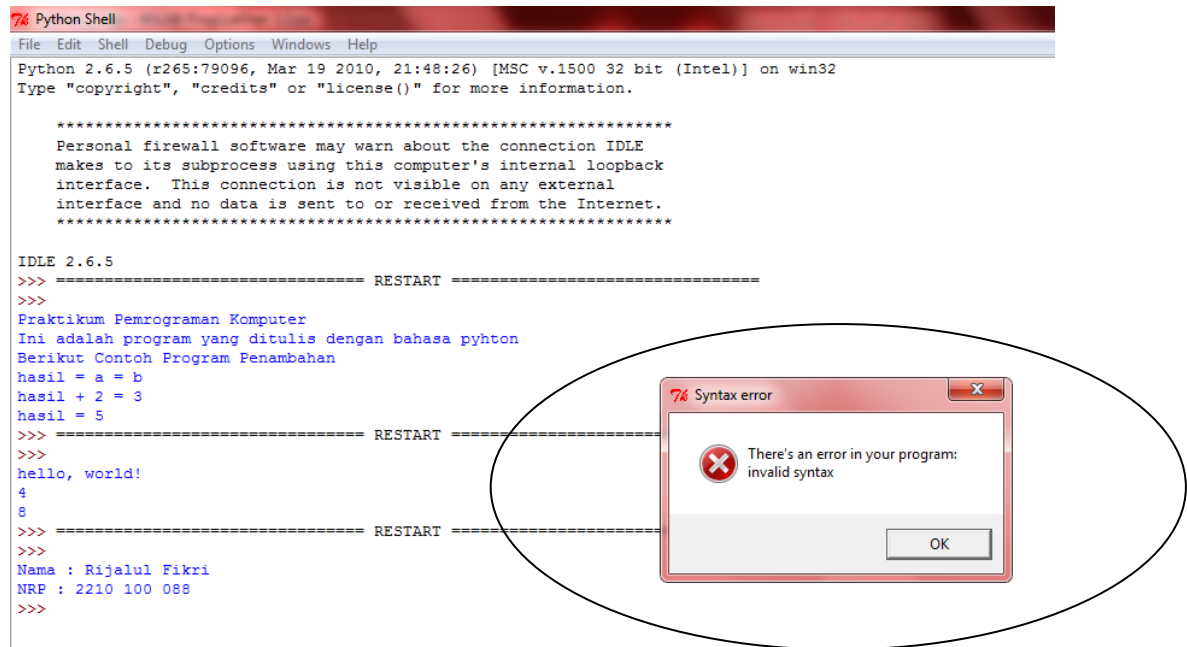
hasil = a + b

print "hasil = a + b"

print "hasil = %d + %d" % (a,b)

print "hasil = %d" % (hasil)

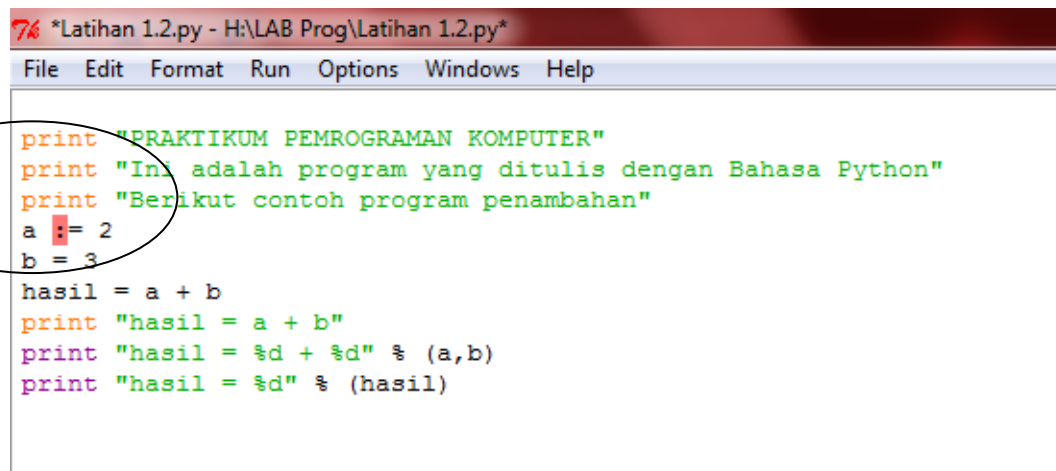
Output



Keterangan : mendeteksi ada kesalahan dalam proses

Klik OK.....!!!!!!!!!!!!!!

Lanjutan



Keterangan : mendeteksi sebuah kesalahan pada yang diwana merah , tanda " : "

input

```
print "PRAKTIKUM PEMROGRAMAN KOMPUTER"  
  
print "Ini adalah program yang ditulis dengan Bahasa Python"  
  
print "Berikut contoh program penambahan"  
  
a = 2  
  
b = 3  
  
hasil = a + b  
  
print "hasil = a + b"  
  
print "hasil = %d + %d" % (a,b)  
  
print "hasil = %d" % (hasil)
```

Kesalahan yang sudah ditandai dengan warna merah dihapus.....!!!!!!!

output


```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
Praktikum Pemrograman Komputer
Ini adalah program yang ditulis dengan bahasa pyhton
Berikut Contoh Program Penambahan
hasil = a = b
hasil + 2 = 3
hasil = 5
>>> ===== RESTART =====
>>>
hello, world!
4
8
>>> ===== RESTART =====
>>>
Nama : Rijalul Fikri
NRP : 2210 100 088
>>> ===== RESTART =====
>>>
PRAKTIKUM PEMROGRAMAN KOMPUTER
Ini adalah program yang ditulis dengan Bahasa Python
Berikut contoh program penambahan
hasil = a + b
hasil = 2 + 3
hasil = 5
>>>
```

TUGAS 1.5

input

print "hello, world!"

