



UNIVERSITAS SAM RATULANGI MANADO
FAKULTAS TEKNIK, JURUSAN TEKNIK ELEKTRO
Program Studi S-1 Teknik Informatika

Review dan Module

Mata Kuliah: Algoritma & Logika Informatika (IFC3504)

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Review

Analisa program: `hitung_ip.py`

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Program utama

4

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Boolean flag untuk iterasi

Program utama

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Kendali iteratif dengan while

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Program utama

6

Dictionary untuk memetakan nilai ke bobot

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk, sks, nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```


Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Inisialisasi

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```


Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk, sks, nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Kendali iteratif dengan while

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris,"<25"),": Nilai ",data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ",ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Input dari keyboard

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+ "sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Konversi antar tipe data

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk, sks, nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

- 1) Method append utk tambah elemen list
- 2) List dalam list

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK: ")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Pemanggilan Fungsi dan argumennya

Fungsi

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```
# fungsi ulangi
def ulangi(pertanyaan):
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

Fungsi

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```
# fungsi ulangi
```

```
def ulangi(pertanyaan):
```

Definisi fungsi (nama+param)

```
    p = input(pertanyaan+" Y/N: ")
```

```
    while p not in ["Y", "N"]:
```

```
        p = input("Pilih Y atau N: ")
```

```
    else:
```

```
        if p == "N":
```

```
            return False
```

```
        else:
```

```
            return True
```

Fungsi

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```
# fungsi ulangi
def ulangi(pertanyaan): String Concatenation
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

Fungsi

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```
# fungsi ulangi
def ulangi(pertanyaan): Input checking
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

Fungsi

18

```
# fungsi ulangi
def ulangi(pertanyaan):
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

Operator keanggotaan

Fungsi

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```
# fungsi ulangi
def ulangi(pertanyaan):
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

While dengan else

Fungsi

20

```
# fungsi ulangi
def ulangi(pertanyaan):
    p = input(pertanyaan+" Y/N: ")
    while p not in ["Y", "N"]:
        p = input("Pilih Y atau N: ")
    else:
        if p == "N":
            return False
        else:
            return True
```

Nilai kembalian

Program utama

21

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Print dengan escape
sequence

Program utama

22

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Kendali iteratif dengan
for

Program utama

23

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+ ". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Fungsi range

Program utama

24

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1) + ". " + data_mk[i][0] + "(" + str(data_mk[i][1]) + "sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Fungsi len

Program utama

25

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25>"), "Nilai: ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

String concatenation

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk, sks, nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". " + data_mk[i][0]+ "(" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<5s"); "Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Retrieve elemen List

Program utama

27

```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+" "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: ", ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Print dengan format

Program utama

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```
# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        mk = input("Nama MK: ")
        sks = int(input("SKS: "))
        tot_sks += sks
        nilai = input("Nilai: ")
        tot_bobot += bobot_nilai[nilai] * sks
        data_mk.append([mk,sks,nilai])
        ada_mk_lagi = ulangi("Ada MK lagi?")
    print("\nDAFTAR MK:")
    for i in range(len(data_mk)):
        baris = str(i+1)+". "+data_mk[i][0]+" (" +str(data_mk[i][1])+"sks)"
        print(format(baris, "<25"), ": Nilai ", data_mk[i][2])
    ip = tot_bobot / tot_sks
    print("\nINDEX PRESTASI: " + ip)
    ulang = ulangi("Ulangi perhitungan IP?")
```

Fungsi dipanggil lagi

Latihan:

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Tambahkan lah fungsi **string_kosong()** untuk pengecekan input kosong di Nama MK

```
Python 3.4.3 Shell
>>>
Nama MK: Algoritma
SKS: 5
Nilai: A
Ada MK lagi? Y/N: Y
Nama MK:
Tidak boleh kosong. Silahkan masukkan lagi.

Nama MK: Matematika
SKS: 5
Nilai: B
Ada MK lagi? Y/N: N

DAFTAR MK:
1. Algoritma(5sks)           : Nilai  A
2. Matematika(5sks)         : Nilai  B

INDEX PRESTASI: 3.5
Ulangi perhitungan IP? Y/N: N
>>>
```

