Firstly, a new plain text being created, with content:

{"rose":"red",  
 "sky":"blue",  
 "sea":"blue",  
 "wheat":"gold",  
 "mandarin":"orange",  
 "dragonfruit":"red"}

As we can see there are key {sky, sea: rose, dragonfruit} are in the same value.

Then we open the file, read and close the text.

di=open("dict\_.txt")  
c=eval(di.read())  
di.close()

The eval() function evaluates the specified expression, if the expression is a legal Python statement, it will be executed.

Now, the content in text file is been stored in variable c,

Next step is to write the invert function, the way inverts a dictionary is introduced in Unit 7, the code in below:

def invert\_dict(d):  
 inverse = dict()  
 for key in d:  
 val = d[key]  
 if val not in inverse:  
 inverse[val] = [key]  
 else:  
 inverse[val].append(key)  
 return inverse

Call revert\_dict function in main body

c=invert\_dict(c)

lastly, make an output function to store the output data.

def output(z):  
 op=open("output.txt","w")  
 op.write(z)  
 op.close

Full set of this program:

def invert\_dict(d):  
 inverse = dict()  
 for key in d:  
 val = d[key]  
 if val not in inverse:  
 inverse[val] = [key]  
 else:  
 inverse[val].append(key)  
 return inverse  
def output(z):  
 op=open("output.txt","w")  
 op.write(z)  
 op.close  
  
di=open("dict\_.txt")  
c=eval(di.read())  
di.close()  
c=invert\_dict(c)  
output(str(c))

output file context:

{'red': ['rose', 'dragonfruit'], 'blue': ['sky', 'sea'], 'gold': ['wheat'], 'orange': ['mandarin']}

References:

Downey, A. (2015). Think Python: How to think like a computer scientist. Green Tea Press. <https://greenteapress.com/thinkpython2/thinkpython2.pdf>

https://www.w3schools.com/python/ref\_func\_eval.asp

*w3schools Python eval() Function*