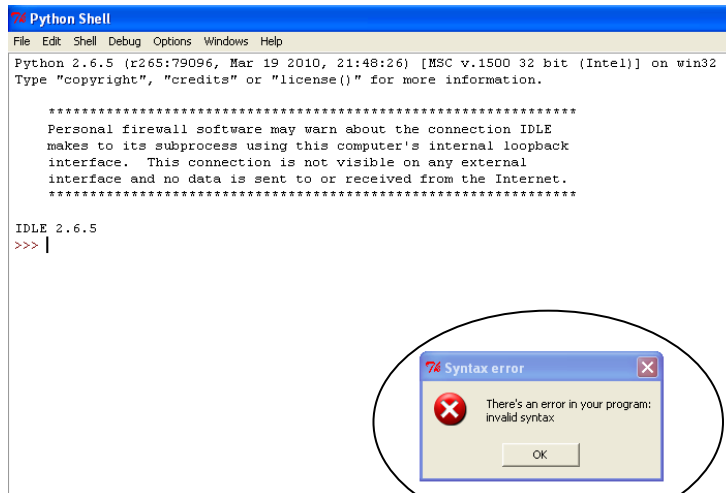
print 2 + 2,

print "test 123"

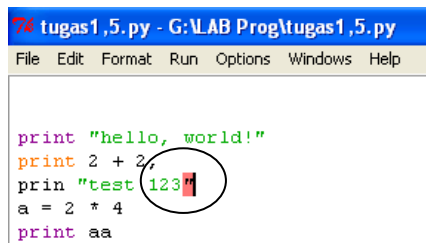
a = 2 * 4

print aa

Output



Deteksi Kesalahan



PEMBETULAN

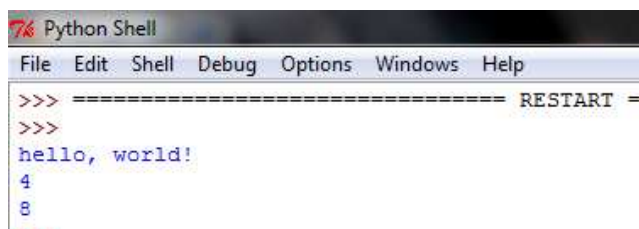
input

`print "hello, world!"`

`print 2 + 2`

`a = 2 * 4`

`print a`





Praktikum

Algoritma dan Pemrograman Komputer

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Modul 2

Input / Output (I/O)



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MODUL 2

2.1 MENAMPILKAN DATA DENGAN PERINTAH PRINT

Tidak Menggunakan Variabel

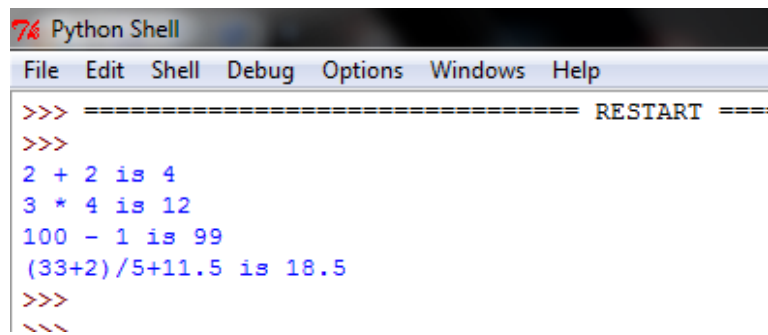
```
print "2 + 2 is", 2+2
```

```
print "3 * 4 is", 3*4
```

```
print "100 - 1 is", 100-1
```

```
print "(33+2)/5+11.5 is", (33+2)/5+11.5
```

Output

A screenshot of a Python Shell window. The title bar says "Python Shell". The menu bar includes "File", "Edit", "Shell", "Debug", "Options", "Windows", and "Help". The shell content shows a series of prompts and outputs: a "RESTART" line, followed by four lines of code and their corresponding outputs: "2 + 2 is 4", "3 * 4 is 12", "100 - 1 is 99", and "(33+2)/5+11.5 is 18.5". The prompts are ">>>" and the outputs are in blue text. The window ends with "^^^".

```
>>> ===== RESTART =====  
>>>  
2 + 2 is 4  
3 * 4 is 12  
100 - 1 is 99  
(33+2)/5+11.5 is 18.5  
>>>  
^^^
```

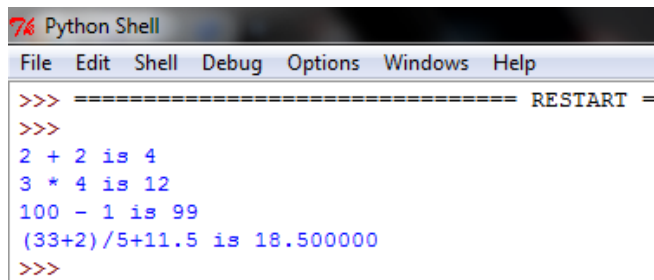
Menggunakan Variabel

```
print "2 + 2 is %d" %(2+2)
```

```
print "3 * 4 is %d" %(3*4)
```

```
print "100 - 1 is %d" %(100-1)
```

```
print "(33+2)/5+11.5 is %f" %((33+2)/5+11.5)
```



```
Python Shell
File Edit Shell Debug Options Windows Help
>>> ===== RESTART =
>>>
2 + 2 is 4
3 * 4 is 12
100 - 1 is 99
(33+2)/5+11.5 is 18.500000
>>>
```

LATIHAN 2.1 : MENAMPILKAN DATA

Proses

Latihan 2.1

```
no = 10
```

```
var_float = 1.2345
```

```
var_str = "Hello, World"
```

```
print "phyton style"
```

```
print "ok = ",no
```

```
print "floating-point = ", var_float
```

```
print "string = ",var_str
```

```
print
```

```
print "C style"
```

```
print "ok = %d" % (no)
```

```
print "Floating-point = %f" % (var_float)
```

```
print "string + %s" % (var_str)
```

```
print
```

```
print "Control khusus"
```

```
print "Pindah baris dua kali\n"
```

```
print "nggak pindah baris",
```

```
print "\tmasih satu baris"
```

Output

```

74 Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)]
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
python style
integer = 10
floating-point = 1.2345
string = Hello, World

C style
Integer = 10
Floating-point = 1.234500
string + Hello, World

Control khusus
Pindah baris dua kali

nggak pindah baris      masih satu baris
>>>

```

LATIHAN 2.2: MENGINPUTKAN DAN MENAMPILKAN DATA

Proses

```
kuliah = "Praktikum Prokom"
```

```
nama = raw_input ("Masukan nama Anda = ")
```

```
nrp = input ("Masukan nrp Anda = ")
```

```
print
```

```
print "Selamat Datang di Mata Kuliah", kuliah
```

