

Homework 2

Student name:

Assignment submission date:

Answer the following problems. Add additional cells as needed. Explain your code by adding comments to it and/or cells with markdown text as necessary.

Problem 1

Create a function that takes as input a temperature value in degrees Fahrenheit and converts it to degrees Kelvin. You should research the formula for doing such a conversion. The name you **must** give to the function is *kelvin*. The function must return the temperature value in degrees Kelvin. (40 points)

```
In [15]: # YOUR CODE HERE
# Using keyword def to define a function named as kelvin.
#taking the argument as degree_fa as input for the funtion and returned the result using return keyword.

def kelvin(degree_fa):
    degree_kel=round((degree_fa-32)*5/9,2)+273.15
    return degree_kel
```

```
In [16]: #calling the function kelvin, by giving the input of degree Fahrenheit as 72
kelvin(72)
```

Out[16]: 295.37

Problem 2

Using the grading table provided in the course syllabus, create a function that takes a 0 to 100 score value and returns the corresponding letter grade. The name you must give to the function is *lettergrade*. (40 points)

```
In [48]: # YOUR CODE HERE

#Since the default type of input is string, type conversion to float has been acheived to
#perform logical operations on numericals.

def lettergrade(score):
    score=float(score)
    if score <=100 and score >=93:
        return ('A')
    elif score >=90 and score <=92.99:
        return ('A-')
    elif score >=87 and score <=89.99:
        return ('B+')
    elif score >=83 and score <=86.99:
        return ('B')
    elif score >=80 and score <=82.99:
        return ('B-')
    elif score >=77 and score <=79.99:
        return ('C+')
    elif score >=73 and score <=76.99:
        return ('C')
```

```
elif score >=70 and score <=72.99:
    return ('C-')
elif score >=0 and score <=69.99:
    return ('F')
```

```
In [49]: # YOUR CODE HERE
#Taking the input of the score and passing it as arugument to the fuction call.
#printed the value returned using print.
score=input()
print(lettergrade(score))
```

C+

Problem 3

Create a piece of code that uses a flow control statement (if, for, while) that was not used in the previous problems of this assignment. (20 points)

```
In [53]: # YOUR CODE HERE
#checking if sum of items in list is odd or even
#using for loop, to perform this operation

arr=[2,6,9,4,1,10]
sum=0
for i in arr:
    sum=sum+i

if sum%2==0:
    print("Sum is",sum,"which is even")
else:
    print("Sum is",sum,"which is odd")
```

Sum is 32 which is even

```
In [55]: # YOUR CODE HERE
#printing even number from 1 to 25
num=1
while num<=25:
    if num%2==0:
        print(num)
    num=num+1
```

2
4
6
8
10
12
14
16
18
20
22
24