WEB AND MOBILE TECHNOLOGIES - CLASS ASSIGNMENT 1 – DEVELOPMENT OF PROGRESSIVE WEB APP (PWA)

Project.
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DATE: APRIL 2018.

MSC INFORMATION SYSTEMS WITH COMPUTING

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INTRODUCTION

Progressive Web App (**PWA**) is a term used to denote a new software development methodology. Unlike traditional applications, progressive web apps are a hybrid of regular web pages (or websites) and a mobile application

This PWA assessment cuts across using html, css, jquery to implement modern day mobile and web technology features. The app fetches data from a given JSON url and displays data to the user using PWA features.

METHODOLOGY

I made use of HTML, CSS and AJAX in the development of this app. Service workers were introduced using javascript as required.

REQUIREMENTS

- Contain at least three html pages with appropriate navigation for both desktop and mobile view (e.g. hamburger navigation icons)
- Contains at least one form
- Connects to the a third-party api for movie listings (see below) and displays these in a master / detail view (e.g. movie / movie details)
- Displays a list of seats for selection (styled 'box' divs will be sufficienct)
- Uses Bootstrap or another 3rd party CSS framework
- Demonstrates the use of a media query (device orientation) to restrict a view to landscape. This can be any view within your app (e..g detail view of a movie, or seating arrangement) of your choosing.
- Uses local storage to store at least 5 movies in the event that there is no connection
- Uses a mock json feed to simulate a movie listing while the app is being developed
- Uses a service worker to allow for notifications , offline usage
- Images or placeholder images should be utilized throughout
- All code should be commented, and clearly identified at the top of each file with your student name and number.

LIMITATIONS

There were a lot of limitations in the process of creating this app, few are listed below

- Due to the fact that I'm not family with javascript, a faced a lot of difficulties.
- Due to time constraints, I couldn't meet up with some stated requirements as pictured in my head
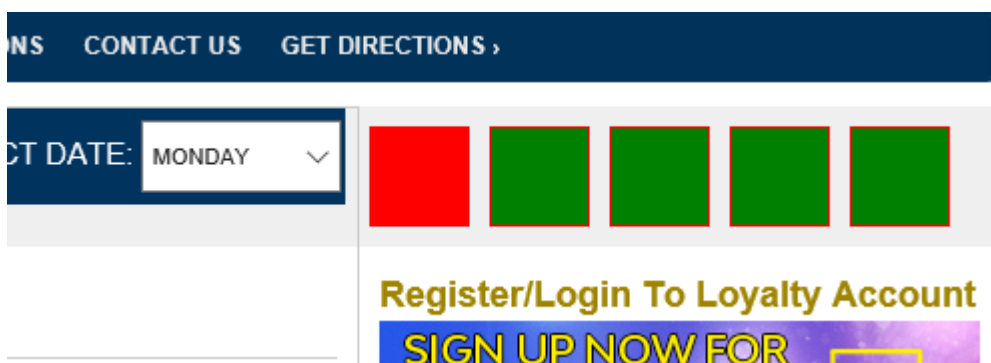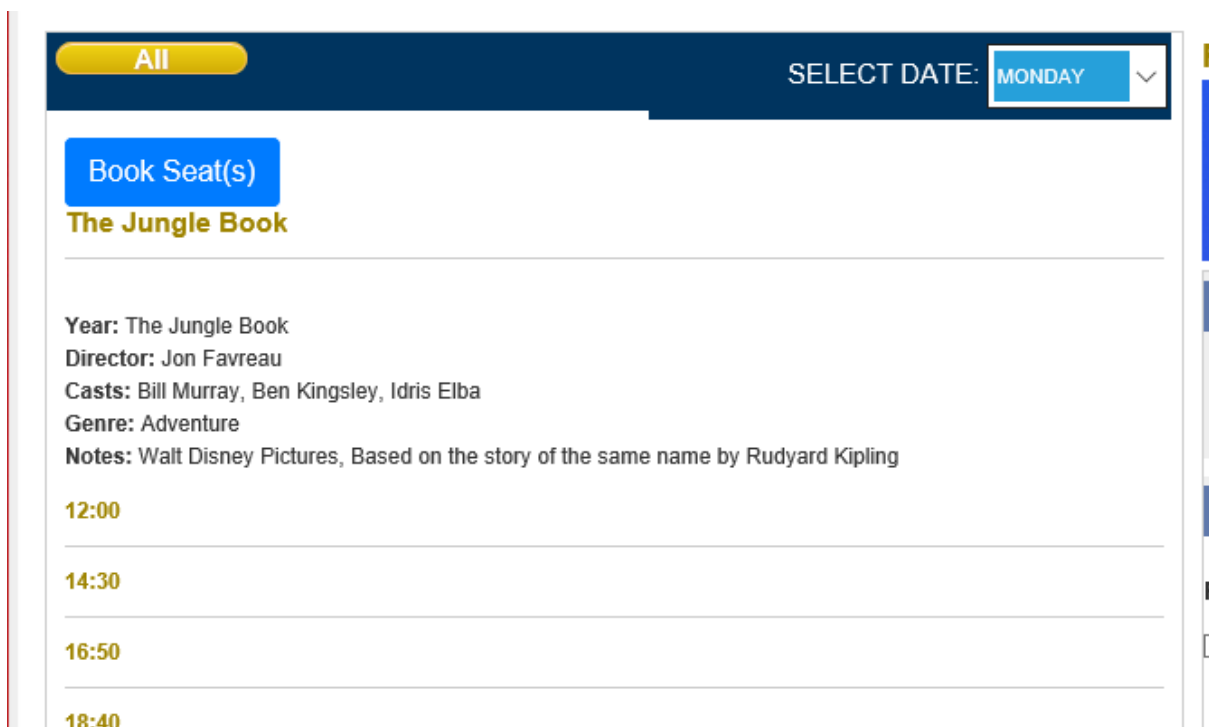
CONCLUSION