Output

```
Python Shell
File Edit Shell Debug Options Windows Help
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)] on
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
python style
integer = 10
floating-point = 1.2345
string = Hello, World

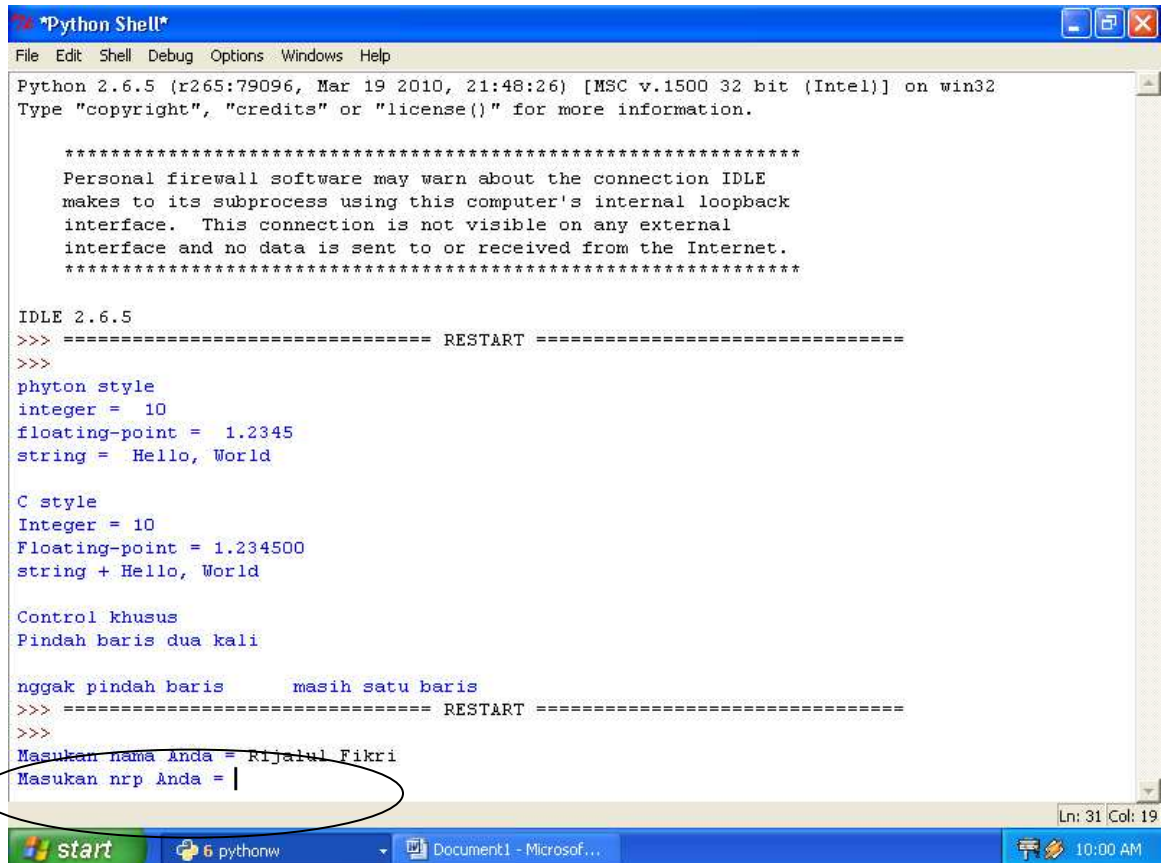
C style
Integer = 10
Floating-point = 1.234500
string + Hello, World

Control khusus
Pindah baris dua kali

nggak pindah baris      masih satu baris
>>> ===== RESTART =====
>>>
Masukan nama Anda =
```


"Masukan nama Anda=" diisi Rijalul Fikri

Output 2



The screenshot shows a Windows desktop with a taskbar at the bottom. The taskbar includes the Start button, a folder icon labeled 'pythonw', an open file 'Document1 - Microsof...', and a system clock showing '10:00 AM'. The main window is titled '*Python Shell*' and contains the following text:

```
Python 2.6.5 (r265:79096, Mar 19 2010, 21:48:26) [MSC v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.

*****
Personal firewall software may warn about the connection IDLE
makes to its subprocess using this computer's internal loopback
interface. This connection is not visible on any external
interface and no data is sent to or received from the Internet.
*****

IDLE 2.6.5
>>> ===== RESTART =====
>>>
python style
integer = 10
floating-point = 1.2345
string = Hello, World

C style
Integer = 10
Floating-point = 1.234500
string + Hello, World

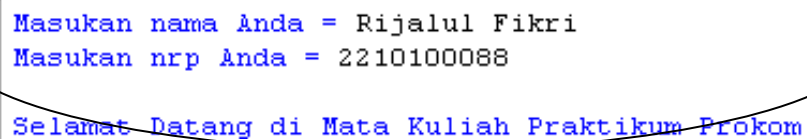
Control khusus
Pindah baris dua kali

nggak pindah baris      masih satu baris
>>> ===== RESTART =====
>>>
Masukan nama Anda = Rijalul Fikri
Masukan nrp Anda = |
```

The last two lines of code are circled in red.

"Masukan nrp=" diisi 2210100088

Output 3



The screenshot shows the final output of the Python script, with the last three lines circled in red:

```
.....
Masukan nama Anda = Rijalul Fikri
Masukan nrp Anda = 2210100088

Selamat Datang di Mata Kuliah Praktikum Prokom
```

KOMBINASI TUGAS 2.2

Proses

#latihan 2.2

```
kuliah = "praktikum prokom"
```

```
nama = raw_input ("masukkan nama anda = ")
```

```
nrp = input ("masukkan nrp anda = ")
```

```
print "selamat datang di mata kuliah ", kuliah
```

```
print nrp," ", nama
```

Output

```
>>> ===== RESTART =====
>>>
masukkan nama anda = Rijalul Fikri
masukkan nrp anda = 2210100088

selamat datang di mata kuliah praktikum prokom
Rijalul Fikri , 2210100088
>>> |
```



