E-commerce websites with jQuery

Asokan M

PG and Research department of Computer Science,
Nehru Memorial College,
Puthanampatti ,India

Abstract—**The internet is one of the most innovative and revolutionary technologies. In recent times E-Commerce emerged as one of the most important features of Internet. An e-commerce website, is an online shop, a virtual space for online sale or where the company can expose its catalog of products and/or services, and conduct commercial transaction safely and without limits. Online shopping is becoming increasingly popular because of speed and ease of use for customers. A** *one-second performance delay in e-commerce response time reduces conversions by 7 percent, according to a study conducted by the Aberdeen Group*. **Competition is just a click away!. Therefore there is a need to develop faster loading websites. Using jQuery we can create faster loading eye catching websites. This paper discuss about advantages of jQuery and advantages of e-commerce websites. Two of the famous e-commerce based plugins jMenu and jQzoom have been explained . They have been tested in our default browser and works well.**

Keywords- jMenu, jQuery, jqzoom, plug-ins

I. INTODUCTION

E-commerce refers to the process of buying or selling products or services over the Internet. The applications of E-commerce are used in various business areas. The most common E-commerce applications are Retail and wholesale**,** Marketing, Finance, Manufacturing and Auctions. *In the G20 countries, the Internet economy will grow at more than 10% annually for the next five years, and by 2016, reach $4.2 trillion, or 5.3 of GDP* [1]. E-commerce website is very beneficial for the product sellers and service providers. Customers can directly buy the product from any website by online payment, credit card or debit card, the products will be dispatched to their given address. jQuery is used to construct faster loading e-commerce websites. *jQuery is an open source JavaScript library that simplifies the interactions between an HTML document, or more precisely the Document Object Model and JavaScript*. This paper describes the benefits of e-commerce websites, advantages of jQuery and the need for building e-commerce websites with jQuery.

II. Advantages of e-commerce websites

E-commerce is the paperless exchange of goods and/or services between vendor and the customer. Some basic advantages of e-commerce websites are given below:

- Allows people to do businesses without time or distance barriers.

- Ideal for niche products.

- Reduces both the time and personnel required.

- Reduction in buyer's sorting out time.

- Better buyer decisions.

- Less time is spent in resolving invoice and order discrepancies.

- Increased opportunities for buying alternative products.

- The strategic benefit of making a business 'ecommerce enabled', is that it helps reduce the delivery time, labour cost and the cost incurred in Document preparation, Error detection and correction, Mail preparation, Telephone calling, Data entry expenses.

III jQuery

jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development.

a)Advantages

jQuery makes using a Web page's DOM (document object model), adding effects to the page, animating elements, and executing Ajax calls to the server extremely simple, hiding the complexity of the underlying JavaScript. The following are the most important benefits of jQuery.

- It's open source, and the project is licensed under an MIT and a GNU General Public License (GPL) license. It's free

- jQuery plugins are plenty in number and are constantly updated

- It's small (18 KB minified) and gzipped (114 KB, uncompressed)

- jQuery works with all browsers, and large software platform vendors such as Microsoft and Nokia are integrating this into their software development toolkits. An added benefit is that JQuery runs on most mobile and tablet browsers as well.

- jQuery makes animated applications just like Flash.

- jQuery can be SEO friendly.

b) Plug-ins

Plug-ins are add-on JavaScript programs that work in conjunction with jQuery to make certain tasks, effects, or features incredibly easy to add to a web page.[2] There are literally thousands of other plug- ins available for jQuery.

IV E-Commerce Oriented jQuery Plug-ins

E-commerce involves a commercial transaction that takes place on the internet where the necessary information required to complete the transaction is transferred via the web. E-commerce gives consumers the opportunity to shop online without any distance or time barriers, allows them to make transactions. More and more companies are opening operations in e-commerce in order to capitalize on its popularity and gain an additional method of making a profit. Global e-commerce sales reached $1.08875 trillion in 2012, up 21.9% from $893.33 billion in 2011, according to digital marketing research firm eMarketer . On-line transactions can be done through an E-commerce website .Therefore there is a need to create faster loading jQuery based E-commerce websites. Every website must have an user interface. JQuery can be used to create ecommerce user interfaces. The some of the most commonly used interfaces are (i) menus(ii) product displays (iii) Shopping cart, Etc. This paper discuss about two of the most commonly used plug-ins , namely (i) jmenu (ii) jQzoom.

a)**jMenu**

The top-level menu is usually displayed on most pages of the site. It is, for many users, the starting point to browse the products. It should be (i)informative (ii)easy to read and use (iii)visible but not intrusive**. jMenu** is a jQuery plugin. It enables us to create horizontal navigations with unlimited sub-menus. Besides jQuery, it also requires jQuery UI and supports all the effects of this library. The markup of the menu is pretty clean as it makes use of nested lists. We can increase or decrease the list size by modifying the index.html file.

