

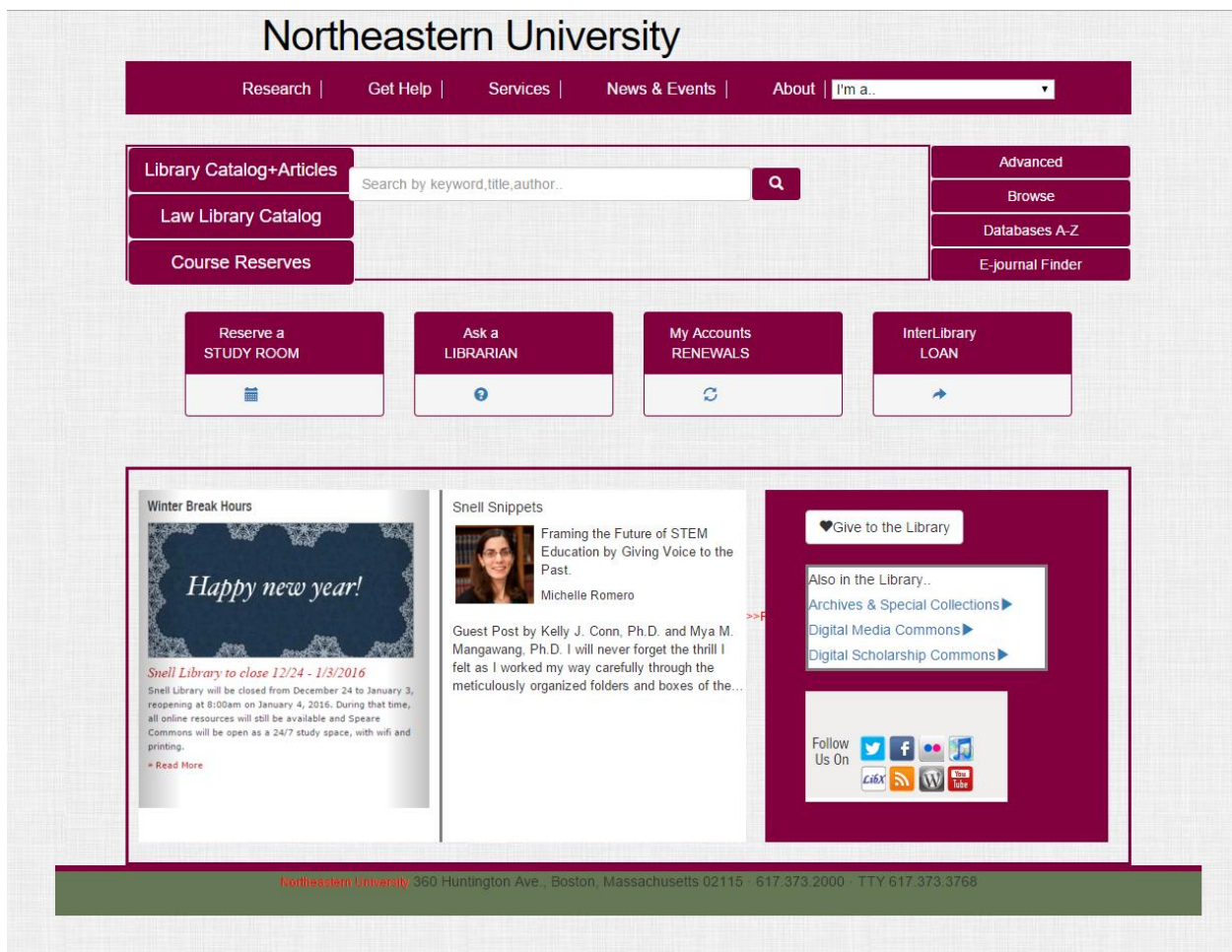
Project Summary & Description:

The project is about enhancement in the Northeastern University Library Website. Current website lacks the importance to be given to the essential factors such as booking the study room, asking librarian and search features. Also current website is not responsive.

