



Faculty of Computers, Informatics and  
Microelectronics  
Technical University of Moldova

Network Programming  
Laboratory work #4

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Chişinău

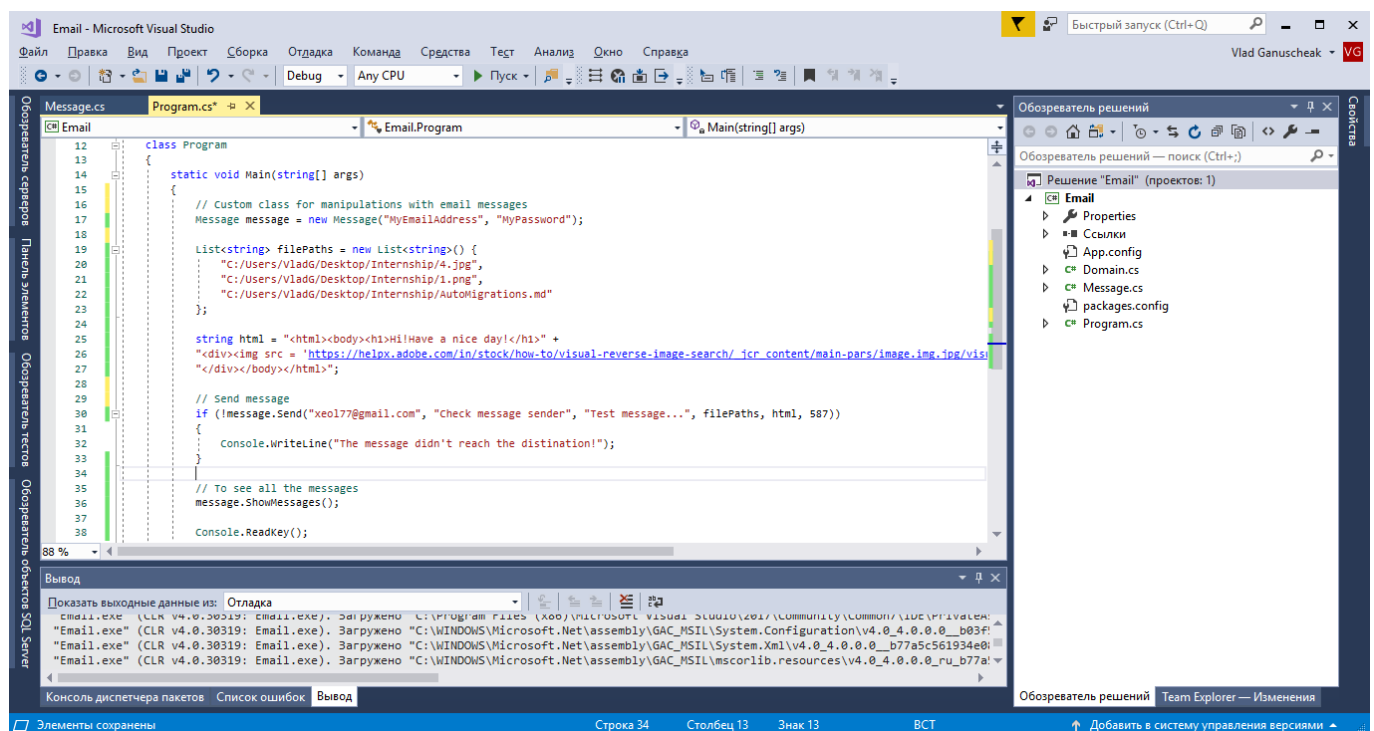
# Task

To create simple email client which could be able to read and send messages using an existing account. As the additional tasks you can implement the following:

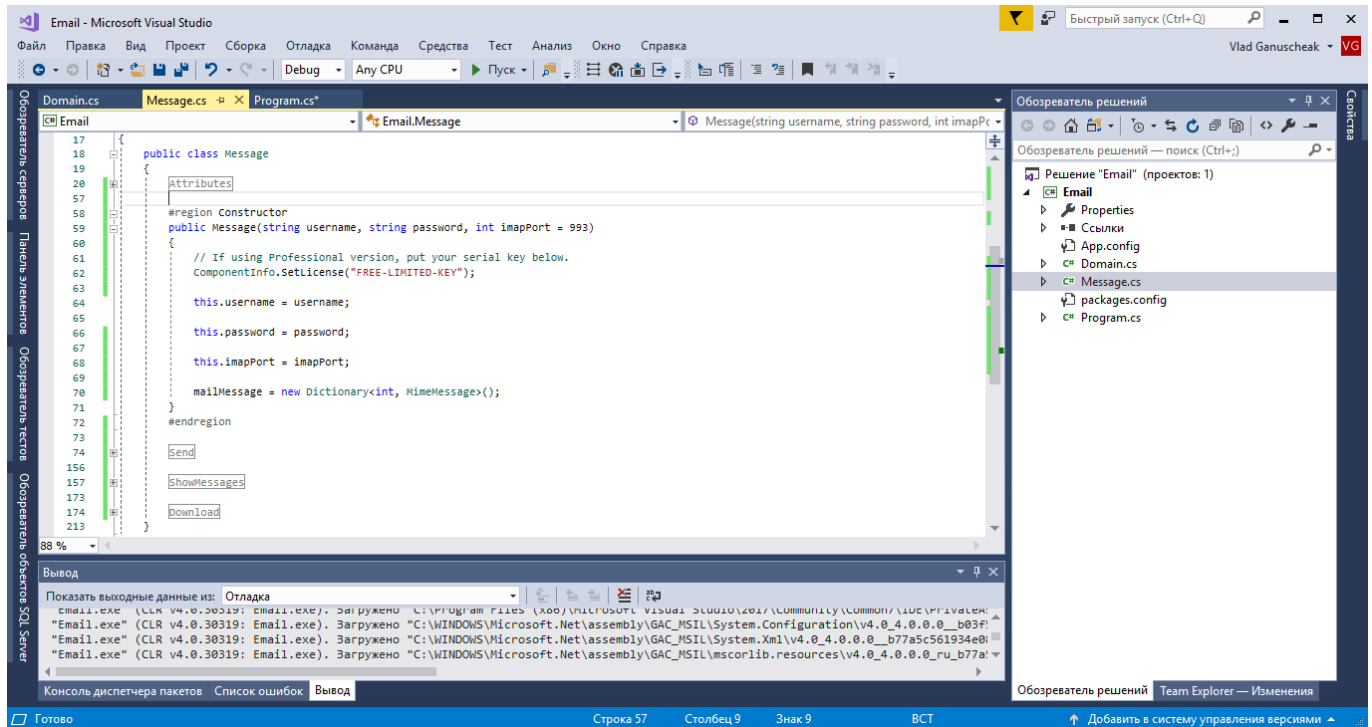
- Sending the message with files;
- Sending HTML forms (which include images);
- Create class POP3Header which will read the message and keep the content into dictionary.

# Implementation

In the main class there is the starting point of the application. Here I launch the **Message** class which has my custom implementation of function which use MailKit and MimeKit.



