

[eFolio tasks for feedback (Week 7 and Week 8) Assignment]

Studio {#6}

Name and Student Id: {Bolin Zheng 33480842}

Self-Evaluation {High Distinction}:

Need Help	Work in Progress	Pass	Credit	Distinction	High Distinction
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Task {7.1}:

{Answers:

I noticed some areas where improvements could be made for future presentations. The logic in the speech was not so smooth. There was no turn keyword in the presentation. The PPT content is a little bit not very relevant to the topic.}

{Screenshots:

Session Hijacking

Content

- What is Session
- What is Session Hijacking
- How it occurs
- How to prevent session hijacking attacks

What is Session

HTTP is stateless, so application designers had to develop a way to track the state between multiple connections from the same user, instead of requesting the user to authenticate upon each click in a web application.

A session is a series of interactions between two communication end points that occurs during the span of a single connection.

A session ID is an identification string (usually a long, random, alpha-numeric string) that is transmitted between the client and the server. Session IDs are commonly stored in cookies, URLs and hidden fields of web pages.

What is Session Hijacking

Many modern websites implement user sessions

Each user is assigned a cookie to maintain their information

Hijackers, if they get access to a particular user's cookies can masquerade as that user on the site.

They can obtain these cookies through various methods.

How it occurs

Mechanisms of Session Hijacking

Bullet Points:

1.Sniffing

Attackers can employ packet-sniffing software to intercept data packets as they travel over the network. This data often contains session cookies, which can be used to hijack a session.

Example: Tools like Wireshark can be used to capture data packets containing session information.

2.Predictable Session Token

If a web application doesn't properly secure session IDs, attackers can predict or guess session tokens. Poor randomization or encryption can lead to this vulnerability.

Example: If a session ID is something as simple as an incrementing integer (e.g., 1234, 1235, 1236...), an attacker can easily hijack a session.

3.Man-in-the-Middle Attacks

an attacker intercepts communication between two parties and relays messages between them, making each think they are communicating directly with each other.

Example: If an attacker gains access to a public Wi-Fi router, they can intercept data packets and potentially capture session IDs.

How to PREVENT session hijacking attacks

- **Avoid public Wi-Fi connections.**
- **When in doubt, use a VPN.**
- **Keep your security software up to date**
- **Keep an eye out for potential scams.**
- **Be wary of a site's security.**



}

{Link to code repository: https://docs.google.com/presentation/d/1wcF9ZgU-C_7la9lvfZbgef870py4uB3Xo6PdcoWcFE/edit#slide=id.g27b55b33e84_0_11}