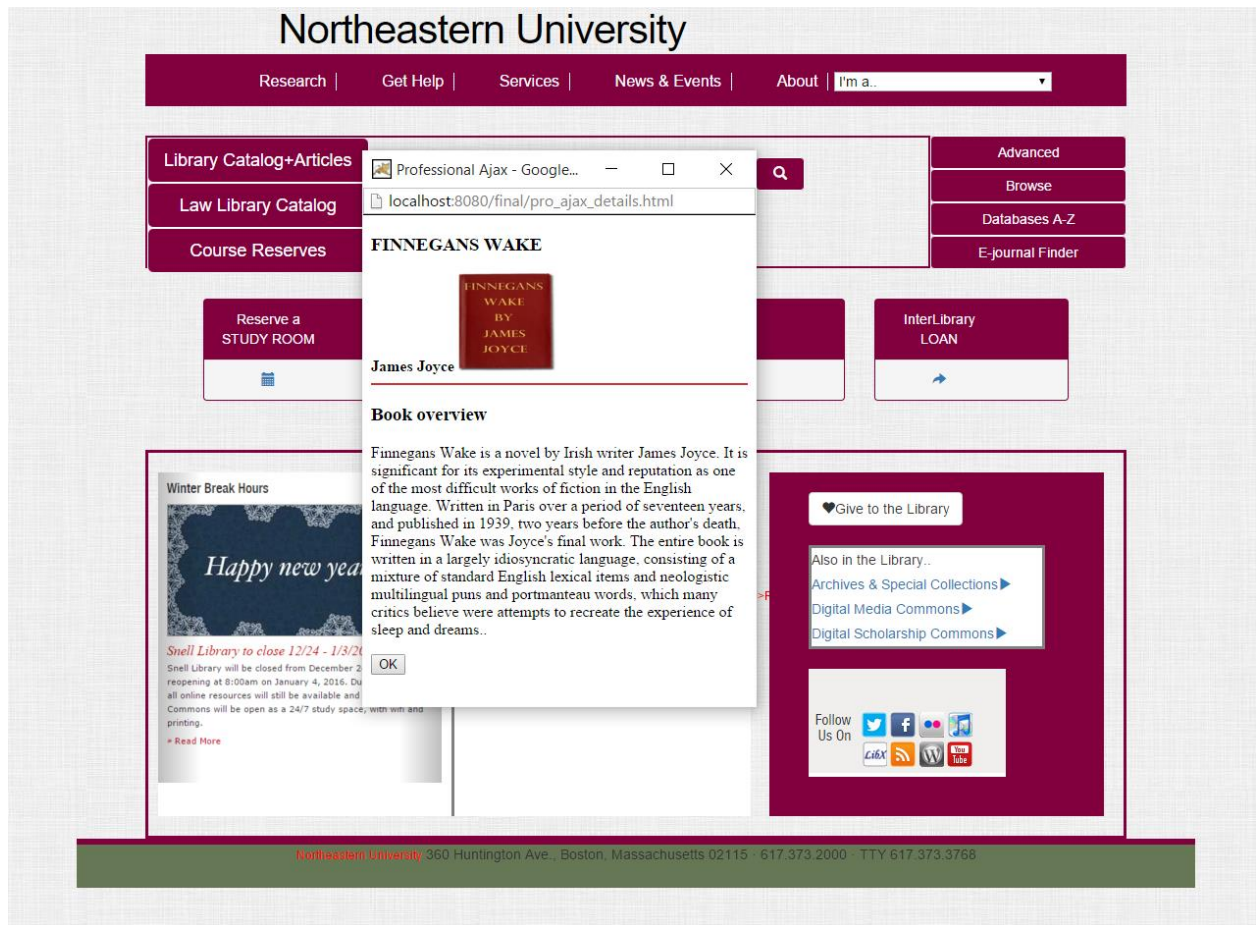
In this project I have developed a prototype of the library website with improvements on above mentioned points. I have used several techniques taught in this course such as bootstrap, css3, html5, JavaScript, jQuery to make the user interface more user friendly and interactive.

Screenshots & Things done:

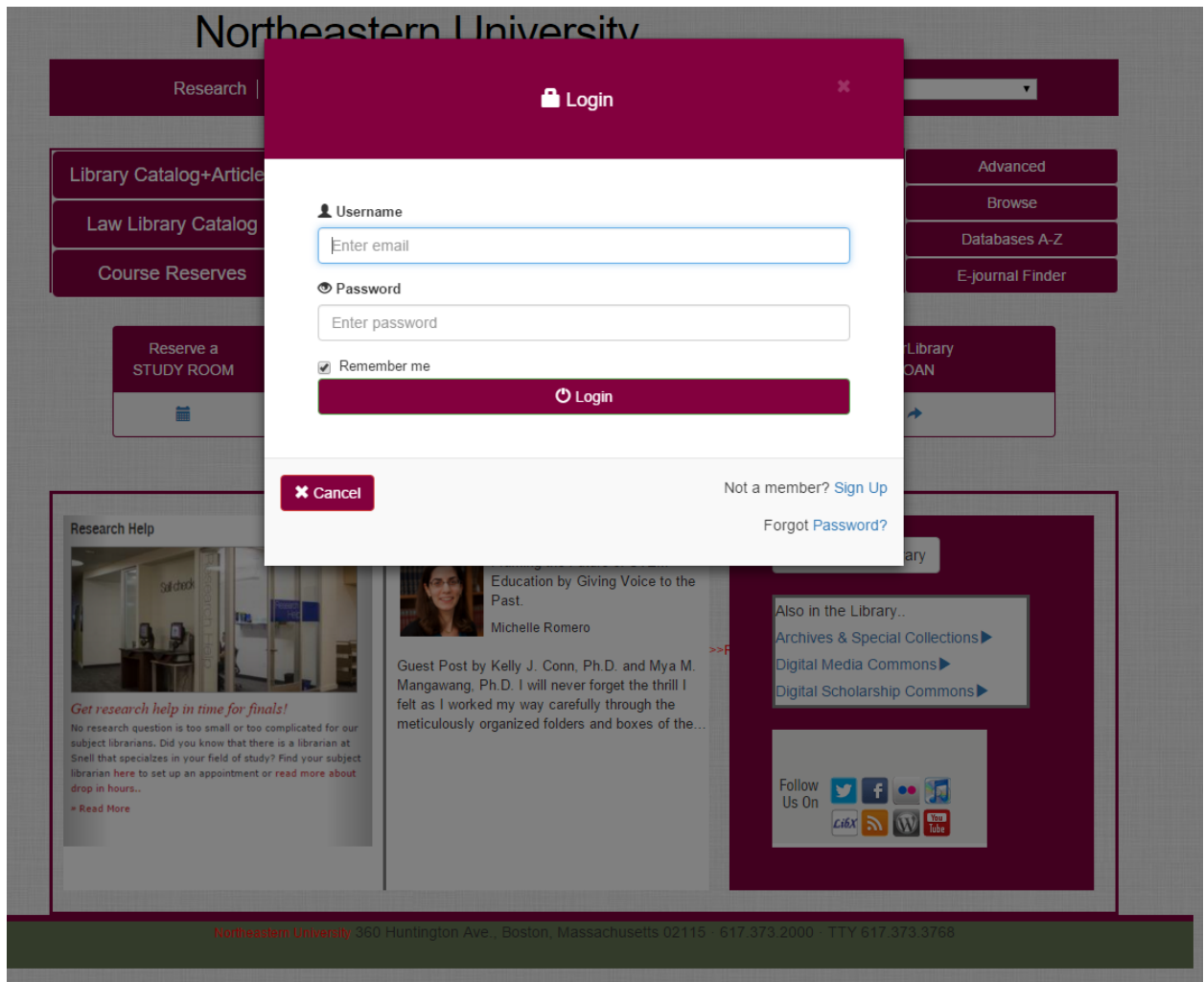
1. Home Page- Home page consists of search functionality driven by javascript and jsp pages, bootstrap features such as Carousel.



