

# Sabanci University

Faculty of Engineering and Natural Sciences

CS204 Advanced Programming

Fall 2019-2020

Homework 9

GUI Application

Due: **23/12/2019, 11:55pm**

## No late submissions.

### PLEASE NOTE:

Your program should be a robust one such that you have to consider all relevant programmer mistakes and extreme cases; you are expected to take actions accordingly!

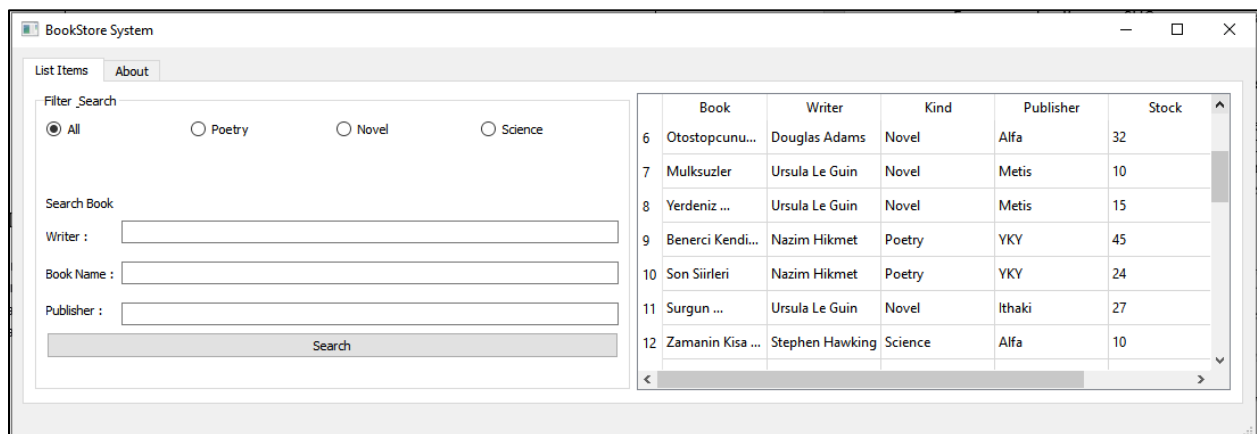
You **HAVE TO** write down the code on your own.

You **CANNOT HELP** any friend while coding.

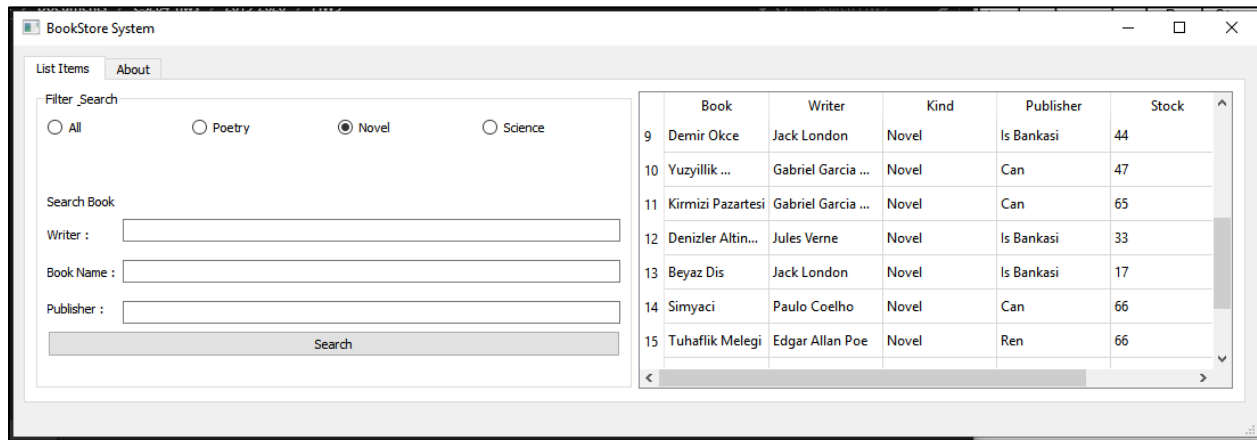
Plagiarism will not be tolerated!

## Introduction

In this homework you're expected to develop a graphical user interface (GUI) based application in C++ using Qt Framework and QtCreator IDE. You are expected to develop a simple Book Store application where one can search for a book, see its writer, publisher, stock values. The application's windows should be similar to the images below.

