

PRAKTIKUM ALGORITMA DAN STRUKTUR DATA

MODUL 7

REGULAR EXPRESSIONS



Oleh : Fariz Taufiqul Hafidz

Nim : L200210192

Kelas : F

**PROGRAM STUDI TEKNIK INFORMATIKA
FAKULTAS KOMUNIKASI DAN INFORMATIKA
UNIVERSITAS MUHAMMADIYAH SURAKARTA**

2023

A. Soal-soal mahasiswa

1. Meng-ekstrak kata-kata dengan awalan ‘me’.

a. Kode

```
1 import re
2
3 file = open("Indonesia.txt", "r", encoding = "utf-8")
4 teks = file.read()
5 file.close()
6 string = []
7 string = re.findall(r"me\w+", teks)
8 print(string)
9
```

b. Output

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE Python Debug Console + - [ ] ... x
```

Windows PowerShell
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Try the new cross-platform PowerShell <https://aka.ms/powershell>

```
PS E:\KuliaH\Semester 4\Praktikum ASD\Modul 7> &'C:\Users\Vasus\AppData\Local\Microsoft\WindowsApps\python3.10.exe' 'C:\Users\Vasus\.vscode\extensions\ms-python.on-treeview-2023.6.1\pythonfiles\lib\python\debugpy\adapter\...\debugpy_launcher' 65215' -'E:\KuliaH\Semester 4\Praktikum ASD\Modul 7\Womor 1.py'  
[menu,'meta','mediaBadges','mediawiki','meta','meta','meta','meta','meta','meta','meta','media','meta','meta','media','meta','  
meta','meta','media','meta','meta','meta','meta','meta','media','media','mewa','meta','media','media','mediawiki','menu','menu','menu','me  
nu','menu','menu','menu','menu','menu','menu','menu','ment','menu','media','menu','menu','menu','menu','menu','menu','men  
tu','menu','menu','menu','menu','menu','menu','menu','menu','mewu','mewa','mewa','mewu','menu','menu','menu','men  
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u','menu','mewa','membuat','meskipun','mewa','meskipun','menu','menu','menu','menu','menu','media','menu','menu','menu','men  
u','mewa','membuat','meskipun','media','mewa','meskipun','media','menu','menu','menu','menu','menu','menu','mewa','mewa','mewa','menu','  
menu','media','media','media','media','media','menangkan','media','media','media','media','media','menu','menu','menu','menu','men  
u','menu','menu','menu','menu','menu','menu','menu','menu','melihat','menu','menu','menu','menu','menu','menu','menu','men  
tu','menu','menu','menu','menu','menu','menu','menu','menu','mewa','memiliki','mewa','memiliki','mewa','mewa','mewa','mengutip','menghubungk  
an','menurut','menurut','menu','menu','menu','menu','mewa','mewa','menu','menu','menu','menu','media','media','mediawiki','mediawiki','me  
ta','media','media','media','mewa','mewa','media','membakar','membakar','media','membakar','menentang','merint','menggunakan','membuat','mendapat  
kan','mendapatkan','menggunakan','membakar','mereka','merika Serikat','merika','merika','mewa','mewa','mela','mela','mendanda','mendapatkan','melak  
ai','mengecek','melukasi','mengeperoleh','menMa','men','menjadi','menantar','mengeperoleh','men Tunki 2022','men','men','media','media','melat  
akan','meninggal','menghabitat','mentaskan','media','media','membutuhkan','merint','meran','meran','meran','meran','meran','merika.Serika  
T 1923','merika','merika','merican film','merican','menerje','menerjemahkan','menerjemahkan','media','menurut','media','menurut','menguasai','men  
guasai','menjadi','merika Serik','merika','melakukan','melaksanakan','media','media','media','mers','menunggu','media','mers','mers','menunggu','
```

2. Meng-ekstrak kata-kata dengan awalan ‘di’.

a. Kode