This project generally exposed me to a whole lot of opportunities, and has given me a little knowledge on javascript, AJAX and so on. This is basically a project I would love to go through again with good time to be able to achieve tangible results

SCREENSHOTS

The Header

Book Seats

Fetched JSON Data for movies showing on Tuesday

The Jungle Book

Year: The Jungle Book
Director: Jon Favreau
Casts: Bill Murray, Ben Kingsley, Idris Elba
Genre: Adventure
Notes: Walt Disney Pictures, Based on the story of the same name by Rudyard Kipling

14:45

18:35

21:45

Dirty Grandpa

Year: Dirty Grandpa
Director: Dan Mazer
Casts: Zac Efron, Robert De Niro, Zoey Deutch, Aubrey Plaza
Genre: Comedy
Notes: Lions Gate Entertainment

14:45

18:35

Fetched JSON Data for movies showing on Friday

The Jungle Book

Year: The Jungle Book
Director: Jon Favreau
Casts: Bill Murray, Ben Kingsley, Idris Elba
Genre: Adventure
Notes: Walt Disney Pictures, Based on the story of the same name by Rudyard Kipling

14:3

16:50

19:10

Dirty Grandpa

Year: Dirty Grandpa
Director: Dan Mazer
Casts: Zac Efron, Robert De Niro, Zoey Deutch, Aubrey Plaza
Genre: Comedy
Notes: Lions Gate Entertainment

14:3

16:50

Contact Us Page

Contact Information

Your name

Your email

Subject

--Please Select--

Message

SUBMIT QUERY

**Calls to 1520 880 333 are charged at 15 cents per minute from an Eircom landline, calls from mobiles and other providers may vary. Average call length three minutes. Customer care helpline 012480007.

Movies@ Dundrum
Dundrum Town Centre,
Sandyford Road, Dublin 16
Ireland

Booking Line
1520 880 333 - Calls cost 15 cents per minute

General Enquiries:
(01) 291 6802
(Open Monday-Friday 9-5pm, Saturday & Sunday; 10-5pm)

Please be advised NO bookings of less than 10 tickets will be processed via our enquiries line

Customers, please be advised refunds or booking amendments cannot be processed via email. For refund or booking amendment information please contact our general enquiries line.
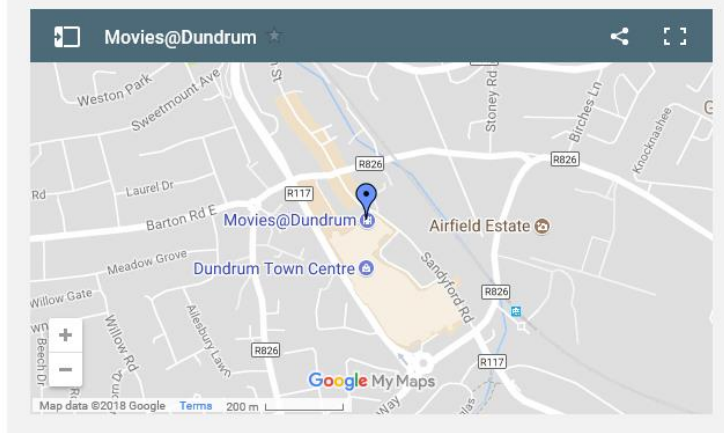
Emails will only be answered between office hours.
(Mon-Fri 9am � 5pm)