LATIHAN 2.3.1

Proses

```
print "Data 1"

Nama1 = raw_input ("nama : ")
NRP1 = raw_input ("NRP : ")
alamat1 = raw_input ("alamat : ")

print "Data 2"

Nama2 = raw_input ("nama : ")
NRP2 = raw_input ("NRP : ")
alamat2 = raw_input ("alamat : ")

print "Data 3"

Nama3 = raw_input ("nama : ")
NRP3 = raw_input ("NRP : ")
alamat3 = raw_input ("alamat : ")

garis = "-----"

print

print garis

print "|    NAMA    |    NRP    |    ALAMAT    |"

print garis

print "|   %s   |" % (Nama1), " %s   |" % (NRP1), " %s   |" % (alamat1)

print garis

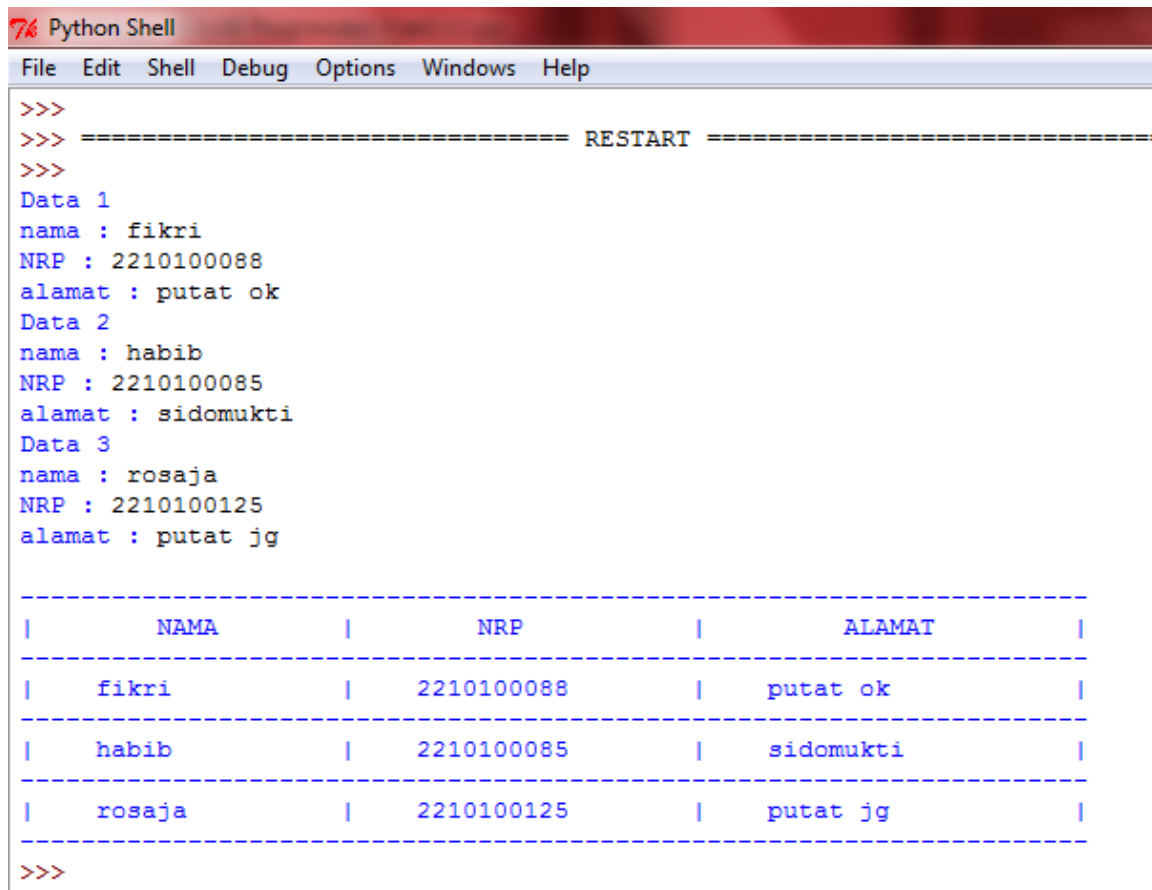
print "|   %s   |" % (Nama2), " %s   |" % (NRP2), " %s   |" % (alamat2)

print garis
```

```
print "| %s      |" % (Nama3), " %s      |" % (NRP3), " %s      |" % (alamat3)

print garis
```

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>> ===== RESTART =====
>>>
Data 1
nama : fikri
NRP : 2210100088
alamat : putat ok
Data 2
nama : habib
NRP : 2210100085
alamat : sidomukti
Data 3
nama : rosaja
NRP : 2210100125
alamat : putat jg

-----
|      NAMA      |      NRP      |      ALAMAT      |
-----
|    fikri    | 2210100088 |    putat ok    |
-----
|    habib    | 2210100085 |    sidomukti    |
-----
|    rosaja    | 2210100125 |    putat jg    |
-----
>>>
```

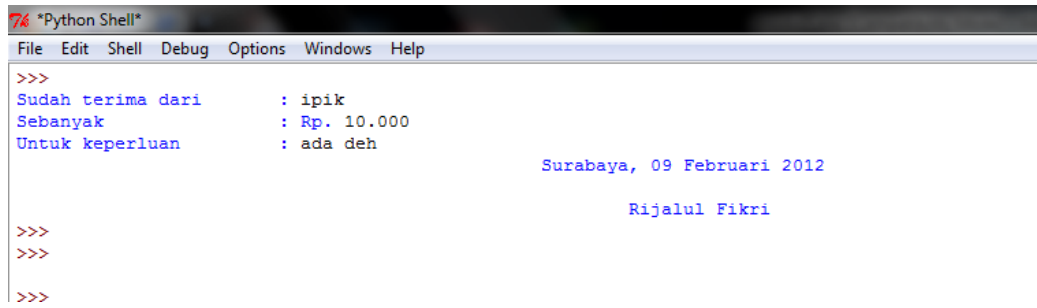
Proses

```
a=raw_input("Sudah terima dari\t: ")
b=raw_input("Sebanyak\t\t: Rp. ")
c=raw_input("Untuk keperluan\t\t: ")
```

```
print "\\t\\t\\t\\t\\tSurabaya, 09 Februari 2012"
```

```
print "\\n\\t\\t\\t\\t\\t\\tRijalul Fikri"
```

Output



```
7% *Python Shell*
File Edit Shell Debug Options Windows Help
>>>
Sudah terima dari      : ipik
Sebanyak               : Rp. 10.000
Untuk keperluan        : ada deh
                        Surabaya, 09 Februari 2012
                        Rijalul Fikri
>>>
>>>
>>>
```

Praktikum

Algoritma dan Pemrograman Komputer

Semester Ganjil 2010/2011

Modul 3

Variabel, List, Operator, dan Lambda



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MODUL 3

LATIHAN 3.0

Proses

a = 10.5

type (a)

Output

```
IDLE 2.6.5
>>> ===== RESTART =====
>>>
>>> a
10.5
>>> |
```

Latihan 3.1

Proses

Program 3.1

import math

r = Proses("Jari-jari lingkaran = ")

print "Luas lingkaran =", math.pi*r*r

Output

```
IDLE 2.6.5
>>> ===== R1
>>>
>>> jari-jari lingkaran=7
Luas lingkaran= 153.938040026
>>> |
```

LATIHAN 3.2

Proses

#Program 3.2

import math

r=Proses("jari-jari lingkaran=")

luas=math.pi*r*r

print "Luas lingkaran=",luas

Output

```
>>> ===== RESTART =====
>>>
>>> jari-jari lingkaran=10
>>> Luas lingkaran= 314.159265359
>>> !
```

LATIHAN 3.3

Proses

#Program 3.3

N=5

tab=[0]*N

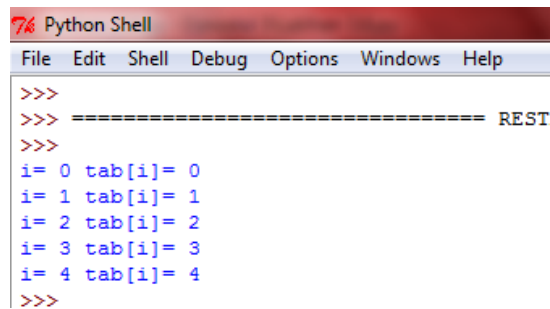
for i in range(N):

 tab[i]=i

for i in range(N):

 print "i=",i,"tab[i]=",tab[i]

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>> ===== REST
>>>
>>> i= 0 tab[i]= 0
>>> i= 1 tab[i]= 1
>>> i= 2 tab[i]= 2
>>> i= 3 tab[i]= 3
>>> i= 4 tab[i]= 4
>>>
```