2. Book Description page after Search is implemented by using jsp :



3. Modal dialogue box for login with validation for email address:



4. Source Code:

1. index.html-

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta name="keywords" content="" />
```

```
<meta name="description" content="" />
```

```
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
```

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

```
<title>Northeastern Library</title>
```

```
<link href="http://fonts.googleapis.com/css?family=Arvo" rel="stylesheet" type="text/css" />
```

```
<link href="style.css" rel="stylesheet" type="text/css" media="screen" />
```

```
<link href="queries.css" rel="stylesheet" type="text/css" media="screen" />
```

```
<!-- Latest compiled and minified CSS -->
```

```

<link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css" integrity="sha384-
1q8mTJOASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkzs7"
crossorigin="anonymous">
<link rel="stylesheet" href="http://jqueryvalidation.org/files/demo/site-demos.css">
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></script>
<script src="http://jqueryvalidation.org/files/dist/jquery.validate.min.js"></script>
<script src="http://jqueryvalidation.org/files/dist/additional-methods.min.js"></script>
<script src="http://maxcdn.bootstrapcdn.com/bootstrap/3.3.5/js/bootstrap.min.js"></script>
<script src="clienthint.js"></script>
<script src="booksearch.js"></script>

```

```

<style type="text/css">
@import "gallery.css";
</style>
</head>
<body>
<div class="container">
<div id="wrapper">
    <div id="header">
        <div id="logo">
            <h1><a href="#">Northeastern University</a></h1>
            <!--h1><a href="#">University Libraries</a></h1-->
        </div>
    </div>
    <!-- end #header -->
    <div class="navigation">
        <div id="menu">
            <ul>

```

```

                <li class="current_page_item" ><a href="#" "class="dropdown-toggle" data-
toggle="dropdown">Research</b></a></li>

```

```

            <ul class="dropdown-menu">
                <li>A to Z Databases</li>
                <li>Article Databases</li>
                <li>Books & E-Books</li>
                <li>Journals & E-Journals</li>
            </ul>

```

```

        <li class="current_page_item"><a href="#">Get Help</a></li>
        <li class="current_page_item"><a href="#">Services</a></li>
        <li class="current_page_item"><a href="#">News & Events</a></li>
        <li class="current_page_item"><a href="#">About</a></li>
        <!--li class="last"><a href="#">I am a</a></li-->
        <li class="last current_page_item">
            <select>

```

```

                <option value="I'm a.." selected="selected" disabled>I'm a..</option>

```

```

        <option value="Undergraduate Students">Undergraduate
Students</option>

        <option value="Graduate Students">Graduate Students</option>
        <option value="Faculty and Staff">Faculty and Staff</option>
        <option value="Parents & Families">Parents & Families</option>
        <option value="Alumnus">Alumnus/a</option>
        <option value="Persons with Disabilities">Persons with
Disabilities</option>

        <option value="Professional / Online Students">Professional / Online
Students</option>

