Umair Naveed
00414943

PA1 Report

Design
The program consists of three classes, which are Server, Client, and Request. As their names might suggest, the Server was modeled to provide server functionality in dealing with individual clients. It is multi-threaded and allows up to 100 clients to be connected. The Client also models behavior after its name by providing communication between the server and writing HTTP requests. Finally the Request class models an HTTP request. It contains headers and header values as well as helper functions for the the client to use.

The program functions by the server starting a ServerSocket on a designated port and accepting socket connections with clients. Each client starts a new thread and communicates with the server as well as reading/writing HTTP requests and responses. The client reads incoming data from the server and parses it, making determinations about whether commands are valid or not. When accessing web pages, the client checks with the server to see if the page is cached. The server stores data about which pages have been accessed and saves the contents in its cache. For cached web pages, the server provides the saved copy to the client allowing for speedier access of websites. For non-cached web pages, the server makes a request to the website and passes that data along to the client.

A design consideration I made was whether to turn everything in objects with helper methods that do much of the work. Ultimately I decided against doing so and stuck with methods that provide functionality inside the server and client.

Testing
For each stage, I tested the program by using the suggested tests from the assignment document. For example, with pa1_a, I tested the functionality with telnet and for pa1_b I used multiple telnet clients. With pa1_final, I configured Firefox 15 to use the proxy as its proxy server. I visited different websites and compared the page generated through the proxy against a page generated on Google Chrome without a proxy. Additionally, I used print statements throughout the program to check if the data was being read/written correctly.

For the caching portion, I used print statements to see if the cache was being hit. I also visited sites to time initial page loads and then checking again after the page had been cached. I was also able to see the cache files being generated and look at the contents of these files.

There are a few cases where I found the proxy doesn't work as intended. For some websites it will not always display images (for example Stack Overflow) whereas it does display them for others (such as Google or github).

Output
Here is an example of a GET request from the client to the proxy server for the website Stack Overflow:
GET http://stackoverflow.com/ HTTP/1.0
Host: stackoverflow.com
User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:15.0) Gecko/20100101 Firefox/15.0
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
Accept-Language: en-us,en;q=0.5

Accept-Encoding: gzip, deflate
Connection: close
Proxy-Connection: close
Cookie: prov=dd7bf20f-a496-41d1-801d-17918b2f6c2d; _ga=GA1.2.1329428317.1424672128; __qca=P0-2001961898-1424672128297

This is the response the server receives from Stack Overflow and passes onto the client.
Headers:
HTTP/1.1 200 OK
Cache-Control: public, max-age=29
Content-Type: text/html; charset=utf-8
Expires: Tue, 24 Feb 2015 05:23:25 GMT
Last-Modified: Tue, 24 Feb 2015 05:22:25 GMT
Vary: *
X-Frame-Options: SAMEORIGIN
X-Request-Guid: ded27711-05d9-428c-a0db-327d362ebd9d
Date: Tue, 24 Feb 2015 05:22:55 GMT
Connection: close
Content-Length: 235671