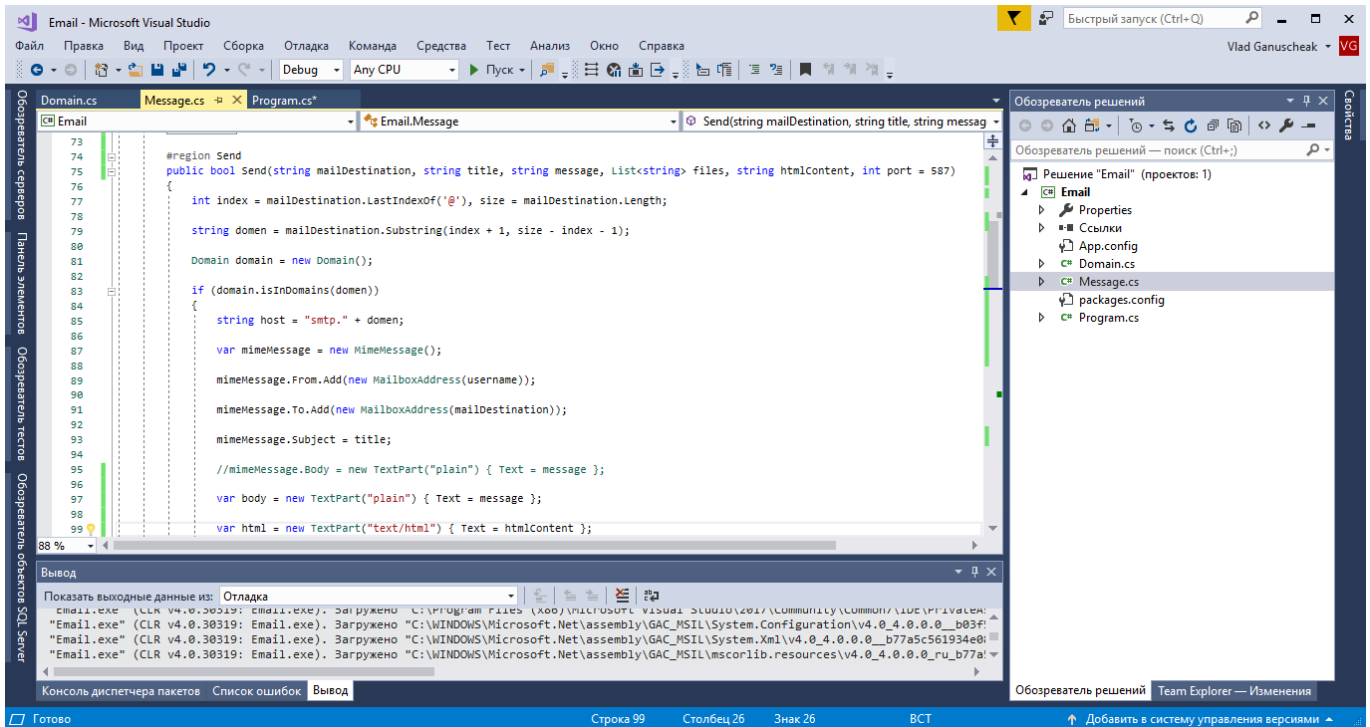
In the **Message** class constructor I define the values of *username* (email address) and *password* and the *imap port* (by default it is 993). Also inside the constructor the Dictionary object is instantiated.



In this function there is the code that permits to send messages to users. As the input parameters it has:

- *mailDestination* - (the address of the email of the receiver);
- *title* - the title of the message;
- *message* - the text content of the sending form;
- *files* - the list of strings where are indicated the paths to corresponding files;
- *htmlContent* - the content of the html page saved as a string;
- *port* - smtp port for email domain (it may vary for different emails, but by default it is setted as 587).

