

Exercise 3-1:

Add a (lower level) hierarchy under **myfirstpackage** directory, using `<ex32.py>` as the lower level module so that it can be called/used/imported as **myfirstpackage.test.ex32**.

Hints: create a directory and remember what files need to be inside that directory (2 files are required)

Add `<module1.py>` and `<another_module.py>` that you created earlier under this package so that they can be called/used as **myfirstpackage.module1** and **myfirstpackage.another_module**

test by importing `ex32` and execute/call its “multiply” function from a file `<exercise3-1.py>`

test **module1** and **another_module** the same way from `<exercise3-1.py>`

Zip the whole package and files then submit the zip file on SFS

Exercise 3-2:

For **Calorie and Expense Tracker** (In the presentation slide) Implement/write the required code for the functions required (intake, expenses, release), then just like Exercise 3-1 make them into a package, call the package **calorietracker**.

As described in the presentation materials call the python file/module inside this package `<calexp.py>`

Optional:

Add one more lower level of hierarchy. You can add/use any function(s) you want as this lower level hierarchy.

Test by importing and executing the functions (intake, expenses, release)

Zip the whole package and files and submit the zip file on

SFS. Bonus point: (do your research)

add this line

```
if __name__ == '__main__':  
    for assigning "default values"
```

The expected format/type of the parameter of the functions are dictionary

e.g

```
{'rice': 2, 'chicken':1, 'beef': 1, 'veggies': 2, 'ramen':  
1 } for consumption in these functions: intake , expense
```

```
{'rest': 12, 'class': 5, 'walk': 2, 'bike': 1 } for activities  
in this function: release
```

For example:

```
intake({'rice': 2, 'chicken':1, 'beef': 1,  
'veggies': 2, 'ramen': 1 })
```

```
release({'rest': 12, 'class': 5, 'walk': 2,  
'bike': 1 })
```

Hints:

#1

Use dictionary (Lesson 02) to create the required these data structures (dictionary) as inputs, for example(just an example, item name does not match <calexp.py> in teaching materials!-you need to create a proper/correct one based on <calexp.py> in teaching materials!

```
meal_data = { 'burger':(400,250), 'sandwich':(300,200),  
'donut':(200,300) }
```

with 400 being the calory for burger per serve and 250 being the price per serve and so on

```
activity_data = { 'jogging': 150, 'swimming': 50, 'hiking':  
200}
```

with 150 being the calories burned for jogging and so on

#2

To perform accumulation (total) you can use this format

`a+=b` (this means `a=a+b`)

#3

To loop through the dictionary you could use this format (Lesson 02)

```
for act, qty in activities.iteritems():
```

#4

intake

Because consumption is specified as a dictionary, go through the dictionary's key and values and perform the required calculation :

```
calories = calories+ (meal_data's_first_element *  
quantity_consumed)
```

return the calories!

expense

Because activities is specified as a dictionary, go through the dictionary's key and values and perform the required calculation :

```
total_expense = total_expense+ (meal_data's  
_second_element * quantity_consumed)
```

return the total_expense

release

Because consumption is specified as a dictionary, go through the dictionary's key and values and perform the required calculation :

```
calories = calories+ (activities_data)
```

return the calories

IMPORTANT HINT

try these

```
meal_data = {      'burger':(400,250), 'sandwich':(300,200),  
'donut':(200,300) }
```

```
meal_data['burger']  
meal_data['burger'][0]  
meal_data['burger'][1]
```

try the same for meal_data['sandwich'] and so on

EXPECTED functionality:

In your top level python file (call it exercise3-2.py), after creating the package above you should be able to execute these lines. (submit the top level file along /zip everything)

```
import calorieracker.calexp  
a=calorietracker.calexp.intake({'rice':          2,  
'chicken':1, 'beef': 1, 'veggies': 2, 'ramen': 1  
})  
b=calorietracker.calexp.expense({'rice':          2,  
'chicken':1, 'beef': 1, 'veggies': 2, 'ramen': 1  
})  
c=calorietracker.calexp.release({'rest':          12,  
'class': 5, 'walk': 2, 'bike': 1 })  
  
print a,b,c
```