Directions Page

Index.html

```html
            <li><a href="index.html">Home</a></li>
            <li><a href="#">Kids Club</a></li>
            <li><a href="#">Event Cinema</a></li>
            <li><a href="#">Coming Soon</a></li>
            <li><a href="#">Competitions</a></li>
            <!--<li><a href="http://ezine.movies-at.ie/index.php/category/competitions/">Competitions</a>

            <li><a href="contact.html">Contact Us</a></li>
            <li><a href="directions.html">Get Directions &#8250;</a></li>
                    </ul>
        </div>
    </div>
</div>
<div class="wrap-all"><!-- all tools are dependent on jQuery library. googleapis provide it fast and gzipped

<div class="wrap-all">
  <div id="primary">

    <!-- .wrap-primary -->
    <div id="showtimes" class="section"><div id="dateselection">

        <a href="indexdebc.html?dates=2" class="datenav">All</a>
        </div>
        <div id="date-select">
            <form name="dates" action="#"><label for="dates"><span style="font-size:15px;">SELECT DATE: </span></label
                <select name="dates" id="chooseDay">
                    <option value="0">Select a Date</Option>
                  <option value="mon">MONDAY</Option>
                    <option value="tue">TUESDAY</Option>
                        <option value="wed">WEDNESDAY</Option>
                            <option value="thur">THURSDAY</Option>
                            <option value="fri">FRIDAY</Option>
                        <option value="sat">SATURDAY</Option>
```

Index.html Continued

```
        </div>
        <div class="dayItem" id="thu" style="display: none">


            <ul id='ulThu'>


            </ul>
        </div>
        <div class="dayItem"  id="fri" style="display: none">


            <ul id='ulFri'>


            </ul>
        </div>
        <div class="dayItem"  id="sat" style="display: none">


            <ul id='ulSat'>


            </ul>
        </div>
        <div class="dayItem"  id="sun" style="display: none">


            <ul id='ulSun'>


            </ul>
        </div>
    </div>       </div></div>
<div class="container" id="seatingLayout" style="display: none">
        <div class="row">

        <div class="seat reserved" data-row="1" data-col="1"></div>
        <div class="seat available" data-row="8" data-col="2"></div>
        <div class="seat available" data-row="7" data-col="3"></div>
        <div class="seat available" data-row="6" data-col="4"></div>
```

Movie.js – Fetch JSON Data and display on page

```javascript
$(function () {

var url = 'movie.json';
$.ajax({
  dataType: "json",
  url: url,

  success: function (result) {

   var tmpResult = result.slice(1,10);
    console.log(tmpResult);


    for(var i = 0; i < tmpResult.length; i++) {

        $('#ulMon').append("<li>" + tmpResult[i]['title'] + "</li>");

        console.log( tmpResult[i]['runningTimes']);

        var ulString = "<ul>";
        for(var j = 0; j < tmpResult[i]['runningTimes']['mon'].length; j++) {

        ulString += "<li>" + tmpResult[i]['runningTimes']['mon'][j] + "</li>";


        }
        ulString += "</ul>";


        $('#ulMon').append(ulString);


    }
```

Movie.js Continued

```javascript
        ulString += "</td></tr></table></div><br><br>"

        $('#ulMon').append(ulString);
    }

    for(var i = 0; i < tmpResult.length; i++) {

        $('#ulTue').append("<li>" + "<h3><a href='#'> " + tmpResult[i]['title'] + "</a></h3></li>" +
"<br>" + "<b>Year:</b> "+ tmpResult[i]['title'] + "<br> <b>Director:</b> " + tmpResult[i]['director']
"<br> <b>Casts:</b> " + tmpResult[i]['cast'] +
"<br> <b>Genre:</b> " + tmpResult[i]['genre'] +
"<br> <b>Notes:</b> " + tmpResult[i]['notes'] +
"<br>" + "<div><table cellspacing='0' cellpadding='0'><tr><td width='14%'>"

);

        var ulString ="";
    for(var j = 0; j < tmpResult[i]['runningTimes']['tue'].length; j++) {

        ulString += "<ul><li><a href='#'>"
         + tmpResult[i]['runningTimes']['tue'][j] + "</a></li></ul>";

        }

        ulString += "</td></tr></table></div><br>"

        $('#ulTue').append(ulString);


    }
    for(var i = 0; i < tmpResult.length; i++) {

        $('#ulWed').append("<li>" + "<h3><a href='#'> " + tmpResult[i]['title'] + "</a></h3></li>" +
```