Body:
```
<!DOCTYPE html>
<html>
<head>

  <title>Stack Overflow</title>
  <link rel="shortcut icon" href="//cdn.sstatic.net/stackoverflow/img/favicon.ico?v=00a326f96f68">
  <link rel="apple-touch-icon image_src" href="//cdn.sstatic.net/stackoverflow/img/apple-touch-icon.png?v=41f6e13ade69">
  <link rel="search" type="application/opensearchdescription+xml" title="Stack Overflow" href="/opensearch.xml">
  <meta name="twitter:card" content="summary">
  <meta name="twitter:domain" content="stackoverflow.com"/>
  <meta property="og:type" content="website" />
  <meta property="og:image" itemprop="image primaryImageOfPage" content="http://cdn.sstatic.net/stackoverflow/img/apple-touch-icon@2.png?v=ea71a5211a91" />
  <meta name="twitter:title" property="og:title" itemprop="title name" content="Stack Overflow" />
  <meta name="twitter:description" property="og:description" itemprop="description" content="Q&amp;A for professional and enthusiast programmers" />
  <meta property="og:url" content="http://stackoverflow.com/"/>


  <script src="//ajax.googleapis.com/ajax/libs/jquery/1.7.1/jquery.min.js"></script>
  <script src="//cdn.sstatic.net/Js/stub.en.js?v=1f3276f7600b"></script>
  <link rel="stylesheet" type="text/css" href="//cdn.sstatic.net/stackoverflow/all.css?v=c11bacd8dc55">

  <link rel="alternate" type="application/atom+xml" title="Feed of recent questions" href="/feeds">

  <script>
        … script data removed for readability sake.
  </script>

    <script>
      StackExchange.ready(function () {
        $('#nav-tour').click(function () {
          StackExchange.using("gps", function() {
            StackExchange.gps.track("aboutpage.click", { aboutclick_location: "headermain" }, true);
          });
        });
```

```
        });
      </script>


</head>
<body class="home-page new-topbar">
    <noscript><div id="noscript-padding"></div></noscript>
    <div id="notify-container"></div>
    <div id="overlay-header"></div>
    <div id="custom-header"></div>

<div class="topbar">
    <div class="topbar-wrapper">


      <div class="js-topbar-dialog-corral">


<div class="topbar-dialog siteSwitcher-dialog dno">
    <div class="header">
        <h3><a href="//stackoverflow.com">current community</a></h3>
    </div>
    <div class="modal-content current-site-container">
        <ul class="current-site">
              <li>
                    <div class="related-links">
          <a href="http://chat.stackoverflow.com" class="js-gps-track"     data-gps-
track="site_switcher.click({ item_type:6 })"
>chat</a>
                  <a href="http://blog.stackoverflow.com" class="js-gps-track"     data-gps-
track="site_switcher.click({ item_type:7 })"
>blog</a>
            </div>
    <a href="//stackoverflow.com"
      class="current-site-link site-link js-gps-track"
      data-id="1"
      data-gps-track="
       site_switcher.click({ item_type:3 })">
       <div class="site-icon favicon favicon-stackoverflow" title="Stack Overflow"></div>
       Stack Overflow
    </a>
              </li>
              <li class="related-site">
                      <div class="L-shaped-icon-container">
        <span class="L-shaped-icon"></span>
    </div>
    <a href="http://meta.stackoverflow.com"
      class="site-link js-gps-track"
      data-id="552"
      data-gps-track="
         site.switch({ target_site:552, item_type:3 }),
       site_switcher.click({ item_type:4 })">
       <div class="site-icon favicon favicon-stackoverflowmeta" title="Meta Stack Overflow"></div>
       Meta Stack Overflow
    </a>

              </li>
                    <li class="related-site">
                  <div class="L-shaped-icon-container">
        <span class="L-shaped-icon"></span>
    </div>
```

```html
            <a class="site-link js-gps-track"
                href="//careers.stackoverflow.com?utm_source=stackoverflow.com&utm_medium=site-
ui&utm_campaign=multicollider"
                    data-gps-track="site_switcher.click({ item_type:9 })"
>
                <div class="site-icon favicon favicon-careers" title="Stack Overflow Careers"></div>
                Stack Overflow Careers
            </a>
        </li>
    </ul>
  </div>

  <div class="header" id="your-communities-header">
      <h3>
your communities        </h3>

  </div>
  <div class="modal-content" id="your-communities-section">

        <div class="call-to-login">
<a href="https://stackoverflow.com/users/signup?returnurl=http%3a%2f%2fstackoverflow.com%2f" class="login-link js-
gps-track"    data-gps-track="site_switcher.click({ item_type:10 })"
>Sign up</a> or <a href="https://stackoverflow.com/users/login?returnurl=http%3a%2f%2fstackoverflow.com%2f"
class="login-link js-gps-track"    data-gps-track="site_switcher.click({ item_type:11 })"
>log in</a> to customize your list.
        </div>
  </div>

  <div class="header">
      <h3><a href="//stackexchange.com/sites">more stack exchange communities</a></h3>
  </div>
  <div class="modal-content">
        <div class="child-content"></div>
  </div>
</div>
    </div>

    <div class="network-items">

      <a href="//stackexchange.com"
        class="topbar-icon icon-site-switcher yes-hover js-site-switcher-button js-gps-track"
        data-gps-track="site_switcher.show"
        title="A list of all 137 Stack Exchange sites">
        <span class="hidden-text">Stack Exchange</span>
      </a>

    </div>

    <div class="topbar-links">

        <div class="links-container">
            <span class="topbar-menu-links">
                <a href="https://stackoverflow.com/users/signup?returnurl=http%3a%2f%2fstackoverflow.com%2f"
class="login-link">sign up</a>
                <a href="https://stackoverflow.com/users/login?returnurl=http%3a%2f%2fstackoverflow.com%2f"
class="login-link">log in</a>
                <a href="/tour">tour</a>
```

```html
                    <a href="#" class="icon-help js-help-button" title="Help Center and other resources">
        help
        <span class="triangle"></span>
    </a>
    <div class="topbar-dialog help-dialog js-help-dialog dno">
        <div class="modal-content">
            <ul>
                            <li>
                    <a href="/tour" class="js-gps-track" data-gps-track="help_popup.click({ item_type:1 })">
                        Tour
                        <span class="item-summary">
                            Start here for a quick overview of the site
                        </span>
                    </a>
                </li>
            <li>
                    <a href="/help" class="js-gps-track" data-gps-track="help_popup.click({ item_type:4 })">
                        Help Center
                        <span class="item-summary">
                            Detailed answers to any questions you might have
                        </span>
                    </a>
                </li>
                    <li>
                    <a href="//meta.stackoverflow.com" class="js-gps-track" data-gps-
track="help_popup.click({ item_type:2 })">
                        Meta
                        <span class="item-summary">
                            Discuss the workings and policies of this site
                        </span>
                    </a>
                </li>
            </ul>
        </div>
    </div>

                    <a href="//careers.stackoverflow.com?utm_source=stackoverflow.com&utm_medium=site-