        <option value="Charlotte Students">Charlotte Students</option>
        <option value="Seattle Students">Seattle Students</option>
        <option value="Retiree">Retiree</option>
    </select>
</li>
</ul>
</div><!-- end of menu-->
</div><!-- end of navigation-->
<!--div id="banner"></div-->
<div id="welcome">
    <div id="search_container">
        <div id="search">
            <form class="form-inline">
                <div class="form-group">
                    <ul>
<li><button type="button" class="btn btn-lg">Library
Catalog+Articles</button></li>
<li><button type="button" class="btn btn-lg">Law Library
Catalog</button></li>
<li><button type="button" class="btn btn-lg">Course
Reserves</button></li>
                    </ul>
                </div>
            </form>
        </div><!--end of search-->
        <div id="search_tabs">
            <form class="form-inline">
                <div id="searchrow">
                    <input type="text" class="form-control" id="exampleEmailInput"
placeholder="Search by keyword,title,author.." onKeyUp="showHint(this.value)" />
                    <datalist id="bookList">
                    </datalist>
                    <button type="button" class="btn btn-s clicksearch">
<span class="glyphicon glyphicon-search"></span>
                    </button>
                </div><!--end of searchrow-->
            </form>
        </div>
    </div>
</div>

```

```

        </div><!--end of search tabs-->
    </div><!--end of search container-->
    <div id="sidebar">
        <ul>
            <li>
                <ul>
                    <li><button type="button"
class="btn">Advanced</button></li>
                    <li><button type="button"
class="btn">Browse</button></li>
                    <li><button type="button" class="btn">Databases A-
Z</button></li>
                    <li><button type="button" class="btn">E-journal
Finder</button></li>
                </ul>
            </li>
        </ul>
    </div>
</div>
<!--end of welcome-->
<div id="four-columns">
    <div class="col-lg-3 col-md-6 col-sm-9 col-xs-12 four-columns-style">
        <div class="panel" id="btncolor">
            <div class="panel-heading">
                <div class="row">
                    <div class="col-xs-
8"><span class="gi-5x"></span>
                    <div class="gi-
3x">
                    <div>Reserve
                    <div>STUDY
                    </div>
                </div>
            </div>
        </div>
    </div>
    <div class="panel-footer">
        <div class="row">
            <div class="col-xs-8">
                <a href="#">
                    <span class="glyphicon glyphicon-
calendar"></span>
                </a>
            </div>
        </div>
    </div>
</div>
</div>

```

```
</div>
<div class="col-lg-3 col-md-6 col-sm-9 col-xs-12 four-columns-style">
  <div class="panel" id="btncolor">
    <div class="panel-heading">
      <div class="row">
        <div class="col-xs-
8"><span class="gi-5x"></span>
        <div class="gi-
3x">
        <div>Ask a</div>
      </div>
    </div>
    <div>LIBRARIAN</div>
  </div>
</div>
</div>
<div class="panel-footer">
  <div class="row">
    <div class="col-xs-8">
      <a href="#">
        <span class="glyphicon glyphicon-
question-sign"></span>
      </a>
    </div>
  </div>
</div>
</div>
<div class="col-lg-3 col-md-6 col-sm-9 col-xs-12 four-columns-style">
  <div class="panel" id="btncolor">
    <div class="panel-heading">
      <div class="row">
        <div class="col-xs-
8"><span class="gi-5x"></span>
        <div class="gi-
3x">
        <div>My
Accounts</div>
      </div>
    </div>
    <div>RENEWALS</div>
  </div>
</div>
</div>
<div class="panel-footer">
  <div class="row">
    <div class="col-xs-8">
```

```

refresh"></span>
<a href="#">
<span class="glyphicon glyphicon-
</a>
</div>
</div>
</div>
</div>
<div class="col-lg-3 col-md-6 col-sm-9 col-xs-12 four-columns-style">
<div class="panel" id="btncolor">
<div class="panel-heading">
<div class="row">
<div class="col-xs-
8"><span class="gi-5x"></span>
<div class="gi-
3x">
<div>InterLibrary</div>
<div>LOAN</div>
</div>
</div>
</div>
<div class="panel-footer">
<div class="row">
<div class="col-xs-8">
<a href="#">
<span class="glyphicon glyphicon-
share-alt"></span>
</a>
</div>
</div>
</div>
</div>
</div>
</div>
<div id="page">
<div id="content">
<div id="left-content">
<!--div class="post">
<!--h2 class="title"><a href="#">Carrousel</a></h2-->
<!--carousel-->
<div id="myCarousel" class="carousel slide" data-
ride="carousel">
<!-- Indicators -->

```


class="active">

to="1">

to="2">

to="3">

```
<ol class="carousel-indicators">
  <li data-target="#myCarousel" data-slide-to="0"

  <li data-target="#myCarousel" data-slide-

  <li data-target="#myCarousel" data-slide-

  <li data-target="#myCarousel" data-slide-

</ol>
```

```
<!-- Wrapper for slides -->
<div class="carousel-inner" role="listbox">
  <div class="item active">
    