{References: <https://venafi.com/blog/what-session-hijacking/> }

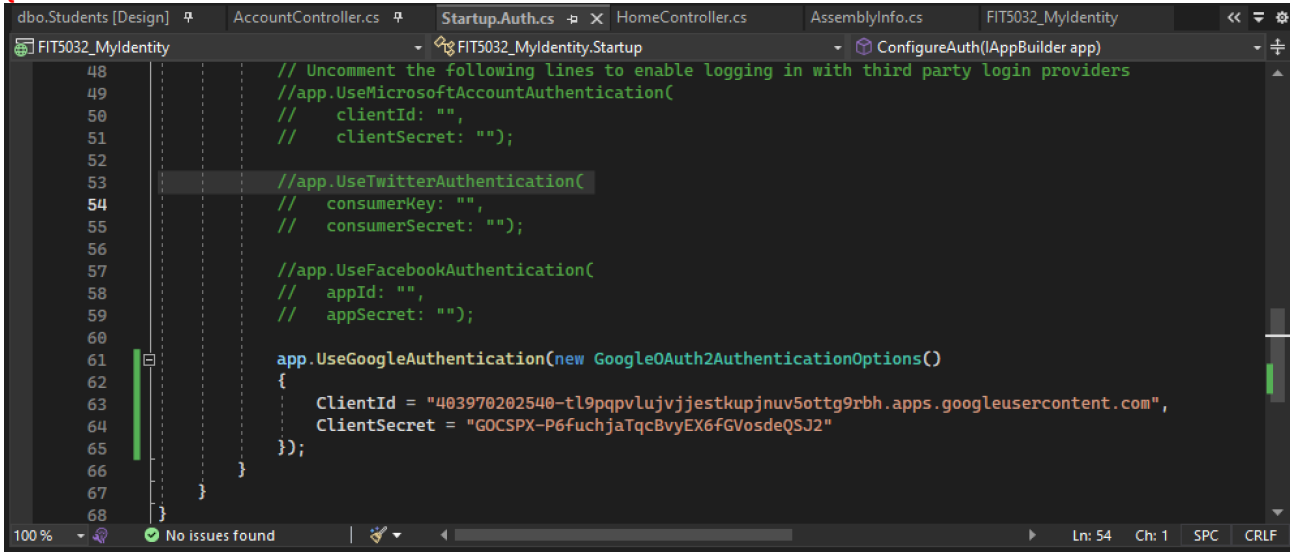
{URLs}

Task {7.2}:

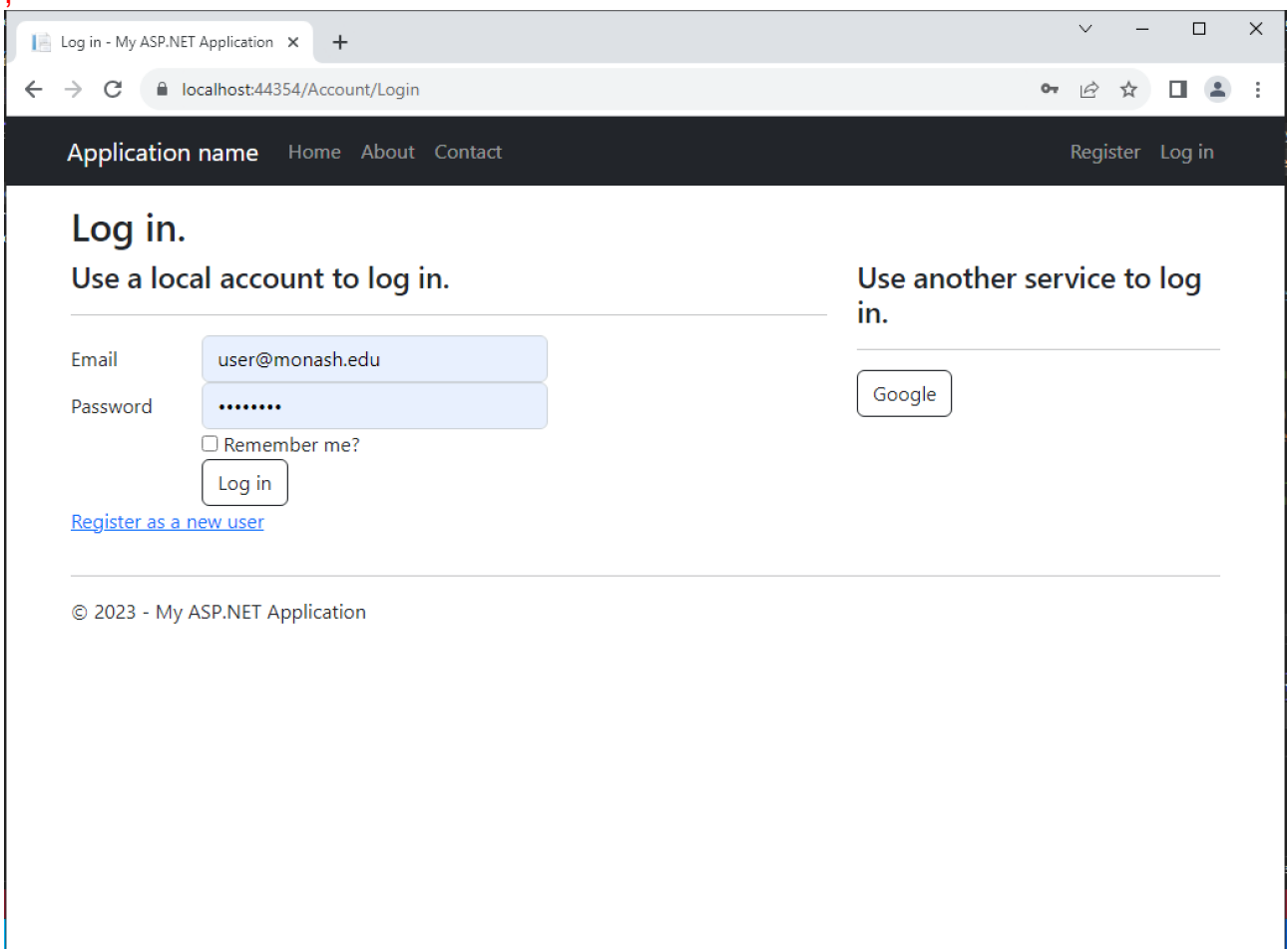
{Answers: The screen shoots below describe the screenshot of the login page and Startup.Auth.cs file containing the code. The screenshot of the page with all student details and the screenshot of the student detail page after logging in along with the code.