ui&utm_campaign=anon-topbar">stack overflow careers</a>
            </span>
        </div>

    <div class="search-container">
        <form id="search" action="/search" method="get" autocomplete="off">
            <input name="q" type="text" placeholder="search" value="" tabindex="1" autocomplete="off"
maxlength="240" />
        </form>
    </div>

    </div>
  </div>
</div>
  <script>
    StackExchange.ready(function() { StackExchange.topbar.init(); });
  </script>

  <div class="container">
    <div id="header">
      <br class="cbt">
      <div id="hlogo">
```

```html
            <a href="/">
                Stack Overflow
            </a>
        </div>
        <div id="hmenus">
            <div class="nav mainnavs">
                <ul>
                    <li><a id="nav-questions" href="/questions">Questions</a></li>
                    <li><a id="nav-tags" href="/tags">Tags</a></li>
                    <li><a id="nav-users" href="/users">Users</a></li>
                    <li><a id="nav-badges" href="/help/badges">Badges</a></li>
                    <li><a id="nav-unanswered" href="/unanswered">Unanswered</a></li>
                </ul>
            </div>
            <div class="nav askquestion">
                <ul>
                    <li>
                        <a id="nav-askquestion"  href="/questions/ask">Ask Question</a>
                    </li>
                </ul>
            </div>
        </div>
    </div>

    <div id="content" class="snippet-hidden">

<div id="herobox">
    <div id="hero-content">
        <div id="close"><a title="click to minimize">_</a></div>
    <div id="blurb">
    Stack Overflow is a question and answer site for professional and enthusiast programmers. It&#39;s 100% free, no
registration required.
        <br />
        <br />
        <a href="/tour" id="tell-me-more" class="button">Take the 2-minute tour</a>
    </div>
    <div id="desc">
        <b>Here&#39;s how it works:</b>
        <ol id="hiw">
            <li id="q">Anybody can ask a question
            </li>
            <li id="an">Anybody can answer
            </li>
            <li id="b">The best answers are voted up and rise to the top
            </li>
        </ol>
    </div>
    <div style="clear: both"></div>
  </div>
  <script>
    $('#herobox li').click(function () {
        StackExchange.using("gps", function () {
            StackExchange.gps.track("aboutpage.click", { aboutclick_location: "hero" }, true);
        });

        window.location.href = '/tour';
    });
    $('#tell-me-more').click(function () {
        StackExchange.using("gps", function () {
```

```
          StackExchange.gps.track("aboutpage.click", { aboutclick_location: "hero" }, true);
        });
      });
      $('#herobox #close').click(function () {
        StackExchange.using("gps", function () {
          StackExchange.gps.track("hero.action", { hero_action_type: "minimize" }, true);
        });
        $.cookie("hero", "mini", { path: "/", expires: 365 });
        $.ajax({
          url: "/hero-mini",
          success: function (data) {
            $("#herobox").fadeOut("fast", function () {
              $("#herobox").replaceWith(data);
              $("#herobox-mini").fadeIn("fast");
            });
          }
        });
        return false;
      });
    </script>
</div>
    <script>
      StackExchange.using("gps", function () {
        StackExchange.gps.track("hero.show", { hero_type: "hero" }, true);
      });
    </script>
<div id="mainbar">

    <div class="subheader">
      <h1 id="h-top-questions">
          Top Questions
      </h1>
      <div id="tabs">
      <a class="youarehere" href="?tab=interesting" title="Questions that may be of interest to you based on your history
and tag preference">interesting</a>
      <a href="?tab=featured" title="Questions with an active bounty">          <span class="bounty-indicator-
tab">409</span>
featured</a>
      <a href="?tab=hot" title="Questions with the most views, answers, and votes over the last few days">hot</a>
      <a href="?tab=week" title="Questions with the most views, answers, and votes this week">week</a>
      <a href="?tab=month" title="Questions with the most views, answers, and votes this month">month</a>
</div>
    </div>
<div id="qlist-wrapper">
    <div id="question-mini-list">


<div class="question-summary narrow"
    id="question-summary-28688666" >
    <div onclick="window.location.href='/questions/28688666/which-software-tool-game-engine-to-make-a-questions-bank-
based-game'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
```

```html
            <div class="views">
              <div class="mini-counts"><span title="1 view">1</span></div>
              <div>view</div>
            </div>
          </div>
          <div class="summary">

                    <h3><a href="/questions/28688666/which-software-tool-game-engine-to-make-a-questions-bank-based-game"
class="question-hyperlink" title="I would like to create a simple quiz game to assess the player proficiency in a specific
language.
So I will have a list of verbs, for example, along with the translation in an XML file or any other ...">Which software
tool/game engine to make a questions-bank based game?</a></h3>
            <div class="tags t-android">
              <a href="/questions/tagged/android" class="post-tag" title="show questions tagged 'android'" rel="tag"><img
src="//i.stack.imgur.com/tKsDb.png" height="16" width="18" alt="" class="sponsor-tag-img">android</a>
            </div>
            <div class="started">
              <a href="/questions/28688666/which-software-tool-game-engine-to-make-a-questions-bank-based-game"
class="started-link">asked <span title="2015-02-24 05:21:17Z" class="relativetime">1 min ago</span></a>
                <a href="/users/4599724/ayman">Ayman</a> <span class="reputation-score" title="reputation score "
dir="ltr">1</span>
            </div>
          </div>
        </div>
</div>

<div class="question-summary narrow"
    id="question-summary-28680295">
    <div onclick="window.location.href='/questions/28680295/mongodb-query-on-the-last-element-of-an-array'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="-1 votes">-1</span></div>
        <div>votes</div>
      </div>
      <div class="status answered">
        <div class="mini-counts"><span title="2 answers">2</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="23 views">23</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

              <h3><a href="/questions/28680295/mongodb-query-on-the-last-element-of-an-array" class="question-
hyperlink" title="I know that MongoDB supports the syntax find{array.0.field:&quot;value&quot;}, but I specifically want
to do this for the last element in the array, which means I don&#39;t know the index.  Is there some kind of ...">MongoDB -
Query on the last element of an array?</a></h3>
          <div class="tags t-arrays t-mongodb t-mongodb-query t-spring-data-mongodb">
            <a href="/questions/tagged/arrays" class="post-tag" title="show questions tagged 'arrays'" rel="tag">arrays</a> <a
href="/questions/tagged/mongodb" class="post-tag" title="show questions tagged 'mongodb'" rel="tag">mongodb</a> <a
href="/questions/tagged/mongodb-query" class="post-tag" title="show questions tagged 'mongodb-query'"