LATIHAN 3.4

Proses

#Program 3.4

b=[[0,0,0]]*5

for i in range (3):

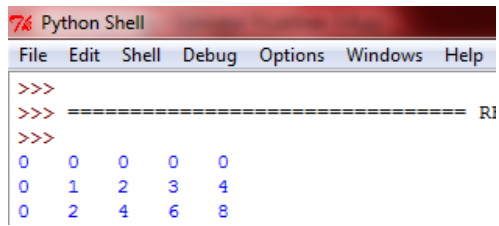
 for j in range(5):

 b[j][i]=i*j

 print b[j][i]," ",

 print

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>> ===== Ri
>>>
0 0 0 0 0
0 1 2 3 4
0 2 4 6 8
```

LATIHAN 3.5

Proses

#Program 3.5

```
i=100
```

```
j=i*2
```

```
k=j/4
```

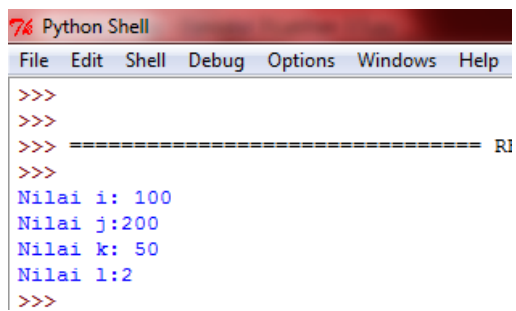
```
l=k%3
```

```
f=lambda x: x**2
```

```
print "Nilai i: %d \nNilai j:%d" %(i,j)
```

```
print "Nilai k: %d \nNilai l:%d" %(k,l)
```

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>> ===== Ri
>>>
Nilai i: 100
Nilai j:200
Nilai k: 50
Nilai l:2
>>>
```

LATIHAN 3.6

Proses

#Program 3.6

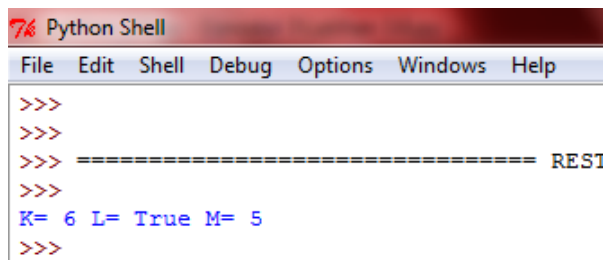
k=2*3

l=(k==6)

m=5 or 10

print "K=", k, "L=", l, "M=", m

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>>
>>> ===== RES1
>>>
K= 6 L= True M= 5
>>>
```

TUGAS MODUL 3.1

Proses

#Luas Dan keliling Persegi, segitiga, jajar genjang

s=Proses("masukkan sisi persegi=")

a=Proses("masukkan alas segitiga=")

c=Proses("masukkan sisi miring segitiga=")

d=Proses("masukkan sisi miring segitiga=")

t=Proses("masukkan tinggi segitiga=")

b=Proses("masukkan alas jajar genjang=")

m=Proses("masukkan sisi miring sejajar jajar genjang=")

h=Proses("masukkan tinggi jajar genjang=")

$L1=s**(2)$

$L2=(a*t)/2$

$L3=b*h$

$K1=4*s$

$K2=c+d+a$

$K3=(2*b)+(2*m)$

print

print "LUAS"

print "Luas persegi=",L1

print "Luas segitiga=",L2

print "Luas jajar genjang=",L3

print

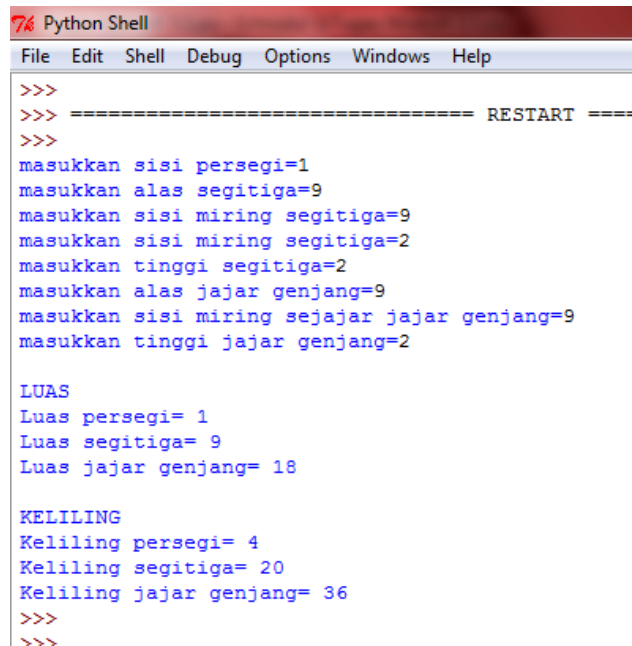
print "KELILING"

print "Keliling persegi=",K1

print "Keliling segitiga=",K2

print "Keliling jajar genjang=",K3

Output



```
Python Shell
File Edit Shell Debug Options Windows Help
>>>
>>> ===== RESTART =====
>>>
masukkan sisi persegi=1
masukkan alas segitiga=9
masukkan sisi miring segitiga=9
masukkan sisi miring segitiga=2
masukkan tinggi segitiga=2
masukkan alas jajar genjang=9
masukkan sisi miring sejajar jajar genjang=9
masukkan tinggi jajar genjang=2

LUAS
Luas persegi= 1
Luas segitiga= 9
Luas jajar genjang= 18

KELILING
Keliling persegi= 4
Keliling segitiga= 20
Keliling jajar genjang= 36
>>>
>>>
```

TUGAS MODUL 3.2

Proses

#Volume tabung, balok, dan prisma segitiga

pi=Proses("masukkan nilai pi=")

t=Proses("masukkan tinggi tabung=")

r=Proses("masukkan jari-jari tabung=")

p=Proses("masukkan panjang balok=")

t=Proses("masukkan tinggi balok=")

l=Proses("masukkan lebar balok=")

h=Proses("masukkan tinggi prisma=")

s=Proses("masukkan panjang alas prisma=")

u=Proses("masukkan tinggi alas prisma=")

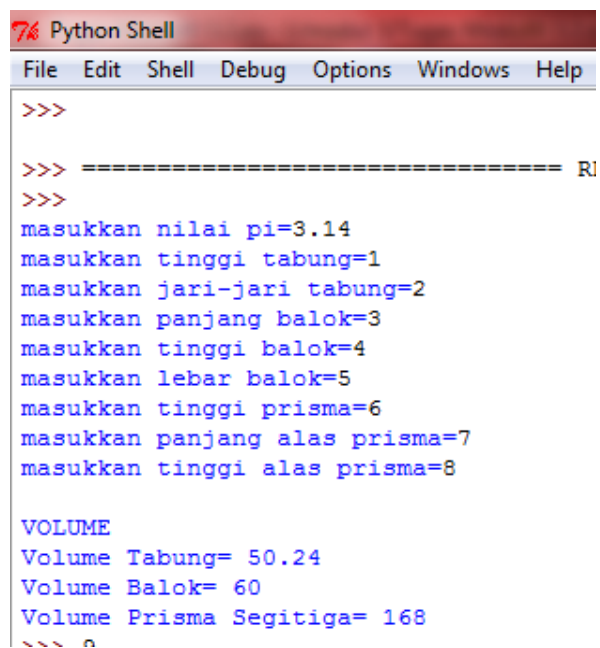
$v1 = \pi * r * r * t$

$v2 = p * l * t$

$v3 = ((s * u) / 2) * h$