}

{Screenshots:



```
48 // Uncomment the following lines to enable logging in with third party login providers
49 //app.UseMicrosoftAccountAuthentication(
50 //    clientId: "",
51 //    clientSecret: "");
52
53 //app.UseTwitterAuthentication(
54 //    consumerKey: "",
55 //    consumerSecret: "");
56
57 //app.UseFacebookAuthentication(
58 //    appId: "",
59 //    appSecret: "");
60
61 app.UseGoogleAuthentication(new GoogleOAuth2AuthenticationOptions()
62 {
63     ClientId = "403970202540-tl9qpvlujvjjestkupjnuv5ottg9rbh.apps.googleusercontent.com",
64     ClientSecret = "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"
65 });
66
67
68 }
```



Log in - My ASP.NET Application

localhost:44354/Account/Login

Application name Home About Contact Register Log in

Log in.

Use a local account to log in.

Email

Password

☐ Remember me?

[Register as a new user](#)

Use another service to log in.

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Home Page - My ASP.NET Applic x

localhost:44354

⌂ ☆ □ 👤 ⋮

Application name Home About Contact [Students](#) Hello user@monash.edu! Log off

ASP.NET

ASP.NET is a free web framework for building great Web sites and Web applications using HTML, CSS and JavaScript.

[Learn more »](#)

Getting started

ASP.NET MVC gives you a powerful, patterns-based way to build dynamic websites that enables a clean separation of concerns and gives you full control over markup for enjoyable, agile development.

[Learn more »](#)

Get more libraries

NuGet is a free Visual Studio extension that makes it easy to add, remove, and update libraries and tools in Visual Studio projects.