rel="tag">mongodb-query</a> <a href="/questions/tagged/spring-data-mongodb" class="post-tag" title="show questions
tagged 'spring-data-mongodb'" rel="tag">spring-data-mongodb</a>
          </div>
          <div class="started">
            <a href="/questions/28680295/mongodb-query-on-the-last-element-of-an-array/?lastactivity" class="started-
link">modified <span title="2015-02-24 05:21:06Z" class="relativetime">1 min ago</span></a>
              <a href="/users/2096770/kaushal">Kaushal</a> <span class="reputation-score" title="reputation score "
dir="ltr">27</span>
```

```html
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688662"


    >
    <div onclick="window.location.href='/questions/28688662/how-to-override-default-unhandled-exception-handling-in-
owin'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="2 views">2</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/28688662/how-to-override-default-unhandled-exception-handling-in-owin"
class="question-hyperlink" title="I&#39;ve written simple server using Owin Self-hosting and WebApi:

namespace OwinSelfHostingTest
{
    using System.Threading;
    using System.Web.Http;
    using Microsoft.Owin.Hosting;
    using Owin;
...">How to override default unhandled exception handling in Owin?</a></h3>
      <div class="tags t-cñ t-web-api t-owin">
        <a href="/questions/tagged/c%23" class="post-tag" title="show questions tagged 'c#'" rel="tag">c#</a> <a
href="/questions/tagged/web-api" class="post-tag" title="show questions tagged 'web-api'" rel="tag">web-api</a> <a
href="/questions/tagged/owin" class="post-tag" title="show questions tagged 'owin'" rel="tag">owin</a>
      </div>
      <div class="started">
        <a href="/questions/28688662/how-to-override-default-unhandled-exception-handling-in-owin" class="started-
link">asked <span title="2015-02-24 05:20:44Z" class="relativetime">1 min ago</span></a>
        <a href="/users/860331/rufanov">rufanov</a> <span class="reputation-score" title="reputation score "
dir="ltr">1,549</span>
      </div>
    </div>
</div>

<div class="question-summary narrow"
    id="question-summary-28688660">
    <div onclick="window.location.href='/questions/28688660/rdlc-is-clipped-on-next-page-in-winform-application'"
class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
```

```html
    <div class="status unanswered">
      <div class="mini-counts"><span title="0 answers">0</span></div>
      <div>answers</div>
    </div>
    <div class="views">
      <div class="mini-counts"><span title="1 view">1</span></div>
      <div>view</div>
    </div>
  </div>
  <div class="summary">

            <h3><a href="/questions/28688660/rdlc-is-clipped-on-next-page-in-winform-application" class="question-
hyperlink" title="I have one long report which contains 8 tablix. Now when the report needs another page for the records, it
is clipping the records. I have set the page size to A4.

The first few records are ...">RDLC is clipped on next page in winform application</a></h3>
    <div class="tags t-cñ t-ûnet t-winforms t-rdlc">
        <a href="/questions/tagged/c%23" class="post-tag" title="show questions tagged 'c#'" rel="tag">c#</a> <a
href="/questions/tagged/.net" class="post-tag" title="show questions tagged '.net'" rel="tag">.net</a> <a
href="/questions/tagged/winforms" class="post-tag" title="show questions tagged 'winforms'" rel="tag">winforms</a> <a
href="/questions/tagged/rdlc" class="post-tag" title="show questions tagged 'rdlc'" rel="tag">rdlc</a>
    </div>
    <div class="started">
        <a href="/questions/28688660/rdlc-is-clipped-on-next-page-in-winform-application" class="started-link">asked
<span title="2015-02-24 05:20:26Z" class="relativetime">1 min ago</span></a>
        <a href="/users/2024124/dhavalr">DhavalR</a> <span class="reputation-score" title="reputation score "
dir="ltr">377</span>
    </div>
  </div>
</div>


<div class="question-summary narrow"
   id="question-summary-28687446">
  <div onclick="window.location.href='/questions/28687446/why-does-reshaper-suggest-me-to-make-type-parameter-t-
contravariant'" class="cp">
    <div class="votes">
      <div class="mini-counts"><span title="1 vote">1</span></div>
      <div>vote</div>
    </div>
    <div class="status answered">
      <div class="mini-counts"><span title="1 answer">1</span></div>
      <div>answer</div>
    </div>
    <div class="views">
      <div class="mini-counts"><span title="38 views">38</span></div>
      <div>views</div>
    </div>
  </div>
  <div class="summary">
                <h3><a href="/questions/28687446/why-does-reshaper-suggest-me-to-make-type-parameter-t-
contravariant" class="question-hyperlink" title="ReShaper suggests me to make type parameter T contravariant: interface
IbusinessValidator&lt;T>
Into this

interface IBusinessValidator&lt;in ...">Why does ReShaper suggest me to make type parameter T contravariant?</a></h3>
  <div class="tags t-cñ t-resharper">
        <a href="/questions/tagged/c%23" class="post-tag" title="show questions tagged 'c#'" rel="tag">c#</a> <a
href="/questions/tagged/resharper" class="post-tag" title="show questions tagged 'resharper'" rel="tag">resharper</a>
```

```
      </div>
      <div class="started">
        <a href="/questions/28687446/why-does-reshaper-suggest-me-to-make-type-parameter-t-contravariant/?lastactivity"
class="started-link">modified <span title="2015-02-24 05:19:58Z" class="relativetime">2 mins ago</span></a>
        <a href="/users/1870803/yuval-itzchakov">Yuval Itzchakov</a> <span class="reputation-score" title="reputation
score 19963" dir="ltr">20k</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688653">
  <div onclick="window.location.href='/questions/28688653/mfc-modify-the-dialog-size-created-by-resource'" class="cp">
    <div class="votes">
      <div class="mini-counts"><span title="0 votes">0</span></div>
      <div>votes</div>
    </div>
    <div class="status unanswered">
      <div class="mini-counts"><span title="0 answers">0</span></div>
      <div>answers</div>
    </div>
    <div class="views">
      <div class="mini-counts"><span title="2 views">2</span></div>
      <div>views</div>
    </div>
  </div>
  <div class="summary">

            <h3><a href="/questions/28688653/mfc-modify-the-dialog-size-created-by-resource" class="question-
hyperlink" title="I created a dialog using MFC Dialog application. This is using the dialog resource. And my resource file is
as below
<a href="/questions/28688653/mfc-modify-the-dialog-size-created-by-resource" class="started-link">asked <span
title="2015-02-24 05:19:45Z" class="relativetime">2 mins ago</span></a>
        <a href="/users/4000250/lokanath-nayak">Lokanath Nayak</a> <span class="reputation-score" title="reputation
score " dir="ltr">6</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688651"


  >
  <div onclick="window.location.href='/questions/28688651/add-parameters-to-form-url-before-submit'" class="cp">
    <div class="votes">
      <div class="mini-counts"><span title="0 votes">0</span></div>
      <div>votes</div>
    </div>
    <div class="status unanswered">
      <div class="mini-counts"><span title="0 answers">0</span></div>
      <div>answers</div>
    </div>
    <div class="views">
      <div class="mini-counts"><span title="3 views">3</span></div>
      <div>views</div>
    </div>
```