```
print  
print "VOLUME"  
print "Volume Tabung=",v1  
print "Volume Balok=",v2  
print "Volume Prisma Segitiga=",v3
```

Output



```
Python Shell  
File Edit Shell Debug Options Windows Help  
>>>  
>>> ===== R  
>>>  
masukkan nilai pi=3.14  
masukkan tinggi tabung=1  
masukkan jari-jari tabung=2  
masukkan panjang balok=3  
masukkan tinggi balok=4  
masukkan lebar balok=5  
masukkan tinggi prisma=6  
masukkan panjang alas prisma=7  
masukkan tinggi alas prisma=8  
  
VOLUME  
Volume Tabung= 50.24  
Volume Balok= 60  
Volume Prisma Segitiga= 168  
>>>
```

TUGAS MODUL 3.3

Proses

#Operasi 2 matriks

a11=Proses("masukkan a11=")

a12=Proses("masukkan a12=")

a13=Proses("masukkan a13=")

a21=Proses("masukkan a21=")

a22=Proses("masukkan a22=")

a23=Proses("masukkan a23=")

a31=Proses("masukkan a31=")

a32=Proses("masukkan a32=")

a33=Proses("masukkan a33=")

b11=Proses("masukkan b11=")

b12=Proses("masukkan b12=")

b13=Proses("masukkan b13=")

b21=Proses("masukkan b21=")

b22=Proses("masukkan b22=")

b23=Proses("masukkan b23=")

b31=Proses("masukkan b31=")

b32=Proses("masukkan b32=")

b33=Proses("masukkan b33=")

c11=(a11+b11)

c12=(a12+b12)

c13=(a13+b13)

c21=(a21+b21)

c22=(a22+b22)

c23=(a23+b23)

c31=(a31+b31)

```

c32=(a32+b32)
c33=(a33+b33)

print
print "nilai tambah dua matriks= | ",c11, c12, c13," |"
print "          | ",c21, c22, c23," |"
print "          | ",c31, c32, c33," |"

c11=(a11-b11)
c12=(a12-b12)
c13=(a13-b13)
c21=(a21-b21)
c22=(a22-b22)
c23=(a23-b23)
c31=(a31-b31)
c32=(a32-b32)
c33=(a33-b33)

print

```

```

print "nilai kurang dua matriks= | ",c11, c12, c13," |"
print "          | ", c21, "",c22, "",c23," |"
print "          | ", "",c31, "",c32, "",c33," |"

print

```

```

c11=(a11*b11)+(a12*b21)+(a13*b31)
c12=(a11*b12)+(a12*b22)+(a13*b32)
c13=(a11*b13)+(a12*b23)+(a13*b33)
c21=(a21*b11)+(a22*b21)+(a23*b31)
c22=(a21*b12)+(a22*b22)+(a23*b32)
c23=(a21*b13)+(a22*b23)+(a23*b33)
c31=(a31*b11)+(a32*b21)+(a33*b31)

```

```
c32=(a31*b12)+(a32*b22)+(a33*b32)
```

```
c33=(a31*b13)+(a32*b23)+(a33*b33)
```

```
print "nilai kali dua matriks= | ", c11," ",c12," ",c13," |"
```

```
print "          | ", c21," ",c22," ",c23," |"
```

```
print "          | ",c31, "",c32,"", c33," |"
```

```
print
```

```
D1=(a11*a22*a33)+(a12*a23*a31)+(a13*a21*a32)-(a12*a21*a33)-(a11*a23*a32)-  
(a13*a22*a31)
```

```
D2=(b11*b22*b33)+(b12*b23*b31)+(b13*b21*b32)-(b12*b21*b33)-(b11*b23*b32)-  
(b13*b22*b31)
```

```
print
```

```
print "Determinan matriks A=",D1
```

```
print
```

```
print "Determinan matriks B=",D2
```

```
print
```

```
print " Transpose matriks A= | ",a11, a21, a31," |"
```

```
print "          | ",a12, a22, a32," |"
```

```
print "          | ",a13, a23, a33," |"
```

```
print
```

```
print " Transpose matriks B= | ",b11, b21, b31," |"
```

```
print "          | ",b12, b22, b32," |"
```

```
print "          | ",b13, b23, b33," |"
```

```
print
```

```
print " ---SELESAI--- "
```


Output

```
Python Shell
File Edit Shell Debug Options Windows Help
>>> ===== RESTART =
>>>
masukkan a11=1
masukkan a12=2
masukkan a13=3
masukkan a21=4
masukkan a22=5
masukkan a23=6
masukkan a31=7
masukkan a32=8
masukkan a33=9
masukkan b11=9
masukkan b12=8
masukkan b13=7
masukkan b21=6
masukkan b22=5
masukkan b23=4
masukkan b31=3
masukkan b32=2
masukkan b33=1

nilai tambah dua matriks= | 10 10 10 |
                          | 10 10 10 |
                          | 10 10 10 |

nilai kurang dua matriks= | -8 -6 -4 |
                          | -2  0  2 |
                          |  4  6  8 |

nilai kali dua matriks= | 30  24  18 |
                       | 84  69  54 |
                       | 138 114  90 |

Determinan matriks A= 0
Determinan matriks B= 0

Transpose matriks A= | 1 4 7 |
                    | 2 5 8 |
                    | 3 6 9 |
```

```
nilai tambah dua matriks= | 10 10 10 |  
                           | 10 10 10 |  
                           | 10 10 10 |
```

```
nilai kurang dua matriks= | -8 -6 -4 |  
                           | -2  0  2 |  
                           |  4  6  8 |
```

```
nilai kali dua matriks= | 30  24  18 |  
                        | 84  69  54 |  
                        | 138 114  90 |
```

Determinan matriks A= 0

Determinan matriks B= 0