To create a **jMenu** do the following steps.

(i)Put the following in a separate folder and name it as *images.*

         ⌄   ≫

     arrow_down.png   arrow_right.png

(ii)   Type the following in a Notepad and save it as style.css. Put style.css in a separate folder and name it as **css**

```
.jMenu {
    display: table;
    margin: 0;
    padding: 0
}

/* First level */
.jMenu li {
    display: table-cell;
    background-color: #321264;
    margin: 0;
}
```

```
.jMenu li a {
   padding: 10px;
   display: block;
   background-color: transparent;
   color: white;
   text-transform: uppercase;
   cursor: pointer;
   font-size: 12px;
}

/* Lower levels */
.jMenu li ul {
   display: none;
   position: absolute;
        z-index:9999;
   padding: 0;
   margin: 0;
}

.jMenu li ul li {
   background-color: #321264;
   display: block;
   border-bottom: 1px solid #484548;
   padding: 0;
}

.jMenu li ul li.arrow {
   background-color:#321264;
   background-image: url('../images/arrow_down.png');
   background-repeat: no-repeat;
   background-position: center center;
   height: 6px;
   padding: 0;
   border-bottom: none;
   padding-bottom: 10px
}

.jMenu li ul li a {
   font-size: 11px;
   text-transform: none;
   padding: 7px;
   display: block;
   border-top: 1px solid transparent;
   border-bottom: 1px solid transparent;
}

.jMenu li ul li a.isParent {
   background-color: #321264;
   background-image: url('../images/arrow_right.png');
   background-repeat: no-repeat;
   background-position: right center;
}
```

```
.jMenu li ul li a:hover {
   background-color: #F15A22;
   border-top: 1px solid #322f32;
   border-bottom: 1px solid #322f32;
}
```