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

                <h3><a href="/questions/28688651/add-parameters-to-form-url-before-submit" class="question-hyperlink"
title="I need to add a path to a file to the form url before submitting. I created therefore a text field and want to add the text
to the url without php.

can somebody help?

the existing code:



    ...">add parameters to form url before submit</a></h3>
        <div class="tags t-html t-forms">
            <a href="/questions/tagged/html" class="post-tag" title="show questions tagged 'html'" rel="tag">html</a> <a
href="/questions/tagged/forms" class="post-tag" title="show questions tagged 'forms'" rel="tag">forms</a>
        </div>
        <div class="started">
            <a href="/questions/28688651/add-parameters-to-form-url-before-submit" class="started-link">asked <span
title="2015-02-24 05:19:28Z" class="relativetime">2 mins ago</span></a>
            <a href="/users/4599733/julia-scheidinger">Julia Scheidinger</a> <span class="reputation-score" title="reputation
score " dir="ltr">1</span>
        </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28599807"


    >
    <div onclick="window.location.href='/questions/28599807/change-strings-to-make-them-equal'" class="cp">
        <div class="votes">
            <div class="mini-counts"><span title="6 votes">6</span></div>
            <div>votes</div>
        </div>
        <div class="status answered">
            <div class="mini-counts"><span title="1 answer">1</span></div>
            <div>answer</div>
        </div>
        <div class="views">
            <div class="mini-counts"><span title="62 views">62</span></div>
            <div>views</div>
        </div>
    </div>
    <div class="summary">

                <h3><a href="/questions/28599807/change-strings-to-make-them-equal" class="question-hyperlink"
title="Referring to question HERE


  We have two strings A and B with the same super set of characters. We
  need to change these strings to obtain two equal strings. In each move
  we can perform one of ...">Change strings to make them equal</a></h3>
        <div class="tags t-string t-algorithm">
            <a href="/questions/tagged/string" class="post-tag" title="show questions tagged 'string'" rel="tag">string</a> <a
href="/questions/tagged/algorithm" class="post-tag" title="show questions tagged 'algorithm'" rel="tag">algorithm</a>
```

```html
        </div>
        <div class="started">
          <a href="/questions/28599807/change-strings-to-make-them-equal/?lastactivity" class="started-link">answered
<span title="2015-02-24 05:18:53Z" class="relativetime">3 mins ago</span></a>
          <a href="/users/4497253/stefan-mandel">Stefan Mandel</a> <span class="reputation-score" title="reputation score
" dir="ltr">11</span>
        </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688642"


    >
    <div onclick="window.location.href='/questions/28688642/nsnotification-addobserver-selector-could-not-open-a-
nsbeginalertsheet-sheet-on'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="3 views">3</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/28688642/nsnotification-addobserver-selector-could-not-open-a-nsbeginalertsheet-
sheet-on" class="question-hyperlink" title="I am trying to open a NSBeginAlertSheet in the selector of addObserver of
NSNotificationCenter. Following is the addObserver selector declaration in init method of my window controller:

-(id) init{
...">NSNotification addObserver selector could not open a NSBeginAlertSheet sheet on window</a></h3>
      <div class="tags t-objective-c t-cocoa t-nsnotificationcenter t-alerts">
        <a href="/questions/tagged/objective-c" class="post-tag" title="show questions tagged 'objective-c'"
rel="tag">objective-c</a> <a href="/questions/tagged/cocoa" class="post-tag" title="show questions tagged 'cocoa'"
rel="tag">cocoa</a> <a href="/questions/tagged/nsnotificationcenter" class="post-tag" title="show questions tagged
'nsnotificationcenter'" rel="tag">nsnotificationcenter</a> <a href="/questions/tagged/alerts" class="post-tag" title="show
questions tagged 'alerts'" rel="tag">alerts</a>
      </div>
      <div class="started">
        <a href="/questions/28688642/nsnotification-addobserver-selector-could-not-open-a-nsbeginalertsheet-sheet-on"
class="started-link">asked <span title="2015-02-24 05:18:25Z" class="relativetime">3 mins ago</span></a>
        <a href="/users/2301570/user2301570">user2301570</a> <span class="reputation-score" title="reputation score "
dir="ltr">184</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688638"
```

```
   >
   <div onclick="window.location.href='/questions/28688638/pci-express-could-not-open-device-pcie-open-failed'"
class="cp">
     <div class="votes">
       <div class="mini-counts"><span title="0 votes">0</span></div>
       <div>votes</div>
     </div>
     <div class="status unanswered">
       <div class="mini-counts"><span title="0 answers">0</span></div>
       <div>answers</div>
     </div>
     <div class="views">
       <div class="mini-counts"><span title="3 views">3</span></div>
       <div>views</div>
     </div>
   </div>
   <div class="summary">