```
Transpose matriks A= | 1 4 7 |  
                     | 2 5 8 |  
                     | 3 6 9 |
```

```
Transpose matriks B= | 9 6 3 |  
                     | 8 5 2 |  
                     | 7 4 1 |
```

---SELESAI---

Praktikum

Algoritma dan Pemrograman Komputer

Semester Ganjil 2010/2011

Modul 4

Kontrol Program



Program Studi Teknik Komputer dan Telematika
Jurusan Teknik Elektro
Fakultas Teknologi Industri
Institut Teknologi Sepuluh Nopember



MODUL 4

LATIHAN 4.1

Proses

```
#program 4.1

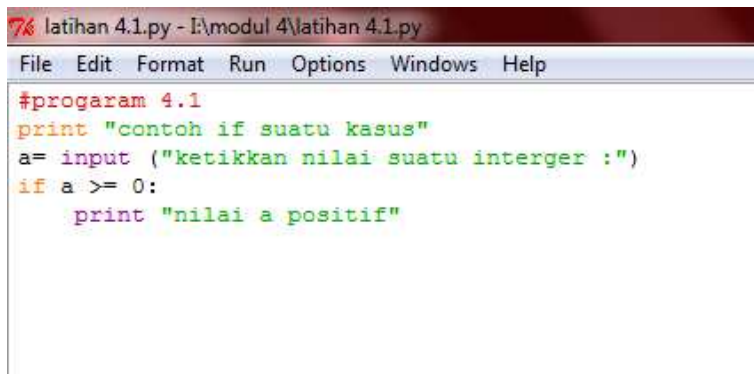
print "contoh if suatu kasus"

a= Proses ("ketikkan nilai suatu interger :")

if a >= 0:

    print "nilai a positif"
```

Output

A screenshot of a Python IDE window titled '7% latihan 4.1.py - E:\modul 4\latihan 4.1.py'. The window has a menu bar with 'File', 'Edit', 'Format', 'Run', 'Options', 'Windows', and 'Help'. The code editor displays the following Python code:

```
#program 4.1
print "contoh if suatu kasus"
a= input ("ketikkan nilai suatu interger :")
if a >= 0:
    print "nilai a positif"
```

LATIHAN 4.2

Proses

```
#program 4.2

print "contoh if dua kasus"

a= Proses ("ketikkan suatu nilai interger :")

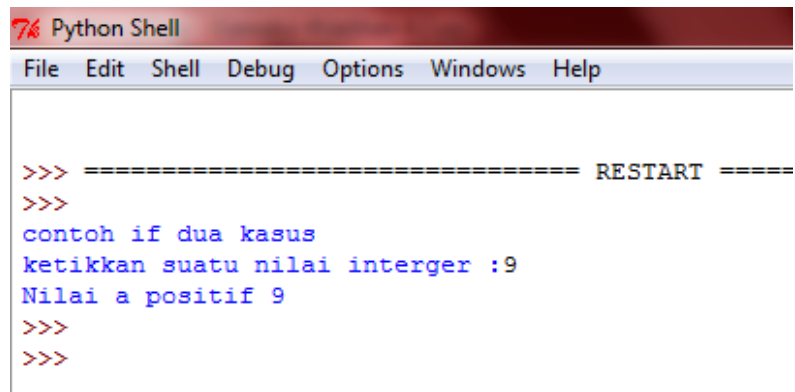
if a>=0:

    print "Nilai a positif",a

else:

    print "Nilai a negatif",a
```

Output



```
Python Shell
File Edit Shell Debug Options Windows Help

>>> ===== RESTART =====
>>>
contoh if dua kasus
ketikkan suatu nilai interger :9
Nilai a positif 9
>>>
>>>
```

LATIHAN 4.3

Proses

program 4.3

print "Baca N, print 1 s/d N"

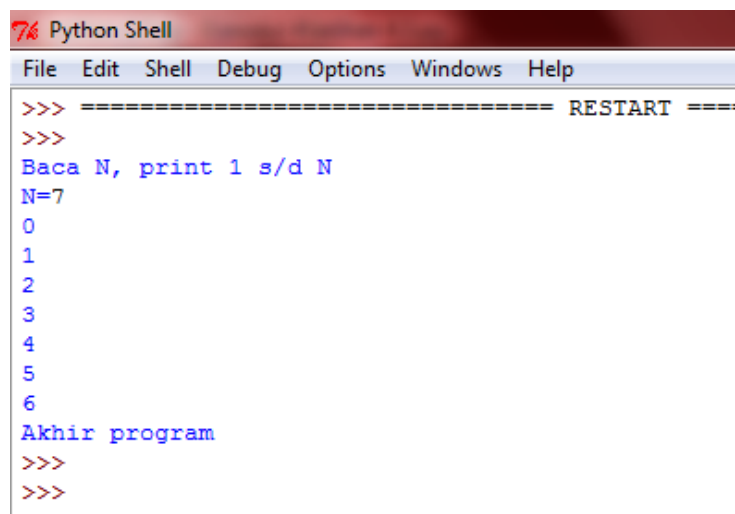
N= Proses ("N=")

for i in range (N):

 print i

print "Akhir program"

Output



```
Python Shell
File Edit Shell Debug Options Windows Help

>>> ===== RESTART =====
>>>
Baca N, print 1 s/d N
N=7
0
1
2
3
4
5
6
Akhir program
>>>
>>>
```

LATIHAN 4.4

Proses

#program 4.4

N= Proses ("Nilai N=")

print "print i dengan WHILE"

i=1

while i <= N:

 print i

 i=i+1

Output



```
>>>
>>> ===== RESTART =====
>>>
Nilai N=7
print i dengan WHILE
1
2
3
4
5
6
7
>>>
```

LATIHAN 4.5

Proses

#PROGRAM 4.5

cc=raw_Proces ("Ketikkan sebuah huruf, akhiri dengan enter \n")

if cc == "o":

 print "yang anda ketikkan adalah o"

elif cc== "a":

 print "yang anda ketikkan adalah a"

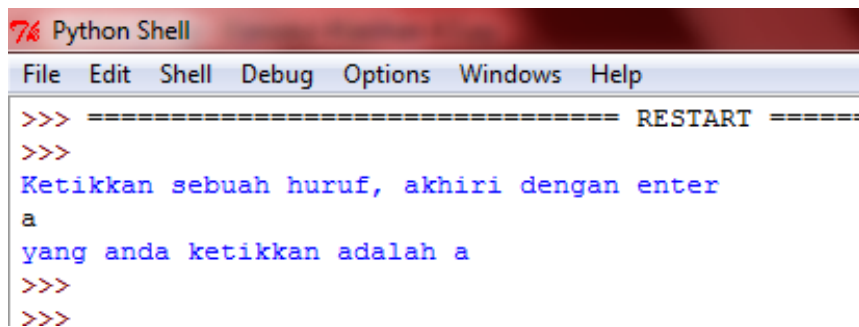
elif cc=="u":