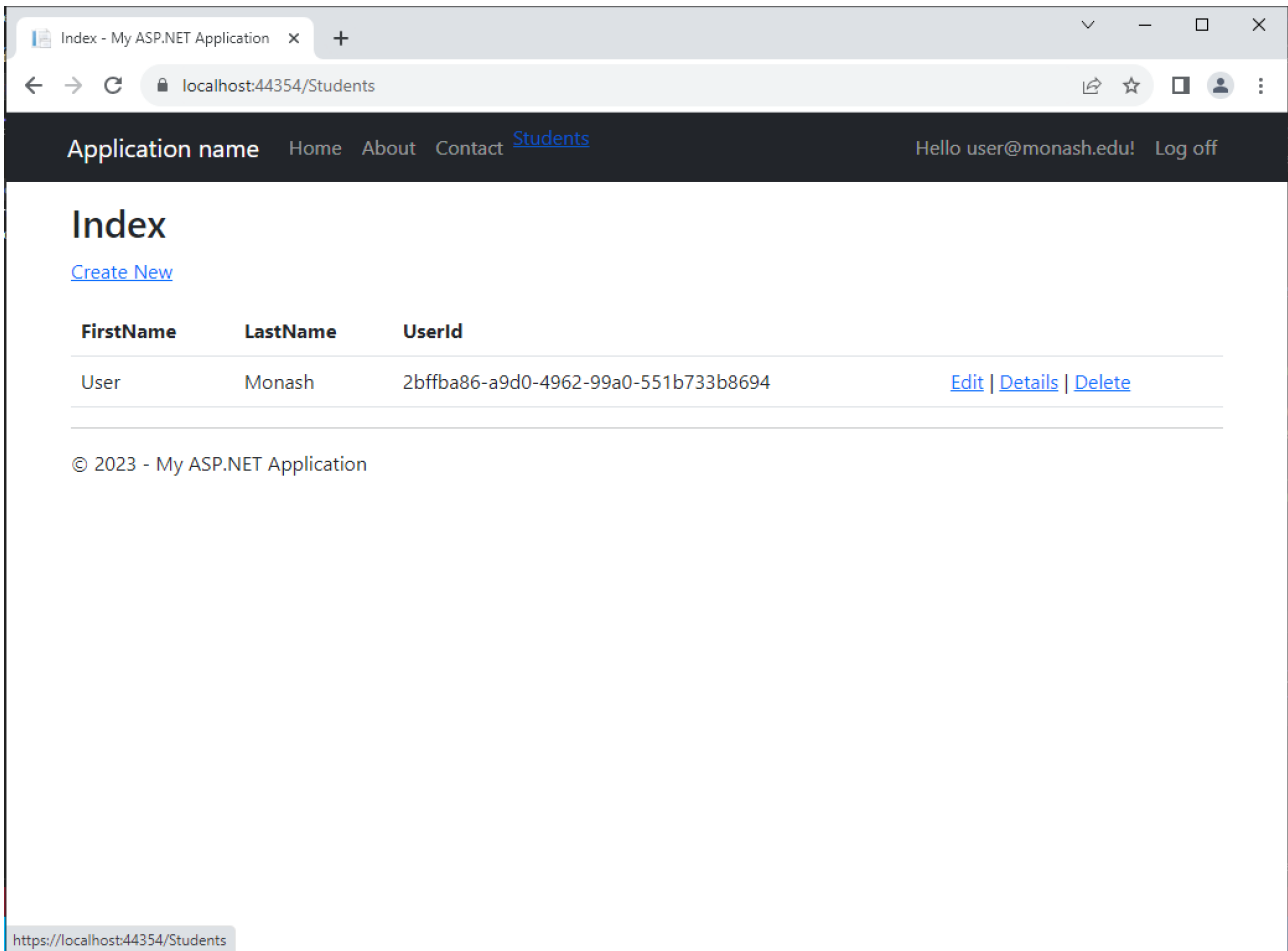
[Learn more »](#)

Web Hosting

You can easily find a web hosting company that offers the right mix of features and price for your applications.

[Learn more »](#)

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Index - My ASP.NET Application

localhost:44354/Students

Application name Home About Contact [Students](#) Hello user@monash.edu! Log off

Index

[Create New](#)

FirstName	LastName	UserId	
User	Monash	2bffa86-a9d0-4962-99a0-551b733b8694	Edit Details Delete