           <h3><a href="/questions/28688638/pci-express-could-not-open-device-pcie-open-failed" class="question-
hyperlink" title="I am using Intel DE2i-150 board where I have Intel atom processor with yocto os and fpga with Nios II
processor. I am trying to access the fpga board from yocto. Initially I was able to communicate ...">PCI express could not
open device, PCIE_open failed</a></h3>
     <div class="tags t-hardware-interface t-yocto t-pci-bus">
       <a href="/questions/tagged/hardware-interface" class="post-tag" title="show questions tagged 'hardware-interface'"
rel="tag">hardware-interface</a> <a href="/questions/tagged/yocto" class="post-tag" title="show questions tagged 'yocto'"
rel="tag">yocto</a> <a href="/questions/tagged/pci-bus" class="post-tag" title="show questions tagged 'pci-bus'"
rel="tag">pci-bus</a>
     </div>
     <div class="started">
       <a href="/questions/28688638/pci-express-could-not-open-device-pcie-open-failed" class="started-link">asked
<span title="2015-02-24 05:18:06Z" class="relativetime">4 mins ago</span></a>
       <a href="/users/4442938/diya">Diya</a> <span class="reputation-score" title="reputation score "
dir="ltr">1</span>
     </div>
   </div>
</div>


<div class="question-summary narrow"
   id="question-summary-28688637"


   >
   <div onclick="window.location.href='/questions/28688637/php-and-mysql-migration-script-ends-with-many-extra-
records-to-the-destination-d'" class="cp">
     <div class="votes">
       <div class="mini-counts"><span title="0 votes">0</span></div>
       <div>votes</div>
     </div>
     <div class="status unanswered">
       <div class="mini-counts"><span title="0 answers">0</span></div>
       <div>answers</div>
     </div>
     <div class="views">
       <div class="mini-counts"><span title="4 views">4</span></div>
       <div>views</div>
     </div>
   </div>
```

```
    <div class="summary">

                <h3><a href="/questions/28688637/php-and-mysql-migration-script-ends-with-many-extra-records-to-the-
destination-d" class="question-hyperlink" title="I have to migrate a database from one application to other, so I have written
the following script to manage this process:

&lt;meta charset=&quot;utf8&quot; />
&lt;?php
/**
* Migrate dddd.dbo_news to ...">PHP and MySQL migration script ends with many extra records to the destination
database</a></h3>
      <div class="tags t-php t-mysql t-data-migration">
        <a href="/questions/tagged/php" class="post-tag" title="show questions tagged 'php'" rel="tag">php</a> <a
href="/questions/tagged/mysql" class="post-tag" title="show questions tagged 'mysql'" rel="tag">mysql</a> <a
href="/questions/tagged/data-migration" class="post-tag" title="show questions tagged 'data-migration'" rel="tag">data-
migration</a>
      </div>
      <div class="started">
        <a href="/questions/28688637/php-and-mysql-migration-script-ends-with-many-extra-records-to-the-destination-d"
class="started-link">asked <span title="2015-02-24 05:17:54Z" class="relativetime">4 mins ago</span></a>
        <a href="/users/1592845/s%d1%94%d0%bcs%d1%94%d0%bc">sємsєм</a> <span class="reputation-score"
title="reputation score " dir="ltr">4,323</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688629"


  >
  <div onclick="window.location.href='/questions/28688629/getting-a-origin-point-and-direction-for-a-ray-from-a-moving-
object-in-jmonkey'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="5 views">5</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

                <h3><a href="/questions/28688629/getting-a-origin-point-and-direction-for-a-ray-from-a-moving-object-in-
jmonkey" class="question-hyperlink" title="I am trying to get the origin point and direction for three spheres moving within
a box on my jmonkey program.  I have to add in a collision detection function, and I have used a ray prior to
identify ...">Getting a origin point and direction for a ray from a moving object in jmonkey</a></h3>
      <div class="tags t-java t-collision-detection">
        <a href="/questions/tagged/java" class="post-tag" title="show questions tagged 'java'" rel="tag">java</a> <a
href="/questions/tagged/collision-detection" class="post-tag" title="show questions tagged 'collision-detection'"
rel="tag">collision-detection</a>
      </div>
      <div class="started">
```

```html
          <a href="/questions/28688629/getting-a-origin-point-and-direction-for-a-ray-from-a-moving-object-in-jmonkey"
class="started-link">asked <span title="2015-02-24 05:16:56Z" class="relativetime">5 mins ago</span></a>
          <a href="/users/2154095/user2154095">user2154095</a> <span class="reputation-score" title="reputation score "
dir="ltr">10</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688627"


    >
    <div onclick="window.location.href='/questions/28688627/ocaml-second-function-parameter-unbound'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="6 views">6</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/28688627/ocaml-second-function-parameter-unbound" class="question-hyperlink"
title="I&#39;m trying to make the intersection of two lists and so far this is what I have

let intersection (lis1, lis2) =
   let flags= Array.create (List.length(lis1)) false in
   List.iter (fun  x -> ...">OCaml second function parameter unbound</a></h3>
      <div class="tags t-ocaml">
        <a href="/questions/tagged/ocaml" class="post-tag" title="show questions tagged 'ocaml'" rel="tag">ocaml</a>
      </div>
      <div class="started">
        <a href="/questions/28688627/ocaml-second-function-parameter-unbound" class="started-link">asked <span
title="2015-02-24 05:16:18Z" class="relativetime">6 mins ago</span></a>
        <a href="/users/4115275/zee">Zee</a> <span class="reputation-score" title="reputation score " dir="ltr">3</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688625"


    >
    <div onclick="window.location.href='/questions/28688625/change-database-in-jhipseter'" class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
```

```
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="4 views">4</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/28688625/change-database-in-jhipseter" class="question-hyperlink" title="Hi could i
change the database from PostgreSQL to MYSQL ,which is generated by jhipster spring project how can i do it ?