(iii)Download (a) jMenu - jQuery Plugin (b) query-1.7.2.js files from jquery.com and put it in a separate folder and name it as **js.**
 (iv)Type the following in a Notepad and save it as **index.html**

```
<!DOCTYPE    html    PUBLIC    "-//W3C//DTD    XHTML    1.0    Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Plugin jQuery jMenu v1.9</title>
    <meta http-equiv="description" content="" />
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
    <link rel="stylesheet" href="css/jMenu.jquery.css" type="text/css" />
    <script                                                    type="text/javascript"
src="https://ajax.googleapis.com/ajax/libs/jquery/1.8.3/jquery.min.js"></script>
    <script type="text/javascript" src="js/jquery-ui.js"></script>
    <script type="text/javascript" src="js/jMenu.jquery.js"></script>
  </head>
  <body  bgcolor= "#F2E4F0">

<H1> <BR><CENTER> <font face=" Times  new  roman" size="8"    color="#EE3043">jMenu
Demo</font></CENTER></H1>

    <ul id="jMenu">
      <li>
        <a class="fNiv">Category 1</a>
        <ul>
          <li class="arrow"></li>
          <li>
            <a>Category 1.2</a>
            <ul>
              <li><a>Category 1.3</a></li>
              <li><a>Category 1.3</a></li>
              <li><a>Category 1.3</a></li>
              <li><a>Category 1.3</a></li>
              <li>
                <a>Category 1.3</a>
                <ul>
                  <li><a>Category 1.4</a></li>
                  <li><a>Category 1.4</a></li>
                  <li><a>Category 1.4</a></li>
                  <li>
                    <a>Category 1.4</a>
                    <ul>
                      <li><a>Category 1.5</a></li>
                      <li><a>Category 1.5</a></li>
                      <li>
                        <a>Category 1.5</a>
                        <ul>
                          <li><a>Category 1.6</a></li>
                          <li><a>Category 1.6</a></li>
                          <li><a>Category 1.6</a></li>
```

```
                        <li><a>Category 1.6</a></li>
                         <li><a>Category 1.6</a></li>
                      </ul>
                    </li>
                  </ul>
              </li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
            </ul>
          </li>
          <li><a>Category 1.3</a></li>
        </ul>
      </li>
      <li><a>Category 1.2</a></li>
      <li>
        <a>Category 1.2</a>
        <ul>
          <li><a>Category 1.3</a></li>
          <li>
            <a>Category 1.3</a>
            <ul>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
              <li><a>Category 1.4</a></li>
            </ul>
          </li>
        </ul>
      </li>
      <li><a>Category 1.2</a></li>
    </ul>
</li>

<li>
  <a class="fNiv">Category 2</a>
  <ul>
    <li class="arrow"></li>
    <li>
      <a>Category 2.2</a>
      <ul>
        <li><a>Category 2.3</a></li>
        <li><a>Category 2.3</a></li>
      </ul>
    </li>
    <li>
      <a>Category 2.2</a>
      <ul>
        <li><a>Category 2.3</a></li>
        <li><a>Category 2.3</a></li>
        <li><a>Category 2.3</a></li>
      </ul>
    </li>
    <li>
      <a>Category 2.2</a>
      <ul>
        <li><a>Category 2.3</a></li>
```

```
              <li><a>Category 2.3</a></li>
              <li><a>Category 2.3</a></li>
              <li><a>Category 2.3</a></li>
              <li><a>Category 2.3</a></li>
              <li><a>Category 2.3</a></li>
            </ul>
        </li>
        <li><a>Category 2.2</a></li>
    </ul>
</li>

<li>
    <a class="fNiv">Category 3</a>
    <ul>
        <li class="arrow"></li>
        <li>
           <a>Category 3.2</a>
           <ul>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
           </ul>
        </li>
        <li>
           <a>Category 3.2</a>
           <ul>
              <li><a>Category 3.3</a></li>
              <li><a>Category 3.3</a></li>
           </ul>
        </li>
        <li><a>Category 3.2</a></li>
        <li><a>Category 3.2</a></li>
    </ul>
</li>

<li>
    <a class="fNiv">Category 4</a>
    <ul>
        <li class="arrow"></li>
        <li><a>Category 4.2</a></li>
        <li><a>Category 4.2</a></li>
        <li>
           <a>Category 4.2</a>
           <ul>
              <li><a>Category 4.3</a></li>
              <li><a>Category 4.3</a></li>
              <li><a>Category 4.3</a></li>
              <li><a>Category 4.3</a></li>
           </ul>
        </li>
        <li><a>Category 4.2</a></li>
    </ul>
</li>

<li>
    <a class="fNiv">Category 5</a>
```

```
      <ul>
        <li class="arrow"></li>
        <li>
          <a>Category 5.2</a>
          <ul>
            <li><a>Category 5.3</a></li>
            <li><a>Category 5.3</a></li>
            <li><a>Category 5.3</a></li>
            <li><a>Category 5.3</a></li>
          </ul>
        </li>
        <li><a>Category 5.2</a></li>
        <li><a>Category 5.2</a></li>
        <li><a>Category 5.2</a></li>
      </ul>
    </li>

    <li><a class="fNiv">Category 6</a></li>

    <li>
      <a class="fNiv">Category 7</a>
      <ul>
        <li class="arrow"></li>
        <li><a>Category 7.2</a></li>
        <li><a>Category 7.2</a></li>
        <li><a>Category 7.2</a></li>
        <li><a>Category 7.2</a></li>
      </ul>
    </li>
  </ul>

  <script type="text/javascript">
    $(document).ready(function() {
      $("#jMenu").jMenu();
    });
  </script>
 </body>
</html>
```

 (v)Put all the three folders and the index. html in a new folder and name it as **jmenu**.

