Multiple small tasks

This exercise is made up of multiple small tasks which could be included in a real paper C. There is a separate file for each short task.

a) Practice giving a user a specific number of attempts to answer a question.

i)   Take the sample code provided and add a check to see if the string entered contains an @ symbol. (Other email formatting checks are not necessary here).

```
1 # PC2200 Multi a
2 # Name and School:
3
4 email = input("Enter your email : ")
```

The output should look like this:

```
>>> %Run PC2200Multi_a.py
 Enter your email : jimatgmail.com
 Invalid email
>>> %Run PC2200Multi_a.py
 Enter your email : jim@gmail.com
 Valid email
```

ii)   Now change the code so the user is given three opportunities to enter a valid email address.

```
Enter your email : dasdd
Invalid email
Enter your email : asdasdd
Invalid email
Enter your email : asdsads
Invalid email
Too many invalid entries
```

b) This code involves reading from a CSV file and processing each line as a list.
The sample code looks like this:

```
1 # PC2200 Multi (b)
2 # Name and School:
3
4 fp=open("PC2200Multi_b.csv",'r')
```

i)   Read the contents from the file and display it as follows:

```
Subject            Marks
Maths               67
French              72
Irish               81
Music               60
```

c) This sample practices working with numeric operations. The sample code is as follows:

```
1  # PC2200 Multi (c)
2  # Name and School:
3
4  numA = input("Enter the first number")
5  numB = input("Enter the second number")
```

i) Compare the two numbers and print a statement to inform the user which number is bigger.

The output could look like this.

```
>>> %Run PC2200Multi_c_complete.py
 Enter the first number23
 Enter the second number23
 The numbers are equal
>>> %Run PC2200Multi_c_complete.py
 Enter the first number23
 Enter the second number24
 Second number is bigger
```

ii) Now do a calculation to divide the bigger number by the smaller number and express the answer as a quotient and remainder.

```
>>> %Run PC2200Multi_c_complete.py
 Enter the first number432
 Enter the second number37
 First number is bigger
 432 divided by 37 equals 11 remainder 25
```

iii) Now set up a list of prime numbers between 2 and 19 as follows
primes=[2,3,5,7,11,13,17,19].

Now write a function isDivisible() which takes two arguments – the bigger number entered by the user and each of the prime numbers in turn. It should return True if the number is divisible. Eg isDivisible(100,5) returns True.

Sample output :

```
>>> %Run PC2200Multi_c_complete.py
 Enter the first number76
 Enter the second number15
 First number is bigger
 76 divided by 15 equals 5 remainder 1
 76 is divisible by :2 19
```