**System requirements for application  
«Online Shop of Books» (OSB)**

System is to be a web-application, which stores information about books, orders and sales in database. And also system is to allow analyzing this information.

User’s roles in system:

1. Customer (unauthorized user)
2. Sale manager (authorized user)
3. Courier (authorized user)
4. Product manager (authorized user)
5. HR manager (authorized user)

The application window is split into three parts:

* main part;
* additional part;
* navigation part.

Navigation part for any user contains logo and title of the online shop. Logo is hyperlink to the user start page. Navigation part can contain main menu hyperlinks. List of items of the main menu depends on user's role.

There is a hyperlink «login» in the main menu in the navigation part for unauthorized user. This hyperlink is last in the list of the main menu items. «Authorization» page is opening when user clicks on this hyperlink.

There is a hyperlink «logout» in the main menu in the navigation part for any authorized user. This hyperlink is last in the list of the main menu items. Current session is destroyed and main page for the customer is opening after user clicks on hyperlink «logout».

«Authorization» page contains web-form in the main part. This form consists of 2 text fields «username» and «password», and button «login». Main menu in the navigation part of «Authorization» page is empty. Additional part on «Authorization» page is not displayed.

System is checking «username» and «password» after user clicks on button «login». If «username» and «password» corresponds to information in the database, user session is created and start page for corresponding user’s role opens. If «username» and «password» not corresponds to information in the database, «Authorization» page opens and at the top of web-form the following message is displayed: «The username or the password is not identified».

***Customer***

Main menu in the navigation part is always empty for customer.

Additional part on any customer page (except «Authorization» page) contains list of names of categories of books. Each name of the category in the list in the additional part is hyperlink to the start page. But every time after user clicks on some hyperlink from this list, list of books of the selected category is displayed on the start page.

Main part of the start page for customer contains the list of books in the selected category. If category was not selected, main part of the start page contains the list of first 10 most popular books in order of popularity. Popularity of the book depends on quantity of the sold copies. List of books contains information about author (initials and last name), title, short description and price. Near each book in the list there are buttons «view details» and «add into basket». «View book» page is opening after user clicks on button «view details».

Also additional part on any customer page (except «Authorization» page) contains basket. Basket contains table with following structure:

|  |  |  |  |
| --- | --- | --- | --- |
| **author** | **title** | **quantity** | **cost** |
| … | … | … | … |
| ***total*** | | … | … |

Each row of the table contains information about one book, which user placed into the basket. Column «author» contains information about author (initials and last name). Column «title» contains books title. Each title is hyperlink to the «View book» page. Column «quantity» contains quantity of copies of the current book. Column «cost» contains total cost of all copies of the current book. Last row contains total quantity of all copies and total cost of all books in the basket. Under the basket there is a button «view details». «View basket» page is opening after user clicks on this button «view details».

«View book» page contains in main part full information about selected book: information about author (first name, middle name, last name and years of life if they are present), books title, short description, full description, name of publisher, year of publishing, price. Under this information about book there is button «add into basket».

One copy of the selected book is added into basket after user clicks on button «add into basket» near corresponding book in the list of books on start page or after user clicks on button «add into basket» on «View book» page. In any case start page for customer is opening after user clicks on one of these buttons. And start page contains list of books of the same category as category of the added book.

«View basket» page contains in main part table with following structure:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **author** | **title** | **price** | **quantity** | **cost** |  |  |
| … | … | … | … | … | «remove» button | «add» button |
| ***total*** | | | … | … |  |  |

Each row of the table contains information about one book, which user placed into the basket. Column «author» contains information about author (initials and last name). Column «title» contains books title. Each title is hyperlink to the «View book» page. Column «price» contains current book price. Column «quantity» contains quantity of copies of the current book. Column «cost» contains total cost of all copies of the current book. Last 2 columns contain buttons «remove» and «add». Last row contains total quantity of all copies and total cost of all books in the basket. Under the basket there is a button «issue the order». «Ordering» page is opening after user clicks on button «issue the order».

One more copy of the selected book is added into basket after user clicks on button «add» on «View basket» page. One copy of the selected book id removed from basket after user clicks on button «remove» on «View basket» page. If there are no any copies of the book in basket, corresponding row will be deleted from table on «View basket» page.

«Ordering» page contains in main part information about all books in basket as table with following structure:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **author** | **title** | **price** | **quantity** | **cost** |
| … | … | … | … | … |
| ***total*** | | | … | … |

Each row of the table contains information about one book, which user placed into the basket. Column «author» contains information about author (initials and last name). Column «title» contains books title (but title is not hyperlink). Column «price» contains current book price. Column «quantity» contains quantity of copies of the current book. Column «cost» contains total cost of all copies of the current book. Row «total» contains total quantity of all copies and total cost of all books in the basket. Under this table there is web-form. Web-form contains following fields: «customer name», «phone number», «address» and «notes». Also web-form contains button «confirm the order». To issue order, customer is to fill this web-form and is to click on the button «confirm the order». If customer fills this web-form correctly, order is stored for processing by sale manager, and start page for customer (with empty basket) is opening. If customer fills this web-form incorrectly, the same page is opening, and there is corresponding error message before the table. Web-form is filled incorrectly if one of the following conditions is observed:

|  |  |
| --- | --- |
| **condition** | **corresponding error message** |
| «customer name» field is empty | It is necessary to fill customer name |
| «phone number» field is empty | It is necessary to fill phone number |
| «address» field is empty | It is necessary to fill address |
| «phone number» field contains value which is not matched to the template «xx-xx-xx», where «x» is any decimal digit | Phone number is to match to the template «xx-xx-xx», where «x» is any decimal digit |