 (vi) Open the **jmenu** folder and Double click on the index.html file . Now we can see the JMenu in our browser. The screen shot is shown in Fig-1.
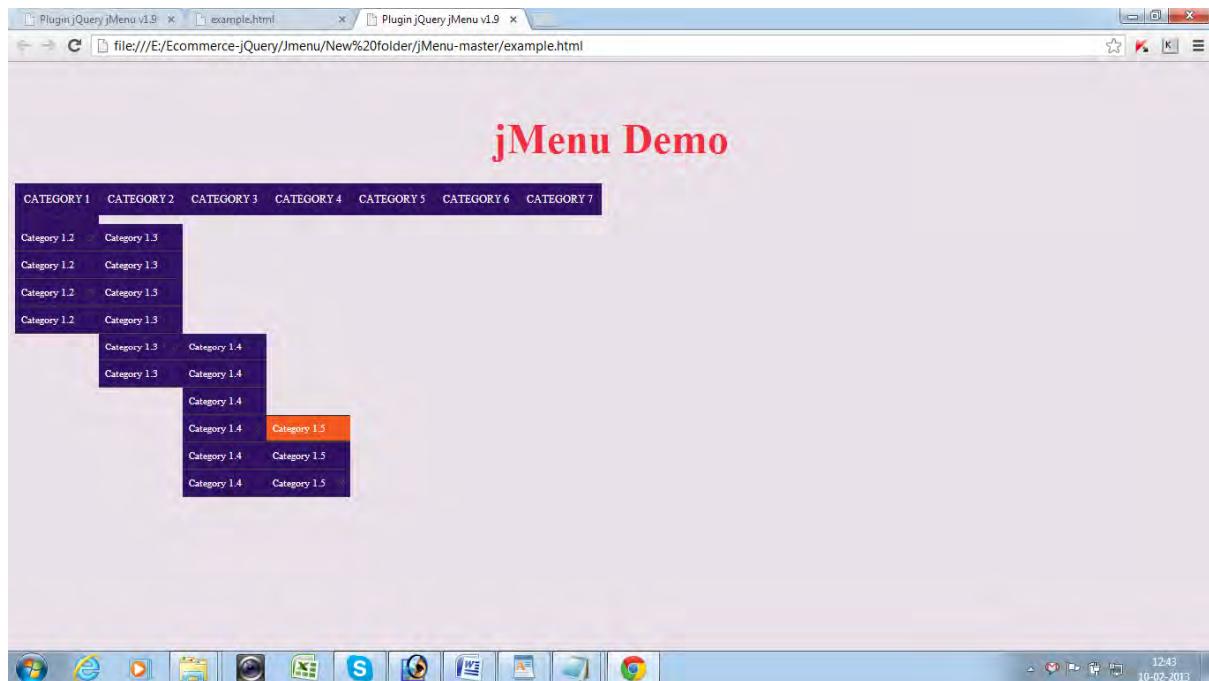
Fig-1 jMenu Demo

b) **jQzoom**

Product photographs are very important in E-commerce websites. It makes customers to take a critical purchase decision. JQuery Zoom plugins can be truly beneficial for displaying big photos on a internet site with minimal room. JQZoom is a javascript image magnifier built at the top of the popular jQuery javascript framework. jQzoom is a great and easy to use script to magnify the product.

To create **jQzoom** do the following steps.

(i) Put the following in a separate folder and name it as *images.*
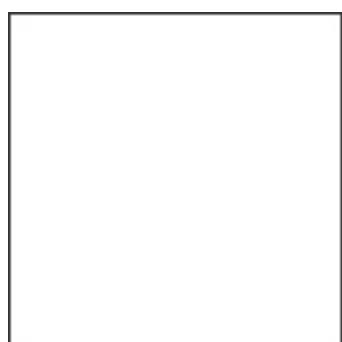
advertise.jpg

Thumbs.db

zoom loader.gif

(ii)   Type the following in a Notepad and save it as jquery.jqzoom.css. Put it in a new folder and name it as **css.**

```
.zoomPad{
        position:relative;
        float:left;
        z-index:99;
        cursor:crosshair;
}


.zoomPreload{
  -moz-opacity:0.8;
```

```
  opacity: 0.8;
  filter: alpha(opacity = 80);
  color: #333;
  font-size: 12px;
  font-family: Tahoma;
  text-decoration: none;
  border: 1px solid #CCC;
  background-color: white;
  padding: 8px;
  text-align:center;
  background-image: url(../images/zoomloader.gif);
  background-repeat: no-repeat;
  background-position: 43px 30px;
  z-index:110;
  width:90px;
  height:43px;
  position:absolute;
  top:0px;
  left:0px;
   * width:100px;
   * height:49px;
}


.zoomPup{
        overflow:hidden;
        background-color: #FFF;
        -moz-opacity:0.6;
        opacity: 0.6;
        filter: alpha(opacity = 60);
        z-index:120;
        position:absolute;
        border:1px solid #CCC;
  z-index:101;
  cursor:crosshair;
}

.zoomOverlay{
        position:absolute;
        left:0px;
        top:0px;
        background:#FFF;
        /*opacity:0.5;*/
        z-index:5000;
        width:100%;
        height:100%;
        display:none;
  z-index:101;
}

.zoomWindow{
        position:absolute;
        left:110%;
        top:40px;
        background:#FFF;
        z-index:6000;
        height:auto;
  z-index:10000;
  z-index:110;
}
```

```
.zoomWrapper{
        position:relative;
        border:1px solid #999;
 z-index:110;
}
.zoomWrapperTitle{
        display:block;
        background:#999;
        color:#FFF;
        height:18px;
        line-height:18px;
        width:100%;
 overflow:hidden;
        text-align:center;
        font-size:10px;
 position:absolute;
 top:0px;
 left:0px;
 z-index:120;
 -moz-opacity:0.6;
 opacity: 0.6;
 filter: alpha(opacity = 60);
}
.zoomWrapperImage{
        display:block;
 position:relative;
 overflow:hidden;
 z-index:110;

}
.zoomWrapperImage img{
 border:0px;
 display:block;
 position:absolute;
 z-index:101;
}

.zoomIframe{
 z-index: -1;
 filter:alpha(opacity=0);
 -moz-opacity: 0.80;
 opacity: 0.80;
 position:absolute;
 display:block;
}
```