```

    print "yang anda ketikkan adalah u"
elif cc=="e":
    print "yang anda ketikkan adalah e"
elif cc=="i":
    print "yang anda pikirkan adalah i"
else:
    print "yang anda ketik adalh huruf mati"

```

Output



```

Python Shell
File Edit Shell Debug Options Windows Help
>>> ===== RESTART =====
>>>
Ketikkan sebuah huruf, akhiri dengan enter
a
yang anda ketikkan adalah a
>>>
>>>

```

TUGAS 4.1

Proses

```

b=Proses ("masukkan bilangan")
if b%2==0:
    print b, "adalah bilangan genap"
else:
    print b, "adalah bilanga ganjil"

```

Output

```
Python Shell
File Edit Shell Debug Options Windows Help
>>> ===== RESTART =====
>>>
masukkan bilangan2
2 adalah bilangan genap
>>>
>>>
```




Praktikum

Algoritma dan Pemrograman Komputer

Semester Ganjil 2010/2011

Modul 5

Fungsi dan Parameter



Program Studi Teknik Komputer dan Telematika
Jurusan Teknik Elektro
Fakultas Teknologi Industri
Institut Teknologi Sepuluh Nopember



MODUL 5

Latihan 5.1

```
#Program 5.1
def input_data():
    "Fungsi pertama"
    nama=raw_input("Nama:")
    nrp=raw_input("NRP:")

def cetak_string():
    print "Ini adalah fungsi yang mencetak string"
    print "Silahkan masukkan data"
    input_data()

cetak_string()

>>>
Ini adalah fungsi yang mencetak string
Silahkan masukkan data
Nama:Hikmah Miladiyah
NRP:2210100046
>>> |
```

Latihan 5.2

```
#Program 5.2
def cetak_string(par1,par2):
    print "Nama mahasiswa adalah", par1
    print "NRP mahasiswa adalah", par2

def hitung(a,b):
    print "Hasil penjumlahan",a,"+",b,"adalah",(a+b)

#main program
nama=raw_input("Nama=")
nrp=raw_input("NRP=")
cetak_string(nama,nrp)
bil1=10
bil2=12
hitung(bil1,bil2)

>>>
Nama=Hikmah Miladiyah
NRP=2210100046
Nama mahasiswa adalah Hikmah Miladiyah
NRP mahasiswa adalah 2210100046
Hasil penjumlahan 10 + 12 adalah 22
>>> |
```

Latihan 5.3

```
#Program 5.3
def tambah(a,b):
    jum=a+b
    return jum
def kurang(c,d):
    return c-d
bil1=input("Masukkan nilai A:")
bil2=input("Masukkan nilai B:")
hasil=tambah(bil1,bil2)
print "Hasil penjumlahan :",hasil
print "Hasil pengurangan :",kurang(bil1,bil2)
```

```
>>>
Masukkan nilai A:2
Masukkan nilai B:3
Hasil penjumlahan : 5
Hasil pengurangan : -1
>>> |
```

Latihan 5.4

```
#Program 5.4
def tambah_kurang(a,b):
    return [a+b,a-b]
bil1=input("Masukkan nilai A:")
bil2=input("Masukkan nilai B:")
[plus,minus]=tambah_kurang(bil1,bil2)
print "Hasil penjumlahan :",plus
print "Hasil pengurangan :",minus
```

```
>>>
Masukkan nilai A:4
Masukkan nilai B:6
Hasil penjumlahan : 10
Hasil pengurangan : -2
>>> |
```

Latihan 5.5

```
#Program 5.5
def faktorial(nn):
    if nn<=1:
        return 1
```

```

else:
    f=nn*faktorial(nn-1)
    return f
N=input("Masukkan integer=")
print "Faktorial dari",N,"adalah",faktorial(N)

>>>
Masukkan integer=4
Faktorial dari 4 adalah 24
>>> ===== RESTART
>>>
Masukkan integer=6
Faktorial dari 6 adalah 720
>>> |

```

TUGAS

Nomer 1

```

#Program Tugas 5.6.1
#Nomer 1
print "Fungsi yang menjumlahkan 2 integer"
def f(a,b):
    f=a+b
    print f
a=input("a=")
b=input("b=")
f(a,b)

print"-----selesai-----","\n"

>>>
Fungsi yang menjumlahkan 2 integer
a=2
b=6
8
-----selesai-----
>>> |

```

Nomer 2

```

#Program Tugas 5.6.2
#Nomer 2
print "Fungsi yang menukar isi dua buah variabel string"
def v(a,b):
    c=a
    d=b
    a=d

```

```

b=c
print "a=",a," dan ","b=",b
a=raw_input("masukkan a:")
b=raw_input("masukkan b:")
v(a,b)

print"-----selesai-----","\n"

```

```

>>>
Fungsi yang menukar isi dua buah variabel string
masukkan a:9
masukkan b:2
a= 2 dan b= 9
-----selesai-----
>>>

```

Nomer 3

```

#Program Tugas 5.6.3
#Nomer 3
print "Fungsi yang mengembalikan nilai KPK dari dua bilangan"
def g(a,b):
    k=a*b
    n=1
    sw=0
    while n<=k:
        if sw==0:
            sisa1=n%a
            sisa2=n%b
            if (sisa1==0) and (sisa2==0) :
                print "KPK dari",a,"dan",b,"=",n
                sw=1
            else:
                n=n+1
        else:
            print "-----selesai-----","\n"
            n=k+1
a=input("masukkan a=")
b=input("masukkan b=")
g(a,b)

```

```

>>>
Fungsi yang mengembalikan nilai KPK dari dua bilangan
masukkan a=25
masukkan b=12
KPK dari 25 dan 12 = 300
-----selesai-----

```

Nomer 4

#Program Tugas 5.6.4

#Nomer 4

print "Fungsi yang mengembalikan jumlah huruf vokal dari suatu kalimat"

def h(x):

 m1=0

 m2=0

 m3=0

 m4=0

 m5=0

 m6=0

 for i in (x):

 if (i=="a"):

 m1=m1+1

 if (i=="i"):

 m2=m2+1

 if (i=="u"):

 m3=m3+1

 if (i=="e"):

 m4=m4+1

 if (i=="o"):

 m5=m5+1

 else:

 m6=0

 print "Jumlah huruf vokalnya ada:",m1+m2+m3+m4+m5+m6

x=raw_input("masukkan x=")

h(x)

print"-----selesai-----","\n"

>>>

Fungsi yang mengembalikan jumlah huruf vokal dari suatu kalimat

masukkan x=saya anak mama

Jumlah huruf vokalnya ada: 6

-----selesai-----

^^^