  </div>

  <div class="item">
    
  </div>

  <div class="item">
    
  </div>

  <div class="item">
    
  </div>
</div>
```

role="button" data-slide="prev">

aria-hidden="true"></span-->

role="button" data-slide="next">

aria-hidden="true"></span-->

```
<!-- Left and right controls -->
<a class="left carousel-control" href="#myCarousel"

  <!--span class="glyphicon glyphicon-chevron-left"

  <span class="sr-only">Previous</span>

</a>
<a class="right carousel-control" href="#myCarousel"

  <!--span class="glyphicon glyphicon-chevron-right"

  <span class="sr-only">Next</span>

</a>
</div>
```

```
<!--end of carousel-->
```

```
<!--/div-->
```

```
</div><!--end of left-content-->
```

```
<div id="right-content">
```

```
<div class="post">
```

```

<h5>Snell Snippets</h5>
<div class="entry">
    </div>
    <div id="imgtext">Framing the Future of STEM Education by
Giving Voice to the Past.<h6>Michelle Romero</h6></div>
    <div class="guest">Guest Post by Kelly J. Conn, Ph.D. and Mya
M. Mangawang, Ph.D. I will never forget the thrill I felt as I worked my way carefully through the
meticulously organized folders and boxes of the...</div>
    <a href="#" alt="read more"> &gt;&gt;Read More</a>
<!--/div-->
</div>
</div>
</div><!--end of content-->
<!-- end #content -->
<div id="page-sidebar">
<ul>
    <li><button type="button" class="btn btn-
default"><span class="glyphicon glyphicon glyphicon-heart"></span>Give to the
Library</button></li>

    <div id="side">

        <li>Also in the

            <li><a href="#">Archives
& Special Collections<span class="glyphicon glyphicon glyphicon-play"></span></a></li>
            <li><a href="#">Digital
Media Commons<span class="glyphicon glyphicon glyphicon-play"></span></a></li>
            <li><a href="#">Digital
Scholarship Commons<span class="glyphicon glyphicon glyphicon-play"></span></a></li>

        </div>

        <li></li>

    </ul>
</div>
</div>
<!-- end #page -->

<div id="footer">
    <span id="foot"><a href="https://www.northeastern.edu/">Northeastern University</a></span>
    <span>360 Huntington Ave., Boston, Massachusetts 02115 · 617.373.2000 · TTY
617.373.3768</span>

</div>
<!-- end #footer -->
</div><!--end of wrapper-->

```

```

</div><!-- end of container-->
<!-- Modal -->
<div class="modal fade" id="myModal" role="dialog">
  <div class="modal-dialog">

    <!-- Modal content-->
    <div class="modal-content">
      <div class="modal-header" style="padding:35px 50px;">
        <button type="button" class="close" data-dismiss="modal">&times;</button>
        <h4><span class="glyphicon glyphicon-lock"></span> Login</h4>
      </div>
      <div class="modal-body" style="padding:40px 50px;">
        <form role="form" name="form1" >
          <div class="form-group">
            <label for="usrname"><span class="glyphicon glyphicon-user"></span> Username</label>
            <input type="text" class="form-control" id="usrname" placeholder="Enter email" required >
          </div>
          <div class="form-group">
            <label for="psw"><span class="glyphicon glyphicon-eye-open"></span> Password</label>
            <input type="text" class="form-control" id="psw" placeholder="Enter password" >
          </div>
          <div class="checkbox">
            <label><input type="checkbox" value="" checked>Remember me</label>
          </div>
          <button type="submit" class="btn btn-success btn-block" id="formsub"><span
class="glyphicon glyphicon-off"></span> Login</button>
        </form>
      </div>
      <div class="modal-footer">
        <button type="submit" class="btn btn-danger btn-default pull-left" data-
dismiss="modal"><span class="glyphicon glyphicon-remove"></span> Cancel</button>
        <p>Not a member? <a href="#">Sign Up</a></p>
        <p>Forgot <a href="#">Password?</a></p>
      </div>
    </div>
  </div>

</div>
</div>
<script>

</script>
</body>
</html>

```

2. style.css-

```
/*css for Library*/

body {
    margin: 0;
    padding: 0;
    background: #EFEFEF url(images/main-bg.jpg) repeat;
    font-family: 'Arvo', serif;
    font-size: 14px;
    color: #000000;
}

h1, h2, h3 {
    margin: 0;
    padding: 0;
    font-weight: normal;
    color: #221D1D;
}

h1 {
    font-size: 2em;
}

h2 {
    font-size: 2.4em;
}

h3 {
    font-size: 1.6em;
}

p, ul, ol {
    margin-top: 0;
    line-height: 180%;
}

ul, ol {
}

a {
    text-decoration: none;
    color: #091478;
}
```

```
a:hover {  
}
```

```
#wrapper {  
    width:100%;  
    padding: 0;  
    background: url(images/main-image-bg.jpg) no-repeat center top;  
    margin: 0px auto 30px auto;  
}
```

```
/* Header */
```

```
#header {  
    width: 80%;  
    height: 3%;  
    margin: 0px auto;  
    /*background:yellow;*/  
}
```