Lr: 198 Col: 4

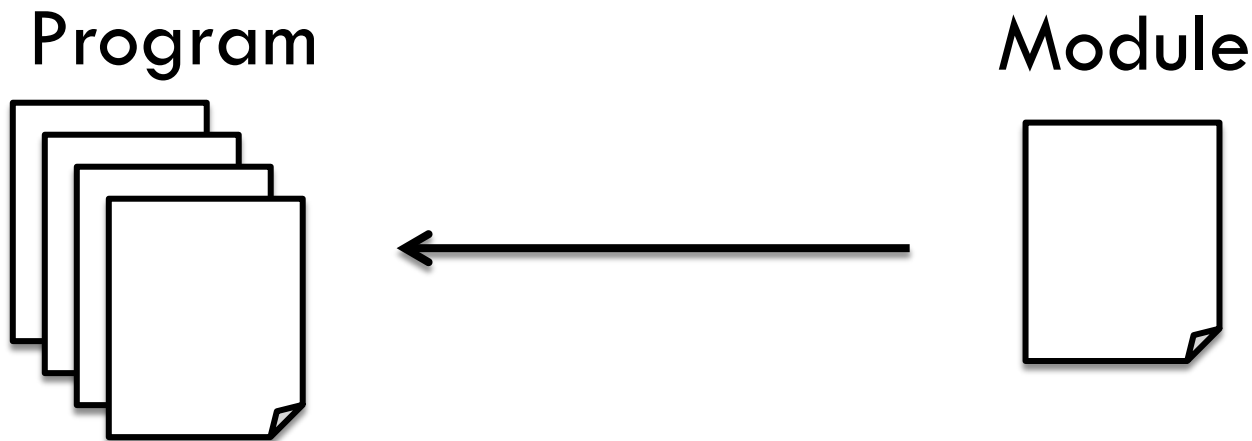
2

Module

Apa itu Module?

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- **Module** adalah file berisi definisi2 fungsi yang dapat digunakan dalam program jika dibutuhkan.
- Module yg sama dapat digunakan dalam program2 yang berbeda-beda:

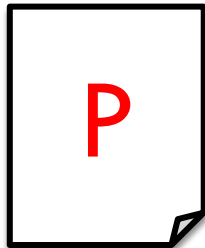


Membuat Module

32

- Buat file baru (*.py) di direktori yang sama dengan program utama atau pada path yang dikenali Python. Nama file tsb akan menjadi nama Module.
- Tuliskan fungsi-fungsi yang akan dipanggil dari program utama dalam file tsb.
- Contoh:

hitung_ip2.py



cek_input.py



Import Module

33

- Untuk menggunakan module dari program utama, kita gunakan statemen **import**.
- Nama module (nama file module) dituliskan setelah statemen **import**.

```
import cek_input

# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
```

Menggunakan fungsi Module

34

- Fungsi dipanggil menggunakan nama fungsinya sebagai **Method** dari **Module**
 - ▣ Dipisahkan dengan tanda titik

```
while ada_mk_lagi:
    # input nama MK
    mk = input("Nama MK: ")
    while cek_input.string_kosong(mk):
        mk = input("Nama MK: ")
    # input jumlah SKS
    sks_str = input("SKS: ")
    while cek_input.string_kosong(sks_str):
        sks_str = input("SKS: ")
    sks = int(sks_str)
    tot_sks += sks
```


Demo

Program: `hitung_ip2.py`

from <nama_module> import *

36

```
hitung_ip3.py - /Users/asambul/Programming/python/kuliah9/hitung_ip3.py (3.4.3)
from cek_input import *

# program utama: menghitung IP
ulang = True
while ulang:
    bobot_nilai = {"A":4, "B":3, "C":2, "D":1, "E":0 }
    ada_mk_lagi = True
    tot_sks = 0
    tot_bobot = 0
    data_mk = []
    while ada_mk_lagi:
        # input nama MK
        mk = input("Nama MK: ")
        while string_kosong(mk):
            mk = input("Nama MK: ")
        # input jumlah SKS
        sks_str = input("SKS: ")
        while string_kosong(sks_str):
            sks_str = input("SKS: ")
        sks = int(sks_str)
        tot_sks += sks
```

Ln: 14 Col: 32

Demo

Program: `hitung_ip3.py`

Selective Import

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- Kita dapat mengimport **sebagian saja** (tidak semua) dari fungsi2 yang disediakan oleh Module.
- Daftarkan nama2 fungsi yang ingin diimport:
 - ▣ **from** <nama_module> **import** <nama2 fungsi>
- Contoh:
 - ▣ **from** cek_input **import** ulangi, string_kosong

Demo

Program: `hitung_ip4.py`

Tugas Kelompok

- Membuat modul2
- Akan tersedia di elearning dalam waktu dekat