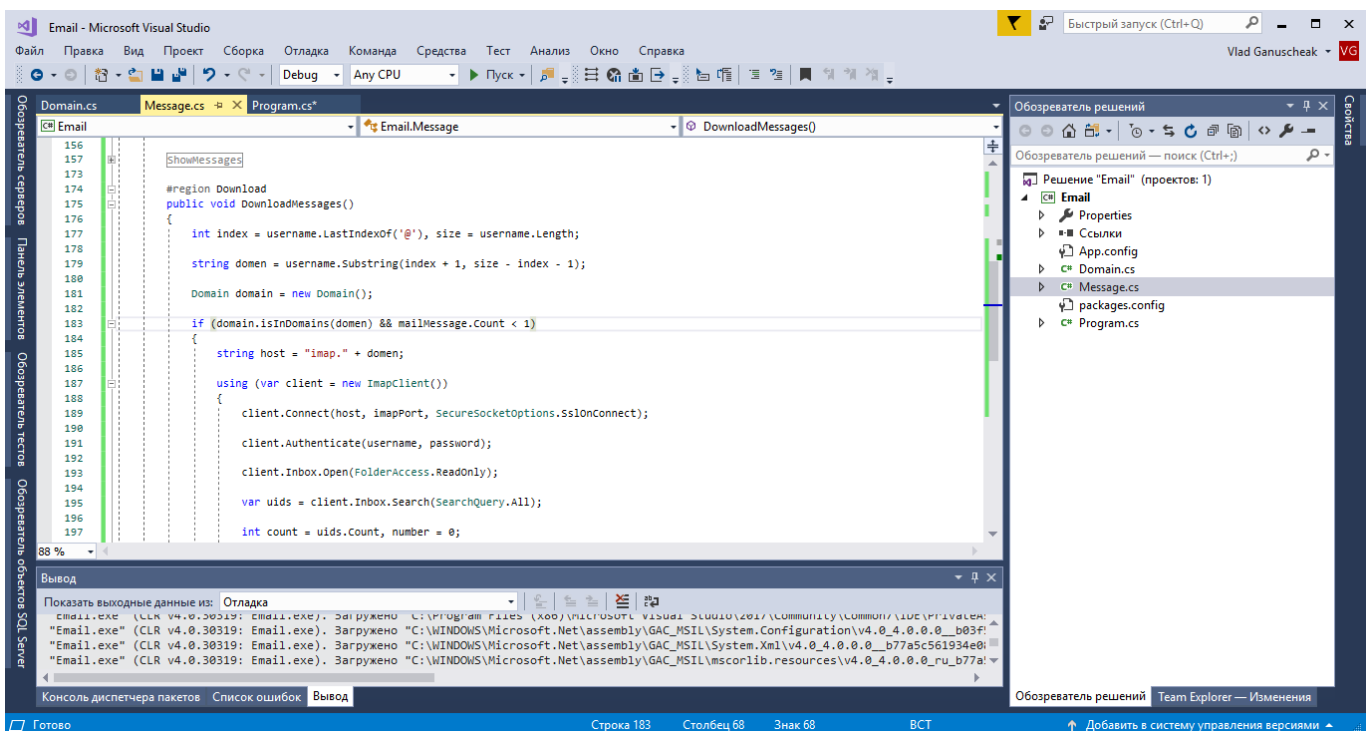
The thing that I should mention is that I use custom **Domain** class which checks the validity of the email address (it contains ~ 40 most popular email domains).



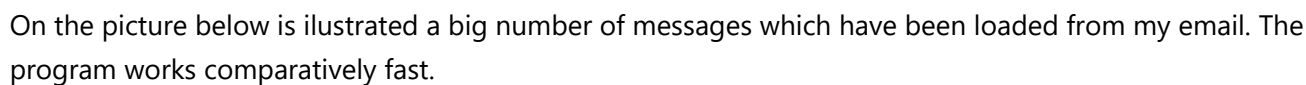
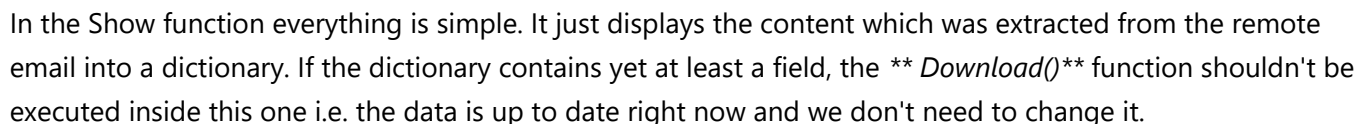
The **DownloadMessage** class which load from the defined earlier attributes messages from the remote server (i.e. gmail.com, yahoo.com, mail.ru etc.).

All extracted messages and their content are kept in the dictionary where **Key** is the order of the message from the remote server and the **Value** is message itself.

In this method the `_Domain` class is used too.