```
/* Logo */
```

```
#logo {  
    width: 80%;  
    height: 5%;  
    margin: 0px auto;  
    color: #000000;  
}
```

```
#logo h1{  
    margin: 0;  
    padding: 0;  
}
```

```
#logo h1 {  
    line-height:50px;  
    letter-spacing: -1px;  
    text-align: left;  
    text-transform: Capitalize;  
    font-size: 3em;  
}
```

```
#logo a {  
    border: none;
```

```

        background: none;
        text-decoration: none;
        color: #000000;
    }

    /* Search Container*/

    #search_container{
        float: left;
        width: 80%;
        height: 135px;
        padding: 0px 0px 0px 0px;
        /*background: #323435;
        border-bottom: 4px solid #0974C4;*/
        margin: 0px auto;
        /*background:green;*/
        border:2px solid #83003E;
    }

    #search_container button,#sidebar button {
        width: 100%;
        text-align:center;
        background:#83003E;
        color:white;
        border:1px solid white;
    }

    #search{
        float:left;
        /*background:pink;*/
        height: 125px;
        width: 200px;
    }

    #search ul {
        margin: 0;
        padding: 0;
        list-style: none;
    }

    #search li {
        margin: 0;
        padding: 0;
    }

    #search_tabs{

```

```
float:left;
width:80%px;
height:130px;
z-index:5;
/*background:cyan;*/
/*border:3px solid #83003E;*/

}
```

```
#searchrow button{
```

```
float:left;
width:50px;
margin:20px 0px 0px 0px;
background:#83003E;
color:white;
}
```

```
#searchrow input[type="text"] {
float:left;
margin:20px 0px 0px 20px;
width: 400px;
}
```

```
/* Menu */
```

```
.hamburger {
display: none;
}
```

```
#menu {
overflow: hidden;
width: 1000px;
padding: 15px 0px;
margin: 0px auto 30px auto;
background: #83003E;
font-size: 20px;
color: #000000;
}
```

```
#menu ul {
margin: 0px 0px 0px 0px;
```

```

padding: 0px 0px;
list-style: none;
line-height: normal;
text-align: center;
}

#menu li {
display: inline-block;
border-right: 1px solid #FFFFFF;
}

#menu a {
display: block;
padding: 0px 10px 0px 40px;
text-decoration: none;
text-align: center;
font-size: 16px;
font-weight: 400;
color: #FFFFFF;
border: none;
}

#menu a:hover, #menu .current_page_item a {
text-decoration: none;
}

#menu .current_page_item a {
color: #FFFFFF;
}

#menu .last {
border-right: none;
font-size: 14px;
}

.last select {
color: black;
}

.dropdown-menu {
min-width: 125px; /* Set width of the dropdown */
background: #f2f2f2;
display: none;
position: absolute;

```



```
        z-index: 999;
        left: 0;
        list-style:
    }

.dropdown:hover .dropdown-menu{
    display: block; /* Display the dropdown */
}
```

```
.dropdown-menu li{
    display: block;
}
/*
.current_page_item:hover #menudrop{
    background: yellow;
    display: block;
}
/* Page */
```

```
#page {
    overflow: hidden;
    width: 1000px;
    margin: 0px auto;
    padding: 10px 10px;
    /*background: blue;*/
    border: 3px solid #83003E;
}
```

```
/* Content */
```

```
#content {
    /*background: grey;*/
    float: left;
    width: 62%;
    padding: 10px 0px 0px 0px;
}
```

```
#left-content{
    float: left;
    width: 50%;
    height: 350px;
    background: white;
```

```
        margin:auto;
        padding-right:10px;
        border-right:3px solid gray;
    }
    .carousel-inner > .item > img{
        width: 100%;
        height:100%;
        margin: auto;
    }

    #right-content{
        float:left;
        width:50%;
        background:white;
        height:350px;
        padding-left:10px;
    }
    #page-sidebar{
        margin:10px;
        float: right;
        width: 35%;
        padding: 20px 0px 0px 0px;
        color: #383838;
        background:#83003E;
        height:350px;

    }

    #page-sidebar ul li{
        list-style-type:none;

    }

    #side{
        list-style:none;
        list-style-position:inside;
        margin-left:0;
        padding-left:0;
        margin:20px 0px;
        border:3px solid gray;
        background:white;
        width:80%;

    }
```

```
.carousel-indicators {  
    color:red;  
}
```

```
#imgtext{  
    float:right;  
    font-size:13px;  
    width:70%;  
  
}
```

```
.guest{  
    margin-top:10px;  
    float:left;  
    font-size:13px;  
}
```

```
.guest + a{color:red;  
            font-size:12px;  
}
```

```
.entry {  
    font-size:0.75em;  
    width:30%;  
    float:left;  
    /*padding: 0px 0px 20px 0px;  
    padding-bottom: 20px;*/  
    text-align:left;  
}
```

```
.links {  
    padding-top: 20px;  
    font-size: 12px;  
    font-weight: bold;  
}
```

