**REFLECTION ON SUBMISSION**

Before I started to code the library I identified the main problem, solution to this problem and basic plan to make calculator functional.

From the beginning I started thinking about basic functionality that calculator should perform to solve this;

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| Problem calculate price base on number of people, flat markup, product category |  |
| Solution:Make a calculate function the will take all necessary inputs |  |
| Planning: |  |
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| 1)Calculate price on flat Markup, that will make price after flat markup |  |
| 2)calculate rate for people - multiply number of people by murkup for each person and multiply it on price after flat markup |  |
| 3)calculate rate for product based on its category - multiply murkup for each category on on price after flat markup |  |
| 4)add results received in step 2 and 3 to the price after flat markup, that we got in step 1; |  |

* Once basic steps were clear, I wrote functions that would implement the above steps in code.
* Next , I added some validation for input number, so the user is not able to provide non-numeric or empty values to the main function.
* In order to avoid the situation that my code pollutes global scope, I decided to use IIFE (**I**mmediately **I**nvoked **F**unction **E**xpression) pattern.
* I also wrote ‘use strict’ because I think it would be a good practice especially for writing libraries;
* I also decided to use Module pattern in my project. Inside my main function define\_finalMarkUpCalculator() I return an object that has 3 properties, this also was made in order to avoid code pollution. If this object is already in a global scope, then I print to console that “Library finalMarkUpCalculator already exists.”. This will help to avoid code overwriting in case there are different version of this library. If no such object exists in global scope, then we will load library.
* I also created custom exception InputError to inform that some value that was provided to the library has a wrong format.