As You can see, there are a lot of domains of electronic mail defined in this class and there is a method which checks if the input parameter corresponds to one of predefined domains (indifferent of was the character in Pascal case or Camel one).



```

C:\Users\VladG\source\repos\Email\Email\bin\Debug\Email.exe
428 | 26.03.2019 8:44:43 +02:00 | "Flight due for Germany lands in Scotland" Moment
429 | 27.03.2019 10:03:36 +02:00 | "The EU has passed its law about internet copyright" Moment
430 | 27.03.2019 13:45:49 +02:00 | Speak up, _GVlad_aka_GV097
431 | 27.03.2019 20:35:51 +02:00 | TS - Laboratory Work
432 | 27.03.2019 22:58:17 +02:00 | Branching model support + 5 new features
433 | 28.03.2019 11:15:17 +02:00 | "Chinese Grindr owner has to sell the app due to US security concern..."
434 | 29.03.2019 10:05:31 +02:00 | "Bears trade Jordan Howard to the Eagles" Moment
435 | 30.03.2019 11:04:58 +02:00 | "Boston Dynamics' robot has a new skill of robot Jenga" Moment
436 | 31.03.2019 13:20:33 +03:00 | "Former Nevada politician says former VP Biden planted 'an awkward k..."
437 | 31.03.2019 19:47:19 +03:00 | TS - Laboratory Works
438 | 01.04.2019 12:38:19 +03:00 | "People are introducing their dads in the latest trend ??" Moment
439 | 02.04.2019 11:14:35 +03:00 | "Saudi Aramco generates more profits than any other company in the w..."
440 | 02.04.2019 11:53:34 +03:00 | SP l/1 #5
441 | 03.04.2019 2:26:10 +03:00 | Just in: Total Chaos speakers revealed, Rhino goes Next and more
442 | 03.04.2019 15:11:14 +03:00 | [PR] Changes in Lab 5, 6
443 | 06.04.2019 10:55:44 +03:00 | [PR] Alternative Task for Lab 5,6
444 | 07.04.2019 15:15:09 +03:00 | PS - materiale evaluate II
445 | 08.04.2019 16:24:06 +03:00 | [PR] Retaking the Quiz / 2'nd Attestation Mark
446 | 09.04.2019 9:56:58 +03:00 | PS l/1 #6
447 | 09.04.2019 11:12:39 +03:00 | PS l/1 #7-8
448 | 09.04.2019 17:59:08 +03:00 | [CodinGame Blog] What if reaching Legend was easier than you thought? ??
449 | 09.04.2019 21:55:48 +03:00 | Fwd: Summer School 2019
450 | 20.04.2019 11:06:01 +03:00 | "Good Friday commemorated with crucifixion reenactments" Moment
451 | 21.04.2019 0:47:43 +03:00 | Важное оповещение системы безопасности
452 | 21.04.2019 3:17:38 +03:00 | _GVlad_aka_GV097, download the app today
453 | 21.04.2019 8:00:00 +03:00 | [TMPS][PR] Admission to Exam / Допуск к экзамену / Admiterea la examen
454 | 21.04.2019 12:43:18 +03:00 | "People are reworking movie titles with body parts ??" Moment
455 | 21.04.2019 14:55:49 +03:00 | Важное оповещение системы безопасности

```

## Conclusion

In order to implement all the functionality what I have done, I used the MailKit and MimeKit libraries from NuGet package Manager of Visual Studio. It has a lot of built-in methods which make programmer's life a little bit easier, but unfortunately, not all of these methods could be used for every email. It could be explained that *imap* and *smtp* ports may differ from server to server. Also I should mention that gmail blocks third part applications which try to synchronize their actions with it (as a solution I was forced to enable permission of the third part applications to access my account in case of valid credentials).

The good thing of this application is that it can send messages to different mail server providers which have support of *imap* and *smtp*. If the messages are not downloaded or are not reach the destination, it means that the user should do a little bit changes inside his/her account settings.