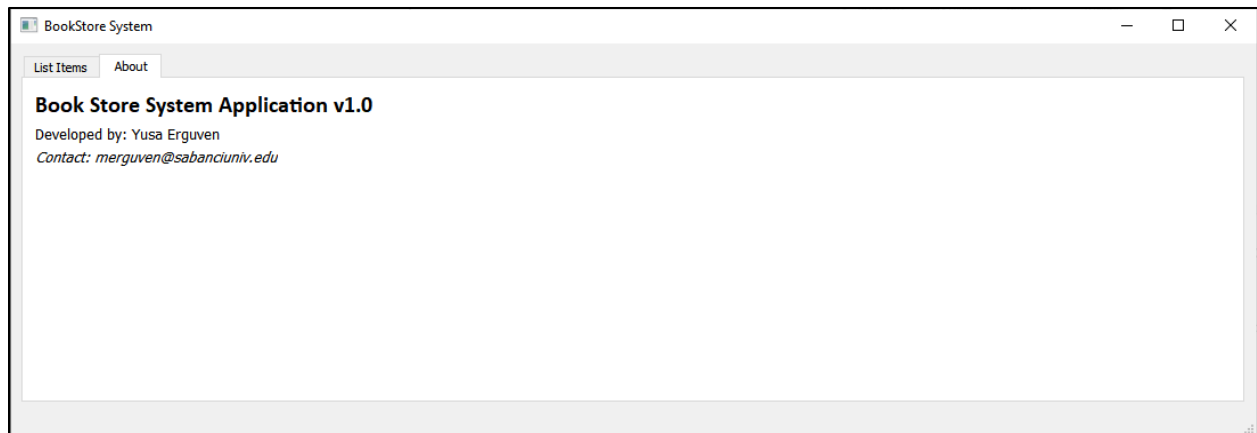


You are given a txt file named ``booklist.txt`` which you will be using as an input file. When you run the program, you will read the file and fill the table in the main window. With the radio buttons at the top left, you will be able to filter the books by their types.



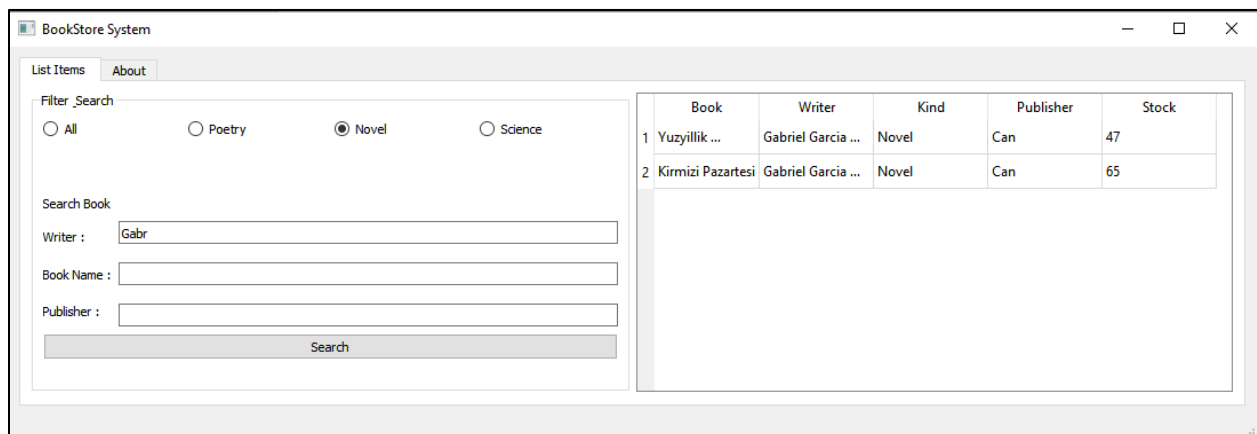
You will also have 4 Labels 3 LineEdits and a PushButon. Once the Search button is clicked, you will also filter the books in the table according to search criteria.

You will also have a second tab named 'About' which is given in the image below. Change the name and email with yours.



## Sample Runs

Sample runs are given below:



BookStore System

List Items

About

Filter\_Search

☐ All

☐ Poetry

☒ Novel

☐ Science

Search Book

Writer :

Book Name :

Publisher :

Search

	Book	Writer	Kind	Publisher	Stock
1	Kirmizi Pazartesi	Gabriel Garcia ...	Novel	Can	65

BookStore System

List Items

About

Filter\_Search

☐ All

☐ Poetry

☐ Novel

☒ Science

Search Book

Writer :

Book Name :

Publisher :

