ASSIGNMENT [14/ 12/ 63]

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D1

PYTHON CODE

```
import numpy as np
def funcReadScores(n):
    #n = int( input('enter num') )
    allsc = []
    for i in range(n) :
        sc = []
        s3 = [ int(s) for s in input().split() ]
        allsc.append(s3)
    S = np.array(allsc)
    w3 = [ float(w) for w in input().split() ]
    W = np.array(w3)
    A = S*W
    print('Final Scores')
    for r in range(n) :
        sumscore = sum(A[r])
     print(sumscore)
```

RESULT

```
>>> funcReadScores(4)
10 15 10                    Final Scores
20 5 15                     11.25
14 8 7                      15.0
12 12 12                    10.75
0.5 0.25 0.25               12.0
```

𝔻2

PYTHON CODE

```
import numpy as np
cost_book = [int(e) for e in input('enter book\'s price
[novel,documentary,traveling,cartton] = ').split()]
allsc = []
for i in range(4):
    s3 = [ int(s) for s in input('enter the number of books in each day
[mon,tues,wednes,thurs,fri]= ').split() ]
    allsc.append(s3)
S = np.array(allsc)
#print(S)
sums = np.sum(S,axis=0)
#print(sums)
maxs = np.max(sums)
for a in range(len(sums)):
    if sums[a] == maxs :
        if a == 0 :
            print('mon {}'.format(maxs))
        elif a == 1 :
            print('tues {}'.format(maxs))
        elif a == 2 :
            print('wed {}'.format(maxs))
        elif a == 3 :
            print('thu {}'.format(maxs))
        elif a == 4 :
            print('fri {}'.format(maxs))
 #print(cost_book)
price = 0
```

```
lst = []
row,col = S.shape
for c in range(col):
    for r in range(row):
        cost = S[r,c]*cost_book[r]
        price = price + cost
    lst.append(price)
    price = 0
g = ''
for b in range(len(lst)):
    g += str(lst[b])+' '
print(g)
```

RESULT

```
enter book's price [novel,documentary,traveling,cartton] = 50 30 40 20
enter the number of books in each day [mon,tues,wednes,thurs,fri]= 20 50 10 15 20
enter the number of books in each day [mon,tues,wednes,thurs,fri]= 30 40 20 65 35
enter the number of books in each day [mon,tues,wednes,thurs,fri]= 75 30 42 70 45
enter the number of books in each day [mon,tues,wednes,thurs,fri]= 40 25 35 22 55
thu 172
5700 5400 3480 5940 4950
```

𝔻3

PYTHON CODE

```
import numpy as np
def read_height_weight():
    n = int(input('enter the number of people = '))
    allsc = []
    for i in range(n):
        s3 = [ int(s) for s in input('enter height & weight = ').split() ]
        allsc.append(s3)
    return np.array(allsc)
def cm_to_m(allsc):
    lst = []
    lst_2 = []
    row,col  = allsc.shape
    for i in range(row):
        x = allsc[i,0]
        y = x/100
        lst.append(y)
    return lst
def cal_bmi(allsc):
    lst = []
    row,col = allsc.shape
    for i in range(row):
        bmi = allsc[i,1]/((allsc[i,0]/100)**2)
        lst.append(bmi)
    return lst
 def main():
    hw = read_height_weight()
    m = cm_to_m(hw)
    bmi = cal_bmi(hw)
```

```
print(bmi)
average = sum(bmi)/len(bmi)
print('average of bmi =',average)
count = 0
for i in range(len(bmi)):
    if bmi[i] < 18.5:
        count += 1
print('num of bmi<18.5 =',count)
for e in range(len(bmi)):
    if bmi[e] < 18.5 :
        print(bmi[e],'Underweight')
    elif 18.5 < bmi[e] < 25.0 :
        print(bmi[e],'Normal')
    elif bmi[e] >25.0 :
        print(bmi[e],'Overweight')
```

RESULT

```
>>> main()
enter the number of people = 4
enter height & weight = 160 60
enter height & weight = 155 62
enter height & weight = 170 54
enter height & weight = 180 55
average of bmi = 21.22609534053624
num of bmi<18.5 = 1
23.437499999999996 Normal
25.806451612903224 Overweight
18.685121107266644 Normal
16.975308641975307 Underweight
```