movie.js continued

```javascript
})
$(function () {

    var url = 'movie.json';
    $.ajax({
      dataType: "json",
      url: url,

      success: function (result) {

       var tmpResult = result.slice(1,20);
        console.log(tmpResult);


        for(var i = 0; i < tmpResult.length; i++) {

            $('#ulMon').append("<li>" + "<h3><a href='#'> " + tmpResult[i]['title'] + "</a></h3></li>" +
        "<br>" + "<b>Year:</b> "+ tmpResult[i]['title'] + "<br> <b>Director:</b> " + tmpResult[i]['director']
        "<br> <b>Casts:</b> " + tmpResult[i]['cast'] +
        "<br> <b>Genre:</b> " + tmpResult[i]['genre'] +
        "<br> <b>Notes:</b> " + tmpResult[i]['notes'] +
        "<br>" + "<div><table cellspacing='0' cellpadding='0'><tr><td width='14%'>"

    );


            var ulString ="";
            for(var j = 0; j < tmpResult[i]['runningTimes']['mon'].length; j++) {

            ulString += "<ul><li><a href='#'>"
             + tmpResult[i]['runningTimes']['mon'][j] + "</a></li></ul>";


            }
```

Movie.js Continued

```javascript
          <br> + <b>Year:</b> + tmpResult[i]['title'] + <br> <b>Director:</b> + tmpResult[i]['director']
      "<br> <b>Casts:</b> " + tmpResult[i]['cast'] +
      "<br> <b>Genre:</b> " + tmpResult[i]['genre'] +
      "<br> <b>Notes:</b> " + tmpResult[i]['notes'] +
      "<br>" + "<div><table cellspacing='0' cellpadding='0'><tr><td width='14%'>"

);

        var ulString ="";
      for(var j = 0; j < tmpResult[i]['runningTimes']['wed'].length; j++) {

          ulString += "<ul><li><a href='#'>"
           + tmpResult[i]['runningTimes']['wed'][j] + "</a></li></ul>";


        }

        ulString += "</td></tr></table></div><br>"

        $('#ulWed').append(ulString);



      }
      for(var i = 0; i < tmpResult.length; i++) {

          $('#ulThu').append("<li>" + "<h3><a href='#'> " + tmpResult[i]['title'] + "</a></h3></li>" +
      "<br>" + "<b>Year:</b> "+ tmpResult[i]['title'] + "<br> <b>Director:</b> " + tmpResult[i]['director']
      "<br> <b>Casts:</b> " + tmpResult[i]['cast'] +
      "<br> <b>Genre:</b> " + tmpResult[i]['genre'] +
      "<br> <b>Notes:</b> " + tmpResult[i]['notes'] +
      "<br>" + "<div><table cellspacing='0' cellpadding='0'><tr><td width='14%'>"

);
```

Jquery with JSON DATA

```html
<!DOCTYPE html>
<html>
<head>
<title>Jquery with JSON Data</title>
<link href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css" rel="stylesheet" integrity="
<script src="https://ajax.googleapis.com/ajax/libs/jquery/2.2.4/jquery.min.js"></script>
<style>

.seat { border: solid 1px red; width: 50px; height: 50px ; margin: 5px;}

.reserved { background-color: red }
.available {background-color: yellow }
.selected { background-color: green }



</style>
</head>
<body>
<div class="container">

<div class="row">
<div class="col-md-6">

    <select id="chooseAnOption">
    <option value="0">Select an item</option>
    <option value="1">First</option>
    <option value="2">Second</option>
    <option value="3">third</option>
    <option value="4">Fourth</option>
    <option value="5">Fifth</option>
```