Search

	Book	Writer	Kind	Publisher	Stock
1	Zamanin Kisa ...	Stephen Hawking	Science	Alfa	10
2	Büyük Sorular...	Stephen Hawking	Science	Alfa	56
3	Kara Delikler	Stephen Hawking	Science	Alfa	16
4	Kozmos	Carl Sagan	Science	Altin	53
5	Tanrı'nın ...	Carl Sagan	Science	Altin	64
6	Soluk Mavi ...	Carl Sagan	Science	Altin	37

BookStore System

List Items

About

Filter\_Search

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☐ Novel

☒ Science

Search Book

Writer :

Book Name :

Publisher :

Search

	Book	Writer	Kind	Publisher	Stock
1	Zamanin Kisa ...	Stephen Hawking	Science	Alfa	10
2	Büyük Sorular...	Stephen Hawking	Science	Alfa	56
3	Kara Delikler	Stephen Hawking	Science	Alfa	16

BookStore System

List Items

About

Filter\_Search

☐ All
☐ Poetry
☒ Novel
☐ Science

Search Book

Writer :

Book Name : D

Publisher :

Search

	Book	Writer	Kind	Publisher	Stock
1	Dune	Frank Herbert	Novel	Ithaki	5
2	Demir Okce	Jack London	Novel	Is Bankasi	44
3	Denizler Altin...	Jules Verne	Novel	Is Bankasi	33

BookStore System

List Items

About

Filter\_Search

☐ All
☐ Poetry
☒ Novel
☐ Science

Search Book

Writer :

Book Name : D

Publisher : Is Ba

Search

	Book	Writer	Kind	Publisher	Stock
1	Demir Okce	Jack London	Novel	Is Bankasi	44
2	Denizler Altin...	Jules Verne	Novel	Is Bankasi	33

BookStore System

List Items

About

Filter\_Search

☐ All
☐ Poetry
☒ Novel
☐ Science

Search Book

Writer : Jac

Book Name : D

Publisher : Is Ba

Search

	Book	Writer	Kind	Publisher	Stock
1	Demir Okce	Jack London	Novel	Is Bankasi	44

## Some Important Rules

In order to get a full credit, your programs must be efficient and well presented, presence of any redundant computation or bad indentation, or missing, irrelevant comments are going to decrease your grades. You also have to use understandable identifier names, informative introduction and prompts. Modularity is also important; you have to use functions wherever needed and appropriate.

When we grade your homeworks we pay attention to these issues. Moreover, in order to observe the real performance of your codes, we are going to run your programs in *Release* mode and **we may test your programs with very large test cases**.

**What and where to submit (PLEASE READ, IMPORTANT)**

You should prepare (or at least test) your program using MS Visual Studio 2012 C++. We will use the standard C++ compiler and libraries of the abovementioned platform while testing your homework. It'd be a good idea to write your name and last name in the program (as a comment line of course).

Submissions guidelines are below. Some parts of the grading process are automatic. Students are expected to strictly follow these guidelines in order to have a smooth grading process. If you do not follow these guidelines, depending on the severity of the problem created during the grading process, 5 or more penalty points are to be deducted from the grade.

Name your cpp file that contains your program as follows:

***"SUCourseUserName\_YourLastname\_YourName\_HWnumber.cpp"***

Your SUCourse user name is actually your SUNet username that is used for checking sabanciuniv e-mails. Do NOT use any spaces, non-ASCII and Turkish characters in the file name. For example, if your SUCourse user name is valent, name is Valentina, and last name is Tereškova, then the file name must be:

***Valent\_Tereskova\_Valentina\_hw1.cpp***

Do not add any other character or phrase to the file name. Make sure that this file is the latest version of your homework program. Compress this cpp file using WINZIP or WINRAR programs. Please use "zip" compression. "rar" or another compression mechanism is NOT allowed. Our homework processing system works only with zip files. Therefore, make sure that the resulting compressed file has a zip extension. Check that your compressed file opens up correctly and it contains your cpp file.

You will receive no credits if your compressed zip file does not expand or it does not contain the correct file. The naming convention of the zip file is the same as the cpp file (except the extension of the file of course). The name of the zip file should be as follows:

***SUCourseUserName\_YourLastname\_YourName\_HWnumber.zip***

For example zubzipler\_Zipleroglu\_Zubeyir\_hw1.zip is a valid name, but

***hw1\_hoz\_HasanOz.zip, HasanOzHoz.zip***

are **NOT** valid names.

**Submit via SUCourse ONLY!** You will receive no credits if you submit by other means (e-mail, paper, etc.).

Successful submission is one of the requirements of the homework. If, for some reason, you cannot successfully submit your homework and we cannot grade it, your grade will be 0.

Good Luck!

CS204 Team (M. Yusa Erguven, Kamer Kaya)

