New York University
School of Continuing and Professional Studies
Division of Programs in Information Technology

Introduction to Python
Session 5 Homework Solutions

5.1 Create a dictionary of student_ids to student information.

```
read_file = '../python_data/student_db.txt'

compile_dict = {}

fh = open(read_file)

lines = fh.readlines()[1:]

for line in lines:
    items = line.split(':')
    student_id = items[0]
    student_info = items[1:]
    compile_dict[student_id] = student_info

while True:

    uinput = input("Please enter an id ('q' for quit):  ")
    if uinput == 'q':
        break
    elif uinput not in compile_dict:
        print('sorry, that id does not exist')
        continue
    else:
        print()
        print('address for {}: '.format(uinput))
        print(items[1])
        print('{}, {}  {}'.format(items[2], items[3], items[4]))
        print()
```

5.2 Sum Mkt-RF Values for every year.

```
fh = open('../python_data/F-F_Research_Data_Factors_daily.txt')

year_sum = {}
lines = fh.readlines()
wanted_lines = lines[5:-2]

for line in wanted_lines:
#    print line
    items = line.split()
    mktrf = items[1]
    year = line[0:4]
    if year not in year_sum:
        year_sum[year] = 0.0
    year_sum[year] = year_sum[year] + float(mktrf)

#print len(year_sum)
#exit()
while True:

    u_num_results = input('please enter number of results desired:  ')
    hi_lo = input('select "highest" or "lowest" results:  ')
    if not u_num_results.isdigit():
        print('num results must be all digits')
        continue

    num_results = int(u_num_results)
    if num_results > len(year_sum):
        print('num results "{}" greater than max "{}"'.format(num_results, len(year_sum)))
        continue

    if hi_lo != 'highest' and hi_lo != 'lowest':
        print('top or bottom results must be "highest" or "lowest"')
        continue

    break

if hi_lo == 'highest':
    rev = True
elif hi_lo == 'lowest':
    rev = False

year_keys = sorted(year_sum, key=year_sum.get, reverse=rev)

wanted_year_keys = year_keys[0:num_results]

for key in wanted_year_keys:
    print("{}:  {}".format(key, round(year_sum[key], 2)))
```