```
/* Sidebar */
```

```
#sidebar {  
    float: right;  
    width: 200px;  
    padding: 0px 0px 0px 0px;  
    color: #383838;  
    /*background:red;*/
```

```
}

#sidebar ul {
    margin: 0;
    padding: 0;
    list-style: none;
}

#sidebar li {
    margin: 0;
    padding: 0;
}

#sidebar h2 {
    padding: 0px 0px 30px 0px;
    letter-spacing: -1px;
    font-size: 1.8em;
    color: #101010;
}

/* Footer */

#footer {
    overflow: hidden;
    width: 100%;
    float: left;
    height: 50px;
    margin: auto;
    padding: auto;
    background: #667755;
    border-top: 6px solid #83003E;
    text-align: center;
}

#footer a {
    margin: 0;
    padding-top: 20px;
    line-height: normal;
    text-align: center;
    color: #FF0000;
    font-size: 12px;
}
```

```
#four-columns {  
  
    /*background:magenta;*/  
    overflow: hidden;  
    width: 80%;  
    /*margin: 0px auto;  
    padding: 0px 0px;*/  
    margin: 100px auto 30px auto;  
    padding-top:30px;  
    /*border: 1px solid #83003E;*/  
    color: #000000;  
}
```

```
#btncolor{  
    background:#83003E;  
    color:white;  
}
```

```
.four-columns-style{  
    text-align:center;  
    float:left;  
  
}
```

```
#welcome {  
    width: 1000px;  
    margin: 0px auto;  
    /*margin-bottom:50px;*/  
    padding: 0px 0px;  
    border-bottom: 1px solid #D4D4D4;  
    color: #000000;  
}
```

```
#welcome h2 {  
    padding: 0px 0px 20px 0px;  
}
```

```
#welcome h2 a {  
    color: #000000;  
}
```

```
#welcome a {  
    color: #000000;
```

```

}

.gi-3x{
    font-size:1em;
    text-align:center;
    margin-left:0px;
}

.gi-5x{
    font-size: 5em;
}
/*modal*/
.modal-header, h4, .close {
    background-color: #83003E;
    color:white !important;
    text-align: center;
    font-size: 30px;
}
.modal-footer {
    background-color: #f9f9f9;
}

#myModal button[type="submit"]{
    background:#83003E;
}

```

3. booksearch.js-

```

$(function(){
    //alert("m in");

    $(".clicksearch").on("click",function(){
        //alert("YA~YA~YA~YA");
        var
        detailwindow=window.open('pro_ajax_details.html',"bookDetails","width=400,height=500");
        $("#exampleEmailInput").val("");
    });
}

```

```
        detailsWindow.focus();

    });

$(document).ready(function(){

    $("select").change(function(){

        /*alert("hi");*/

        var end=$(this).val();

        //alert(end);

        $("#myModal").modal();

        $("select")[0].selectedIndex =0;

        /*var value = $(''.last').val();*/

    });
```

```
$('#formsub').on("click",function(e) {

    /*alert("in formsub");*/

    var sEmail = $("#username").val();

    if (validateEmail(sEmail)) {

        alert('Email is valid');

    }

    else {
```

```

        $("#uemail").val("");
        alert('Invalid Email Address');

        e.preventDefault();

    }

});

})

function validateEmail(sEmail) {
    /*alert("in val");
    alert(sEmail);*/

    var filter = /^[^\w-\.\.]+@((\[[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.)(\([^\w-\.\.]+\)))([a-zA-Z]{2,4})[0-9]{1,3})(\|?)$/;

    if (filter.test(sEmail)) {
        /*alert("in true");*/

        return true;
    }
    else {
        return false;
    }
}

})

```


4.pro_ajax_details.html-

```
<!DOCTYPE html>
```

```
<head>
```

```
<title>Professional Ajax</title>
```

```
<script>
```

```
</script>
```

```
</head>
```

```
<body>
```

```
<h3>FINNEGANS WAKE</h3>
```

```
<strong>James Joyce</strong>
```

```

```

```
<hr color="#cc3333" />
```

```
<h3>Book overview</h3>
```

```
<p>Finnegans Wake is a novel by Irish writer James Joyce. It is significant for its experimental style and reputation as one of the most difficult works of fiction in the English language. Written in Paris over a period of seventeen years, and published in 1939, two years before the author's death, Finnegans Wake was Joyce's final work. The entire book is written in a largely idiosyncratic language, consisting of a mixture of standard English lexical items and neologistic multilingual puns and portmanteau words, which many critics believe were attempts to recreate the experience of sleep and dreams..</p>
```