```
1 import re
2
3 file = open("Indonesia.txt", "r", encoding = "utf-8")
4 teks = file.read()
5 file.close()
6 string = []
7 string = re.findall(r"di\w+", teks)
8 print(string)
```

b. Output

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

Python Debug Console + - [] ... ^ x

Windows PowerShell
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```
PS E:\Kulia\Semester 4\Praktikum ASD\Modul 7> & 'C:\Users\Asus\AppData\Local\Microsoft\WindowsApps\python3.10.exe' 'c:\Users\Asus\.vscode\extensions\ms-python.on-python-2023.6.1\pythonFiles\lib\python\debugpy\adapter\...\.debugpy\launcher' '65271' '- -- "E:\Kulia\Semester 4\Praktikum ASD\Modul 7\Womor 2.py"  
[ 'dia', 'dia', 'dia', 'ding', 'dia', 'disabled', 'disabled', 'disabled', 'director', 'dir', 'dia', 'dia', 'dia', 'ditors', 'diabades', 'diawiki',  
'dia', 'dia', 'diawiki', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'dituri', 'dia', 'dia', 'dia', 'dia', 'dia',  
'dia', 'diawiki', 'din', 'dialog', 'dia', 'div', 'div', 'div', 'ding', 'dia', 'ding', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'ding',  
'div', 'div', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'dia', 'dia', 'dia', 'dia',  
'div', 'div', 'div', 'dia', 'div', 'ding', 'dia', 'div', 'div', 'dia', 'dia', 'dia', 'dia', 'dia', 'dia', 'director', 'dium', 'dia', 'dia',  
'dia', 'dia', 'div', 'div', 'div', 'div', 'div', 'div', 'dia', 'dia', 'dia', 'div', 'div', 'div', 'div', 'div', 'dia', 'dia', 'dia',  
'dia', 'dia', 'dia', 'div', 'div', 'div', 'dia', 'dia', 'div', 'dia', 'dia', 'dia', 'dia', 'dia', 'div', 'div', 'div', 'div', 'div',  
'dia', 'dianjurkan', 'diawjikan', 'dia', 'disaranakan', 'diawjikan', 'div', 'div', 'div', 'ding', 'dia', 'ding', 'div', 'div', 'div', 'dianjukan', 'diawji  
tkan', 'dia', 'dia', 'disaranakan', 'diawjikan', 'dia', 'div', 'div', 'div', 'ditors', 'ditors', 'div', 'ding', 'dia', 'div', 'div', 'div', 'dibuat', 'dia', 'di  
v', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'div', 'dia', 'dia', 'dia',  
'div', 'div', 'div', 'dia', 'dia', 'dia', 'dia', 'dia', 'dilindungi', 'diahn', 'div', 'div', 'div', 'div', 'div', 'dismissable', 'div', 'dia', 'dia',  
'dia', 'ding', 'dia', 'dia', 'ding', 'dia', 'dia', 'ding', 'dia', 'dia', 'ding', 'div', 'dia', 'dia', 'div', 'div', 'div', 'ding', 'ding']
```

3. Meng-ekstrak kata depan ‘di’ dan tempat yang ditunjuknya.

a. Kode

```
1 import re
2
3 file = open("Indonesia.txt", "r", encoding = "utf-8")
4 teks = file.read()
5 file.close()
6 string = []
7 string = re.findall(r"di\s\w+", teks)
8 print(string)
```

b. Output



```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/powershell

PS E:\Kuliah\Semester 4\Praikum ASD\Modul 7> & 'C:\Users\Asus\AppData\Local\Microsoft\WindowsApps\python3.10.exe' 'c:\Users\Asus\.vscode\extensions\ms-python.on-python-2023.6.1\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '65292' '--' 'E:\Kuliah\Semester 4\Praikum ASD\Modul 7\Womom 3.py'
["di mana", "di wikipedia", "di wikipedia", "di area", "di Indonesia", "di Wikidata", "di sebuah", "di negara", "di kategori", "di Indonesia", "di banyak", "di i Malta", "di Argentina", "di misi", "di stasiun", "di Indonesia", "di bekas", "di Stasiun", "di bekas", "di Stasiun", "di Indonesia", "di Sorani", "di Fiji", "di bawah"]
PS E:\Kuliah\Semester 4\Praikum ASD\Modul 7>
```

