

Information Processing Tasks

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A. Pech / S. Aeevermann / N. Schellhaas/ N. A. Ha

First word

The exercises are to work on the computers or personal laptop in groups of two. Each group has to do the works on its own. To get the score for the final project, the accomplishment of 4 out of 5 tasks are required.

All applications must be written for Windows using C#, with window Form as GUI.

Exercise 1: Internet browsing

Programming an application with the following functions:

1. Can open Web pages and navigate backward, forward and refresh pages.
2. A list box shall be used to store “favorite websites” temporarily (i.e. as long as the main window is open). Input of the favorites list can be done either by "Copy/Paste" or by manual input and recorded through a button command. The chosen page can be called by double-clicking on the text in the list box.

Exercise 2: Database management

Create a database management application. The application will operate a warehouse database, consisting of article name, article number, storage, shelf number and brand of the manufacturer.

The following functions are to be carried out:

1. Create a database.
2. Basic operation: Add new entry, delete old entry, and change details of entry.
3. Search and display records base on the article name, even if only a part of the article name is specified.

Exercise 3: Web services

Create a Web service using localhost as server for database management, operate by a browser (Chrome, Firefox, IE...). All functions are the same as task 2.

Exercise 4: Asynchronous communication

Create an application which provide asynchronous access to a file via ftp.

It shall contain the following functions:

- 1) Browsing files – view and selectable - on a free FTP server of free choice.

Example: <ftp://193.43.36.131/Radio/MP3/>

- 2) Detection of selected file size.
- 3) Download chosen file to your work PC.
- 4) Representation of the progress of the download using progress bar.

Exercise 5: Online data parsing

Create a currency converter application.

- 1) The user should have the possibility to choose convertible currencies as a source and destination currency and provide a source an amount. The application should then calculate the corresponding amount in the target currency at the current exchange rate. The result shall be displayed.
- 2) The history of all exchange should also be recorded in a text box, including source and destination currency, the amount, result and the time stamp in format HH:MM.SS, separated by column.

(Example: USD| JAP| 1| 110.18 | 07:12.34).

The application should use the European Central Bank ECB exchange rate, to determine the current daily exchange rate of the desired currency. Write a parser, a GUI, and all other necessary features.