(iii)Download (a) jquery.jqzoom-core (b) jquery.jqzoom-core-pack (c) jquery-1.6 js files from jquery.com and put it in a separate folder and name it as **js.**

(iv)Put the Compaq_big1.jpg, Compaq_small1.jpg in a separate folder and name it as *imgProd*.

Compaq_big1.jpg   Compaq_small1.jpg

(v)Type the following in a notepad and save it as **demo.html**

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
http://www.w3.org/TR/html4/loose.dtd>
<html xmlns="http://www.w3.org/1999/xhtml" >
<head>
<title>Jqzoom 2 Demo</title>
<script src="../js/jquery-1.6.js" type="text/javascript"></script>
<script src="../js/jquery.jqzoom-core.js" type="text/javascript"></script>

<link rel="stylesheet" href="../css/jquery.jqzoom.css" type="text/css">
<style type"text/css">
body{

margin:0px;padding:0px;font-family:Arial;}
a img,:link img,:visited img { border: none; }
table { border-collapse: collapse; border-spacing: 0; }
:focus { outline: none; }
*{margin:0;padding:0;}
p, blockquote, dd, dt{margin:0 0 8px 0;line-height:1.5em;}
fieldset {padding:0px;padding-left:7px;padding-right:7px;padding-bottom:7px;}
fieldset legend{margin-left:15px;padding-left:3px;padding-right:3px;color:#333;}
dl dd{margin:0px;}
dl dt{}

.clearfix:after{clear:both;content:".";display:block;font-size:0;height:0;line-height:0;visibility:hidden;}
.clearfix{display:block;zoom:1}

ul#thumblist{display:block;}

ul#thumblist li{float:left;margin-right:2px;list-style:none;}
ul#thumblist li a{display:block;border:1px solid #CCC;}
ul#thumblist li a.zoomThumbActive{
    border:1px solid red;
}

.jqzoom{

        text-decoration:none;
        float:left;
}

</style>
<script type="text/javascript">

$(document).ready(function() {
```

```
    $('.jqzoom').jqzoom({
   zoomType: 'standard',
   lens:true,
   preloadImages: false,
   alwaysOn:false
  });
});
</script>
</head>
<body bgcolor= "#123555" >
<BR>
<H1> <BR><CENTER> <font face=" Times new roman" size="10"  color="yellow">jQzoom
DEMO</font></CENTER></H1>

<div class="clearfix" id="content" style="margin-top:150px;margin-left:450px; height:500px;width:500px;" >
   <div class="clearfix">
     <a href="imgProd/12ompaq_big1.jpg" class="jqzoom" rel='gal1'  title="COMPAQ" >
       <img src="imgProd/12ompaq_small1.jpg"  title="COMPAQ"  style="border: 4px solid #666;">
     </a>
   </div>
       <br/>
</div>
</body>
</html>
```

(vi)Put **demo.html** and the folder ***imgProd*** in a new folder and name it as ***demo.***

(vii)Put all the four folders in a new folder and name it as **jqzoom**.

(viii) Open the **jqzoom** folder and then double click the **demo.html**. Now we can see the jqzoom effect in our browser. The screen shot is shown in Fig-2.

Fig-2 jQzoom Demo

V. CONCLUSION

Through this paper E-commerce websites with jQuery has been presented. Some details about Global online sales statistics, advantages of e-commerce websites and advantages of jQuery have been discussed. Complete implementation of most commonly used jQuery plugins jmenu and jQzoom have been described . They were tested with leading browsers and works well.

References:

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       O'Reilly Media, Inc., 1005 Gravenstein Highway North, Sebastopol, CA 95472.
[5]   Lynn Beighley (2010) jQuery For Dummies , Wiley Publishing, Inc., Indianapolis,
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       store to make money online!, Copyright ©David Mercer