4. Meng-ekstrak data dari berkas .html.

a. Kode dan Output

```
1 import re
2
3 file = open("KEI.html","r",encoding = "latin1")
4 teks = file.read()
5 file.close()
6 string = []
7 string = re.findall(r'([\w+]+)</a></td>', teks)
8 print(string)
9
```

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Try the new cross-platform PowerShell <https://aka.ms/pscore6>

PS E:\Kuliah\Semester 4\Praktikum ASD\Modul 7> & 'C:\Users\Asus\AppData\Local\Microsoft\WindowsApps\python3.10.exe' 'c:\Users\Asus\.vscode\extensions\ms-python.python-2023.6.1\pythonFiles\lib\python\debuggy\adapter\..\..\debuggy\launcher' '65311' '-' 'E:\Kuliah\Semester 4\Praktikum ASD\Modul 7\Wklor 4.py' ['Denmark', 'Sweden', 'Finland', 'Netherlands', 'Norway', 'Canada', 'Switzerland', 'Kingdom', 'States', 'Australia', 'Ireland', 'Austria', 'Iceland', 'Germany', 'Zealand', 'Belgium', 'Taiwan', 'Luxembourg', 'Japan', 'France', 'Estonia', 'Slovenia', 'Spain', 'Singapore', 'Israel', 'China', 'Italy', 'Hungary', 'Republic', 'Lithuania', 'Korea', 'Latvia', 'Cyprus', 'Portugal', 'Greece', 'Poland', 'Slovakia', 'Barbados', 'Croatia', 'Chile', 'Bulgaria', 'Emirates', 'Romania', 'Uruguay', 'Qatar', 'Dominica', 'Rica', 'Malaysia', 'Federation', 'Bahrain', 'Kuwait', 'Ukraine', 'Argentina', 'Tobago', 'Brazil', 'Turkey', 'Africa', 'Jordan', 'Armenia', 'Mexico', 'Thailand', 'Oman', 'Macedonia', 'Mauritius', 'Arabia', 'Jamaica', 'Moldova', 'Kazakhstan', 'Belarus', 'Lebanon', 'Tunisia', 'Panama', 'Georgia', 'Peru', 'Mongolia', 'Colombia', 'China', 'Guyana', 'Philippines', 'Venezuela', 'Namibia', 'Lanka', 'Albania', 'Egypt', 'Botswana', 'Republic', 'Salvador', 'Azerbaijan', 'Kyrgyzstan', 'Paraguay', 'Ecuador', 'Morocco', 'Bolivia', 'Iran', 'Uzbekistan', 'Algeria', 'Vende', 'Indonesia', 'Honduras', 'India', 'Guatemala', 'Vietnam', 'Swaziland', 'Republic', 'Nicaragua', 'Kenya', 'Tajikistan', 'Senegal', 'Zimbabwe', 'Ghana', 'Uganda', 'Madagascar', 'Mauritania', 'Tanzania', 'Pakistan', 'Lesotho', 'Benin', 'Nigeria', 'Yemen', 'Mali', 'Mozambique', 'Angola', 'Cameroon', 'Faso', 'Nepal', 'Malawi', 'Laos', 'Bangladesh', 'Myanmar', 'Rwanda', 'Ethiopia', 'Djibouti', 'Eritrea', 'Leone', 'Herzegovina', 'Montenegro', 'Haiti', 'Ivoire', 'Sudan', 'Zambia']

PS E:\Kuliah\Semester 4\Praktikum ASD\Modul 7>

b. Kode dan Output

```
1 import re
2
3 file = open("KEI.html","r",encoding = "latin1")
4 teks = file.read()
5 file.close()
6 string = re.findall(r'"([\w+]+)</a></td>\n<td>{[0-9.]+}</td>', teks)
7
8 list = []
9 for i in string:
10     list.append((i[0], float(i[1])))
11
12 print(list)
```