If i am doing manually i am getting this error as while importing

I am ...">change database in Jhipseter</a></h3>
      <div class="tags t-mysql t-spring-boot t-jhipster">
        <a href="/questions/tagged/mysql" class="post-tag" title="show questions tagged 'mysql'" rel="tag">mysql</a> <a
href="/questions/tagged/spring-boot" class="post-tag" title="show questions tagged 'spring-boot'" rel="tag">spring-
boot</a> <a href="/questions/tagged/jhipster" class="post-tag" title="show questions tagged 'jhipster'"
rel="tag">jhipster</a>
      </div>
      <div class="started">
        <a href="/questions/28688625/change-database-in-jhipseter" class="started-link">asked <span title="2015-02-24
05:16:07Z" class="relativetime">6 mins ago</span></a>
        <a href="/users/4369495/karthik-pamidimarri">karthik pamidimarri</a> <span class="reputation-score"
title="reputation score " dir="ltr">76</span>
      </div>
    </div>
  </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688470"


  >
  <div onclick="window.location.href='/questions/28688470/android-google-maps-api-change-position-of-maps-toolbar'"
class="cp">
      <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
      </div>
      <div class="status answered">
        <div class="mini-counts"><span title="1 answer">1</span></div>
        <div>answer</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="10 views">10</span></div>
        <div>views</div>
      </div>
    </div>
  </div>
  <div class="summary">

            <h3><a href="/questions/28688470/android-google-maps-api-change-position-of-maps-toolbar"
class="question-hyperlink" title="I&#39;m using the Google Maps API for Android. The following code enables the maps
toolbar in the bottom right corner when I click on a Marker

googleMap.getUiSettings().setMapToolbarEnabled(true);
```

...">Android: Google Maps API - Change position of maps toolbar</h3>
      <div class="tags t-java t-android t-google-maps t-google-maps-android-api-2">
        java <img src="//i.stack.imgur.com/tKsDb.png" height="16" width="18" alt="" class="sponsor-tag-img">android <img src="//i.stack.imgur.com/uE37r.png" height="16" width="18" alt="" class="sponsor-tag-img">google-maps google-maps-android-api-2
      </div>
      <div class="started">
        answered 6 mins ago
        user2550149 1
      </div>
    </div>
  </div>
</div>

<div class="question-summary narrow"
    id="question-summary-28688618"

  >
   <div onclick="window.location.href='/questions/28688618/using-css-class-causes-problems'" class="cp">
     <div class="votes">
       <div class="mini-counts">0</div>
       <div>votes</div>
     </div>
     <div class="status unanswered">
       <div class="mini-counts">0</div>
       <div>answers</div>
     </div>
     <div class="views">
       <div class="mini-counts">13</div>
       <div>views</div>
     </div>
   </div>
   <div class="summary">

           <h3><a href="/questions/28688618/using-css-class-causes-problems" class="question-hyperlink" title="I set up my .nav class for my nav menu but when I use it it seems to cause problems and when I remove .nav and leave just ul li it fixes it but that also has a margin problem.

the problem is on the ...">Using CSS class causes problems</h3>
      <div class="tags t-html t-css t-html5 t-css3 t-css-menu">
        html css html5 css3 css-menu
      </div>
      <div class="started">
        asked 6 mins ago
        GoogleFailedMe <span class="reputation-score" title="reputation

```
score " dir="ltr">8</span>
      </div>
   </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688617"


   >
   <div onclick="window.location.href='/questions/28688617/connect-to-cassandra-on-datastax-enterprise-demo'"
class="cp">
      <div class="votes">
         <div class="mini-counts"><span title="0 votes">0</span></div>
         <div>votes</div>
      </div>
      <div class="status unanswered">
         <div class="mini-counts"><span title="0 answers">0</span></div>
         <div>answers</div>
      </div>
      <div class="views">
         <div class="mini-counts"><span title="3 views">3</span></div>
         <div>views</div>
      </div>
   </div>
   <div class="summary">
  <h3><a href="/questions/28688617/connect-to-cassandra-on-datastax-enterprise-demo" class="question-hyperlink"
title="I am running DataStax Sandbox 2.0 via VirtualBox and am on Bridge-Adapter mode. I can ping the VirtualBox but I
cannot seem to connect to the Cassandra on there via the C# driver.

When i do an ...">Connect to Cassandra on DataStax Enterprise demo</a></h3>
 </div>
      <div class="started">
 <a href="/questions/28688617/connect-to-cassandra-on-datastax-enterprise-demo" class="started-link">asked <span
title="2015-02-24 05:15:22Z" class="relativetime">7 mins ago</span></a>
         <a href="/users/695701/fes">fes</a> <span class="reputation-score" title="reputation score " dir="ltr">638</span>
      </div>
   </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688615"


   >
   <div onclick="window.location.href='/questions/28688615/angular-push-adds-operator-that-that-results-in-mongoerror'"
class="cp">
      <div class="votes">
         <div class="mini-counts"><span title="0 votes">0</span></div>
         <div>votes</div>
      </div>
      <div class="status unanswered">
         <div class="mini-counts"><span title="0 answers">0</span></div>
         <div>answers</div>
      </div>
      <div class="views">
         <div class="mini-counts"><span title="8 views">8</span></div>
```

```
            <div>views</div>
        </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/28688615/angular-push-adds-operator-that-that-results-in-mongoerror"
class="question-hyperlink" title="I am implementing the tutorial on the mean stack https://www.youtube.com/watch?
v=AEE7DY2AYvI

