

1. Create the function **div(x, y)**, which gets 2 attributes **x** and **y** and returns the value x/y . Inside the function write an assert statement which checks whether the value of **y** is 0 and gives an error message "Can't divide", in case the condition is not satisfied.
2. Create a list with the following values: **['a', 0, 2]**. Write a program which will go over the list using a loop and print the reciprocal of each value from the list ($1/x$). If there are cases when you cannot calculate $1/x$ for the value, you should cover those by a corresponding exception.

The output of the program should be of the following format:

The entry is: **the current entry of the list**

The reciprocal of **the current entry of the list** is **the value of the reciprocal**

OR

The entry is: **the current entry of the list**

Oops! **The exception that occurred**

3. Create the class **Person**.

Attributes: **name**, **last_name**, **age**, **gender**, **student** (this is a boolean attribute i.e. it takes values True/False), as well as a private attribute **password**

Methods:

Greeting(self, second_person) - gets an object of type Person as an input and prints "Welcome dear **X**.", where **X** is the value of the **name** attribute of **second_person**.

Goodbye(self) - prints "Bye everyone!"

Favourite_num(self, num1) - gets an integer **num1** as an input and returns the text "My favourite number is **num1**", using the value of the attribute **num1**.

Read_file(self, filename) - gets a String **filename** as an input and tries to read the file with the name "**filename.txt**", adding ".txt" at the end of the value of the attribute **filename**. Use the function **open()** to open the file.

Add some exceptions to your class where it is necessary (at least one general and one specific exception).

Add set and get methods for the attribute **password**.

Optional: Add a decorator which will check how long does it take to execute the method **Greeting**.