```
<form name="form1" action="">
```

```
<input type="button" value="OK" name="OK"
```

```
onclick="self.close()" />
```

```
</form>
```

```
</body>
```

```
</html>
```

5.queries.css-

```
@media screen and (min-width:920px) and (max-width: 1360px) {
```

```
#sidebar{display:none;}
```

```
}
```

```
@media screen and (min-width:640px) and (max-width: 940px) {
```

```
.hamburger {
```

```
display: block;
```

```
margin-left: .5%;
```

```
padding: .5% .5%;
```

```
}
```

```
#menu {
```

```

        display: none;
    }

    #search{display:none;}

    #sidebar {
display:none;
    }

        #header{width:100%;}
        #search_container{
width:60%;
    }

    #left-content{
        display:none;
    }

    #right-content{
        width:90%
    }

    #content{
        width:100%;
    }

    #page{
        width:90%
    }

        #page-sidebar{
width:100%;
margin:auto;
float:left;
    }

    #side{
        width:60%;
    }

}

```

```

@media screen and (max-width: 640px) {

```

```
.hamburger {
    display: block;
    margin-left: .5%;
    padding: .5% .5%;
}

#menu {
    display: none;
}

#sidebar {
display:none;
}

#header{width:20%;

margin-left:0px;
margin-bottom:0px;
}

#welcome{
    display:none;
}

#left-content{
    display:none;
}

#right-content{
    display:none;
}

#page-sidebar{
    float:left;
    width:100%;
    height:100%;
}

#page{
    width:80%
}

#page-sidebar button{
    display:none;
```

```
}  
#page-sidebar img{display:none;}  
  
}
```

Gethint.jsp

```
<%@ page import="java.util.*" %>  
<%  
    response.setHeader("Pragma", "No-cache");  
    response.setDateHeader("Expires", 0);  
    response.setHeader("Cache-Control", "no-cache");  
  
    // Fill up vector with names  
    Vector names = new Vector();  
  
    names.add("THE GREAT GATSBY");  
    names.add("A Portrait of the Artist as a Young Man");  
    names.add("Cinderella");  
    names.add("LOLITA");  
    names.add("CATCH-22");  
    names.add("DARKNESS AT NOON");  
    names.add("THE GRAPES OF WRATH");  
    names.add("UNDER THE VOLCANO");  
    names.add("I, CLAUDIUS");  
    names.add("AN AMERICAN TRAGEDY");  
    names.add("HENDERSON THE RAIN KING");  
    names.add("APPOINTMENT IN SAMARRA");  
    names.add("U.S.A.(trilogy)");  
    names.add("HOWARDS END");  
    names.add("Deliverance");  
    names.add("ON THE ROAD");  
    names.add("DEATH COMES FOR THE ARCHBISHOP");  
    names.add("SCOOP");  
    names.add("FINNEGANS WAKE");  
    names.add("BRIDESHEAD REVISITED");  
    names.add("LOVING");  
    names.add("UNDER THE NET");  
    names.add("WIDE SARGASSO SEA");  
    names.add("MYTHAGO WOOD");  
    names.add("SOMETIMES A GREAT NOTION");
```

```

names.add("V.");
names.add("NAKED LUNCH");
names.add("GUILTY PLEASURES");
names.add("CITIZEN OF THE GALAXY");
names.add("ENDER'S GAME");

String hint="";

//get the q parameter from URL
String q = request.getParameter("q");

//lookup all hints from array if length of q>0
if (q.length() > 0)
{

    for(int i=0; i<names.size();i++)
    {
        String current = (String) names.elementAt(i);

        if ( current.regionMatches(true, 0, q, 0, q.length()))

            {
                hint += "<option>" + (String)names.elementAt(i) + "</option>";
            }
    }

}

res=hint;

// Set output to "no suggestion" if no hint were found
// or to the correct values

//output the response
out.println(res);
%>

```

Clienthint.js

```
var xmlHttp
```

```
function showHint(str)
{
    /*alert("in");*/
    if (str.length==0)
    {
        document.getElementById("bookList").innerHTML="";
        return;
    }
    xmlHttp=GetXmlHttpRequestObject();
    if (xmlHttp==null)
    {
        alert ("Your browser does not support AJAX!");
        return;
    }
    //alert("in url");
    var url="gethint.jsp";
    url=url+"?q="+str;
    url=url+"&sid="+Math.random();
    xmlHttp.onreadystatechange=stateChanged;
    xmlHttp.open("GET",url,true);
    xmlHttp.send(null);
}

function stateChanged()
{
    if (xmlHttp.readyState==4)
    {
        //alert("hi");
        var str;
        var inp=document.getElementById("exampleEmailInput");
        inp.setAttribute("List","bookList");
        //alert(xmlHttp.responseText);
        //alert(inp);
        var dataList=document.getElementById("bookList");
        /*str += '<option value="'+xmlHttp.responseText+' />';*/
        dataList.innerHTML=xmlHttp.responseText;
        /*alert("text");*/
    }
}
```

```
function GetXmlHttpRequestObject()
{
var xmlhttp=null;
try
{
// Firefox, Opera 8.0+, Safari
xmlhttp=new XMLHttpRequest();
}
catch (e)
{
// Internet Explorer
try
{
xmlhttp=new ActiveXObject("Msxml2.XMLHTTP");
}
catch (e)
{
xmlhttp=new ActiveXObject("Microsoft.XMLHTTP");
}
}
return xmlhttp;
}
```