Lab Topic 04-Flow control if elif and else

Introduction.

I would suggest that you create another folder in labs called Week04-flow, remember to push your code to GitHub
You can save the programs you create in this lab in there.

If, elif, else:

1. Write a program (isEven.py) that asks the user to enter in a number, and the program will tell the user if the number is even or odd.

```
Enter a number: 67
67 is an odd number
```

```
number = int(input("enter an integer:"))

if (number % 2) == 0:
    print ("{} is an even number".format(number))
else:
    print("{} is an odd number".format(number))
```

2. Write a program (grade.py) that reads in a students percentage mark and prints out corresponding the grade (the program should check that the percentage is valid:
    - Under 40% => Fail
    - Between 40% and 49% => Pass
    - Between 50% and 59% => Merit 2
    - Between 60% and 69% => Merit 1
    - Over 70% => Distinction

```
Enter the percentage: 67
Merit2
```

Answer

```
# This program reads in
# a students percentage
# and prints out the
# corresponding grade

percentage = float(input("Enter the percentage: "))
#print (percentage)

# be careful with ands and ors
if percentage < 0 or percentage > 100:
    # Later we will show you error handling
    # This should really throw an error
    print ("Please enter a number between 0 and 100")
elif percentage < 40: # we know it is greater than 0
    print ("Fail")
elif percentage < 50: # between 40 and 49
    print ("Pass")
elif percentage < 60: # between 50 and 59
    print ("Merit1")
elif percentage < 70: # between 60 and 69
    print ("Merit2")
else: # the only option left is between 70 and 100
    print ("Distinction")
```

Extra (I will not give the answer to these)

3. In practice the percentages are rounded ie 69.5 gets rounded to 70 so is equal to a Distinction.
   How would you modify the program in 1 to deal with this?
   I see two ways.
4. How would you use a while loop to modify 1 so that it keeps prompting the user for a number until the user enters -1
5. I believe that data camp has some exercises in python you may want to look at them