Windows PowerShell
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PS E:\Kuliah\Semester 4\Praktikum ASD\Modul 7> & 'C:\Users\Asus\AppData\Local\Microsoft\WindowsApps\python3.10.exe' 'c:\Users\Asus\.vscode\extensions\ms-python.python-2023.6.1\pythonFiles\lib\python\debuggy\adapter\..\..\debuggy\launcher' '65338' '-' 'E:\Kuliah\Semester 4\Praktikum ASD\Modul 7\Wklor 4.2.py' ['Denmark', 9.58], ['Sweden', 9.52], ['Finland', 9.37], ['Netherlands', 9.32], ['Norway', 9.27], ['Canada', 9.21], ['Switzerland', 9.15], ['Australia', 9.05], ['Ireland', 8.92], ['Austria', 8.89], ['Iceland', 8.88], ['Germany', 8.87], ['Belgium', 8.73], ['Taiwan', 8.69], ['Luxembourg', 8.65], ['Japan', 8.56], ['France', 8.47], ['Estonia', 8.34], ['Slovenia', 8.25], ['Spain', 8.24], ['Singapore', 8.24], ['Israel', 8.22], ['Italy', 7.86], ['Hungary', 7.85], ['Lithuania', 7.68], ['Latvia', 7.64], ['Cyprus', 7.55], ['Portugal', 7.52], ['Greece', 7.38], ['Poland', 7.38], ['Slovakia', 7.33], ['Barbados', 7.25], ['Croatia', 7.19], ['Chile', 6.92], ['Bulgaria', 6.8], ['Romania', 6.37], ['Uruguay', 6.35], ['Qatar', 6.15], ['Dominica', 6.07], ['Malaysia', 6.06], ['Bahrain', 6.02], ['Kuwait', 6.01], ['Ukraine', 5.8], ['Argentina', 5.49], ['Brazil', 5.57], ['Turkey', 5.61], ['Jordan', 5.53], ['Armenia', 5.51], ['Mexico', 5.45], ['Thailand', 5.44], ['Oman', 5.37], ['Macedonia', 5.33], ['Mauritius', 5.18], ['Jamaica', 5.04], ['Moldova', 5.04], ['Kazakhstan', 5.01], ['Belarus', 4.93], ['Lebanon', 4.86], ['Tunisia', 4.73], ['Panama', 4.69], ['Georgia', 4.69], ['Peru', 4.64], ['Mongolia', 4.5], ['Colombia', 4.42], ['China', 4.35], ['Guyana', 4.31], ['Philippines', 4.25], ['Venezuela', 4.23], ['Namibia', 4.19], ['Albania', 4.04], ['Egypt', 4.03], ['Botswana', 3.96], ['Azerbaijan', 3.81], ['Kyrgyzstan', 3.74], ['Paraguay', 3.62], ['Ecuador', 3.46], ['Morocco', 3.45], ['Bolivia', 3.42], ['Iran', 3.39], ['Uzbekistan', 3.28], ['Algeria', 3.25], ['Indonesia', 3.23], ['Honduras', 3.21], ['India', 3.12], ['Guatemala', 3.11], ['Vietnam', 3.02], ['Swaziland', 2.93], ['Nicaragua', 2.87], ['Kenya', 2.82], ['Tajikistan', 2.79], ['Senegal', 2.63], ['Zimbabwe', 2.51], ['Ghana', 2.5], ['Uganda', 2.46], ['Madagascar', 2.37], ['Mauritania', 2.35], ['Tanzania', 2.28], ['Pakistan', 2.24], ['Lesotho', 2.15], ['Benin', 2.1], ['Nigeria', 2.04], ['Yemen', 1.8], ['Mali', 1.78], ['Mozambique', 1.71], ['Angola', 1.7], ['Cameroon', 1.69], ['Nepal', 1.61], ['Malawi', 1.55], ['Laos', 1.53], ['Bangladesh', 1.49], ['Myanmar', 1.48], ['Rwanda', 1.34], ['Ethiopia', 1.18], ['Djibouti', 1.15], ['Eritrea', 1.07]]

PS E:\Kuliah\Semester 4\Praktikum ASD\Modul 7>