I am adding a delete feature to remove items from the database on a button click


My client side ...">angular push adds operator that that results in MongoError</a></h3>
        <div class="tags t-javascript t-angularjs t-nodeûjs t-mongodb t-meanjs">
            <a href="/questions/tagged/javascript" class="post-tag" title="show questions tagged 'javascript'"
rel="tag">javascript</a> <a href="/questions/tagged/angularjs" class="post-tag" title="show questions tagged 'angularjs'"
rel="tag">angularjs</a> <a href="/questions/tagged/node.js" class="post-tag" title="show questions tagged 'node.js'"
rel="tag">node.js</a> <a href="/questions/tagged/mongodb" class="post-tag" title="show questions tagged 'mongodb'"
rel="tag">mongodb</a> <a href="/questions/tagged/meanjs" class="post-tag" title="show questions tagged 'meanjs'"
rel="tag">meanjs</a>
        </div>
        <div class="started">
            <a href="/questions/28688615/angular-push-adds-operator-that-that-results-in-mongoerror" class="started-
link">asked <span title="2015-02-24 05:15:20Z" class="relativetime">7 mins ago</span></a>
            <a href="/users/2278564/sakib-shaikh">Sakib Shaikh</a> <span class="reputation-score" title="reputation score "
dir="ltr">22</span>
        </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-6272327"


    >
    <div onclick="window.location.href='/questions/6272327/how-to-find-the-unclosed-div-tag'" class="cp">
        <div class="votes">
            <div class="mini-counts"><span title="19 votes">19</span></div>
            <div>votes</div>
        </div>
        <div class="status answered-accepted" title="one of the answers was accepted as the correct answer">
            <div class="mini-counts"><span title="11 answers">11</span></div>
            <div>answers</div>
        </div>
        <div class="views">
            <div class="mini-counts hot"><span title="40752 views">41k</span></div>
            <div class="hot">views</div>
        </div>
    </div>
    <div class="summary">

            <h3><a href="/questions/6272327/how-to-find-the-unclosed-div-tag" class="question-hyperlink" title="A
unclosed div problem almost make me crazy. It is very difficult to track especially when the page is long and complex.

Any suggestions?
">How to find the unclosed div tag</a></h3>
        <div class="tags t-html t-html-validation">
            <a href="/questions/tagged/html" class="post-tag" title="show questions tagged 'html'" rel="tag">html</a> <a
```

```
href="/questions/tagged/html-validation" class="post-tag" title="show questions tagged 'html-validation'" rel="tag">html-validation</a>
      </div>
      <div class="started">
Reader values:
        <a href="/questions/6272327/how-to-find-the-unclosed-div-tag/?lastactivity" class="started-link">answered <span title="2015-02-24 05:15:18Z" class="relativetime">7 mins ago</span></a>
        <a href="/users/441757/sideshowbarker">sideshowbarker</a> <span class="reputation-score" title="reputation score " dir="ltr">41</span>
      </div>
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688533"


  >
    <div onclick="window.location.href='/questions/28688533/whats-the-rationale-behind-serializable-interface'" class="cp">
      <div class="votes">
  <div class="mini-counts"><span title="2 votes">2</span></div>
        <div>votes</div>
      </div>
      <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
      </div>
      <div class="views">
        <div class="mini-counts"><span title="21 views">21</span></div>
        <div>views</div>
      </div>
    </div>
    <div class="summary">

              <h3><a href="/questions/28688533/whats-the-rationale-behind-serializable-interface" class="question-hyperlink" title="If we want to serialize an object, we can simply do the following implementation:

class MyClass implements Serializable
{
  private static final long serialVersionUID = 12345L;
}


And no extra ...">What&#39;s the rationale behind &ldquo;Serializable&rdquo; interface?</a></h3>
      <div class="tags t-java t-serialization t-serializable t-externalizable">
        <a href="/questions/tagged/java" class="post-tag" title="show questions tagged 'java'" rel="tag">java</a> <a href="/questions/tagged/serialization" class="post-tag" title="show questions tagged 'serialization'" rel="tag">serialization</a> <a href="/questions/tagged/serializable" class="post-tag" title="show questions tagged 'serializable'" rel="tag">serializable</a> <a href="/questions/tagged/externalizable" class="post-tag" title="show questions tagged 'externalizable'" rel="tag">externalizable</a>
      </div>
      <div class="started">
        <a href="/questions/28688533/whats-the-rationale-behind-serializable-interface" class="started-link">modified <span title="2015-02-24 05:15:00Z" class="relativetime">7 mins ago</span></a>
        <a href="/users/1229490/onezero">OneZero</a> <span class="reputation-score" title="reputation score " dir="ltr">1,394</span>
      </div>
```

```html
    </div>
</div>


<div class="question-summary narrow"
    id="question-summary-28688610"


   >
   <div onclick="window.location.href='/questions/28688610/how-to-send-protocol-buffers-data-from-python-to-java'"
class="cp">
     <div class="votes">
        <div class="mini-counts"><span title="0 votes">0</span></div>
        <div>votes</div>
     </div>
     <div class="status unanswered">
        <div class="mini-counts"><span title="0 answers">0</span></div>
        <div>answers</div>
     </div>
     <div class="views">
        <div class="mini-counts"><span title="6 views">6</span></div>
        <div>views</div>
     </div>
   </div>
   <div class="summary">

            <h3><a href="/questions/28688610/how-to-send-protocol-buffers-data-from-python-to-java" class="question-
hyperlink" title="I&#39;m having a very hard trying to get Python to send protocol buffer messages to Java code. I was able
to send ProtocolBuffer message from Java to Python successful. But when I try to send from Python ...">How to send
Protocol buffers data from Python to Java ?</a></h3>
     <div class="tags t-protocol-buffers">
        <a href="/questions/tagged/protocol-buffers" class="post-tag" title="show questions tagged 'protocol-buffers'"
rel="tag">protocol-buffers</a>
     </div>
     <div class="started">
        <a href="/questions/28688610/how-to-send-protocol-buffers-data-from-python-to-java" class="started-link">asked
<span title="2015-02-24 05:14:47Z" class="relativetime">7 mins ago</span></a>
        <a href="/users/1378771/cmr">CMR</a> <span class="reputation-score" title="reputation score "
dir="ltr">443</span>
     </div>
   </div>
</div>
```

… This continues for several more pages until the entire site is displayed.