Service Workers

```javascript
var dataCacheName = 'moviesData-v1';
var cacheName = 'moviesPWA';
var filesToCache = [
  '/',
  '/index.html',
  '/contact.html',
  '/directions.html',
  '/movie.js',
  '/movie.json',
  '/bacgroundimages/Page-wrapper-Love-simon-2.jpg',
  '/styles/inline.css',
  '/css/style.css',
  '/css/bootstrap.min.css',
  '/css/navigator.html'
];

self.addEventListener('install', function(e) {
  console.log('[ServiceWorker] Install');
  e.waitUntil(
    caches.open(cacheName).then(function(cache) {
      console.log('[ServiceWorker] Caching app shell');
      return cache.addAll(filesToCache);
    })
  );
});
```

Service Workers Continued

```javascript
self.addEventListener('fetch', function(e) {
  console.log('[Service Worker] Fetch', e.request.url);
  var dataUrl = 'https://college-movies.herokuapp.com/';
  if (e.request.url.indexOf(dataUrl) > -1) {
    /*
     * When the request URL contains dataUrl, the app is asking for fresh
     * weather data. In this case, the service worker always goes to the
     * network and then caches the response. This is called the "Cache then
     * network" strategy:
     * https://jakearchibald.com/2014/offline-cookbook/#cache-then-network
     */
    e.respondWith(
      caches.open(dataCacheName).then(function(cache) {
        return fetch(e.request).then(function(response){
          cache.put(e.request.url, response.clone());
          return response;
        });
      })
    );
  } else {
    /*
     * The app is asking for app shell files. In this scenario the app uses the
     * "Cache, falling back to the network" offline strategy:
     * https://jakearchibald.com/2014/offline-cookbook/#cache-falling-back-to-network
     */
    e.respondWith(
      caches.match(e.request).then(function(response) {
        return response || fetch(e.request);
      })
    );
  }
});
```

Service Workers continued

```javascript
self.addEventListener('activate', function(e) {
  console.log('[ServiceWorker] Activate');
  e.waitUntil(
    caches.keys().then(function(keyList) {
      return Promise.all(keyList.map(function(key) {
        if (key !== cacheName && key !== dataCacheName) {
          console.log('[ServiceWorker] Removing old cache', key);
          return caches.delete(key);
        }
      }));
    })
  );
  /*
   * Fixes a corner case in which the app wasn't returning the latest data.
   * You can reproduce the corner case by commenting out the line below and
   * then doing the following steps: 1) load app for first time so that the
   * initial New York City data is shown 2) press the refresh button on the
   * app 3) go offline 4) reload the app. You expect to see the newer NYC
   * data, but you actually see the initial data. This happens because the
   * service worker is not yet activated. The code below essentially lets
   * you activate the service worker faster.
   */
  return self.clients.claim();
});
```

Contact Page

```html
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-trans
<html xmlns="http://www.w3.org/1999/xhtml">

<!-- Mirrored from www.movies-at.ie/contact-dd.php by HTTrack Website Copier/3.x [XR&CO'2014], Sun, 08 Apr 2
<!-- Added by HTTrack --><meta http-equiv="content-type" content="text/html;charset=ISO-8859-1" /><!-- /Adde
<head>
  <meta http-equiv="X-UA-Compatible" content="IE=7" />
  <title>Movies-At Dundrum - Movies - PAGETITLE</title>
  <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1" />
  <meta name="keywords" content="Admit One,movies,cinema dublin, movies@,movies@dundrum, movies at the, dund
  <meta name="description" content="Movies @ Dundrum, multiplex cinema in Dundrum Town Centre, Dublin, bring
  <meta name="author" content="Admit One - www.admit-one.eu" />
  <meta http-equiv="content-language" content="en" />
  <meta name="robots" content="index, follow" />
  <meta name="robots" content="all" />
  <link href="css/style.css" rel="stylesheet" type= "text/css" />
  <!--[if lt IE 8]>
  <link href="/css/style_ie.css" rel="stylesheet" type= "text/css" />
  <![endif]-->
  <link rel="stylesheet" type="text/css" media="screen" href="css/screenddaf.css?ver=201804041701" />
  <link rel="stylesheet" type="text/css" media="screen" href="css/scrollable.css" />
  <LINK REL="SHORTCUT ICON" HREF="favicon.ico" />
  <!-- Google Tag Manager -->
<script>
  (function(w,d,s,l,i){
    w[l]=w[l]||[];w[l].push(
      {
        'gtm.start':new Date().getTime(),event:'gtm.js'
      }
    );
    var f=d.getElementsByTagName(s)[0],
      j=d.createElement(s),
      dl=l!='dataLayer'?'&l='+l:'';
```