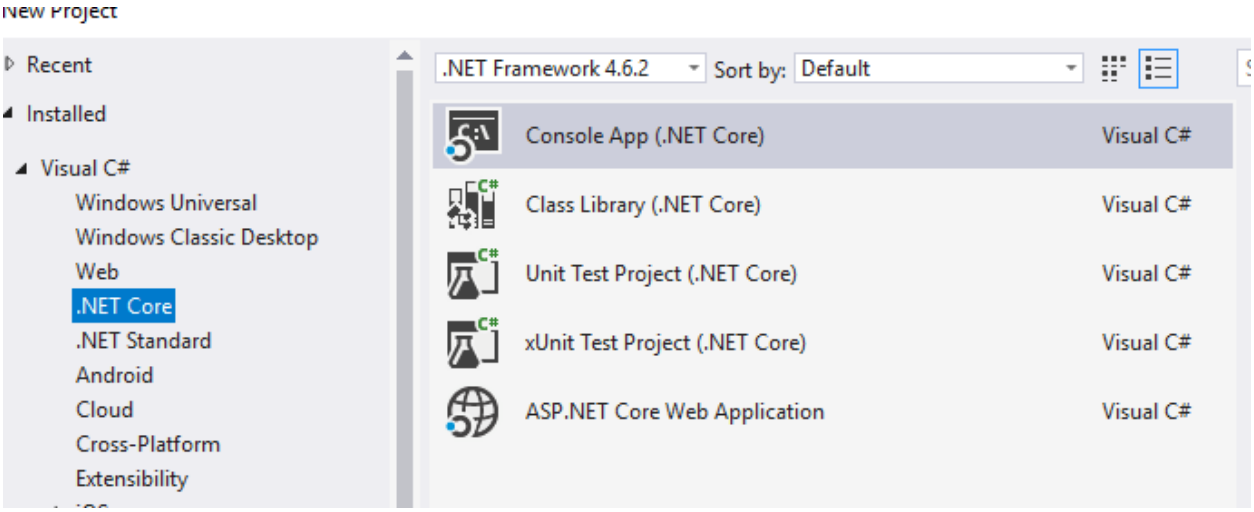
Introduction in .Net Core -> Lab 1 (Florin Olariu && Dan Nastasa)

Prerequisites:

a) Create a blank solution

b) Add 2 dll's : class library and xUnit test project



1. Create a class named **Task** and define the following fields:
   a. Id
   b. Title
   c. Description
   d. StartDate
   e. Assignee
   f. Estimation (number of days)

   Observation: Use defensive coding when initializing the fields (e.g. StartDate, Estimation)

2. Implement the methods:
   a. *IsOnTrack ()* - use the StartDate and Estimation fields
   b. CalculateRemainingEstimate ()

3. Add unit tests in order to achieve 100% code coverage(**discussion about code coverage**)

4. Implement a class named **HouseAlarm**, define the fields and implement the given method:
   a. Id
   b. Address (read-only field)
   c. AlertTime
   d. *Trigger ()* – set AlertTime, return a message, for example: "House alarm triggered, calling cops."

5. Implement a class named **CarAlarm**, define the fields and implement the given method:

   a. Id
   b. Location
   c. AlertTime
   d. *Trigger ()* – set AlertTime, return a message, for example: “Car alarm activated at {Location}, calling cops.”

6. Extract a base class (abstract) called **Alarm**, starting from the previous 2, and make sure to remove all the redundant pieces of code

7. Implement a class called **AlertService** which has the following behavior:
   a. Instantiates at least 3 different alarms and populates an Alarm list
   b. Exposes a method *SoundAlarm(id)* , which triggers the alarm with that specific id

8. Extract an interface for the **AlertService**

Note:

1. All exercises are mandatory.
2. You will receive your points at the end of the lab.
3. Starting with week 2 you can earn bonus points by resolving Kata sessions.
4. Surprises ☺