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https://localhost:44354/Students

```

AccountController.cs  dbo.Students [Data]  Startup.Auth.cs  HomeController.cs  StudentsController.cs  _Layout.cshtml
6      <title>@ViewBag.Title - My ASP.NET Application</title>
7      @Styles.Render("~/Content/css")
8      @Scripts.Render("~/bundles/modernizr")
9
10     </head>
11     <body>
12         <nav class="navbar navbar-expand-sm navbar-toggleable-sm navbar-dark bg-dark">
13             <div class="container">
14                 @Html.ActionLink("Application name", "Index", "Home", new { area = "" }, new { @class = "navbar-brand" })
15                 <button type="button" class="navbar-toggler" data-bs-toggle="collapse" data-bs-target=".navbar-collapse"
16                     aria-expanded="false" aria-label="Toggle navigation">
17                     <span class="navbar-toggler-icon"></span>
18                 </button>
19                 <div class="collapse navbar-collapse d-sm-inline-flex justify-content-between">
20                     <ul class="navbar-nav flex-grow-1">
21                         <li>@Html.ActionLink("Home", "Index", "Home", new { area = "" }, new { @class = "nav-link" })</li>
22                         <li>@Html.ActionLink("About", "About", "Home", new { area = "" }, new { @class = "nav-link" })</li>
23                         <li>@Html.ActionLink("Contact", "Contact", "Home", new { area = "" }, new { @class = "nav-link" })</li>
24                         @if (User.Identity.IsAuthenticated)
25                         {
26                             <li>@Html.ActionLink("Students", "Index", "Students")</li>
27                         }
28                     </ul>
29                     @Html.Partial("_LoginPartial")
30                 </div>
31             </div>
32         </nav>
33     </body>
34 </html>

```

{Link to code repository: }

{References: }

{URLs}

Self-Evaluation { High Distinction }:

Need Help	Work in Progress	Pass	Credit	Distinction	High Distinction
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Task {8.1}:

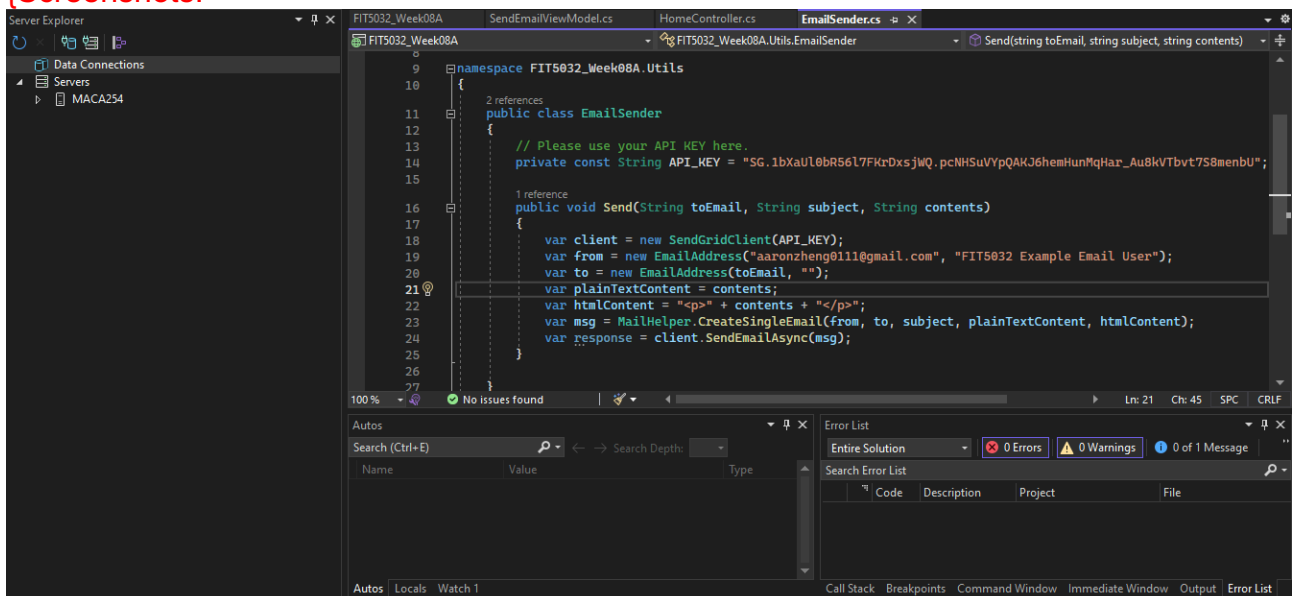
{Answers: A screenshot of your SendGrid console with at least one email delivered.

There are two attempts, one is using my school email, the other one is using my personal email.

The one using the school email is failure due to the school services banned.

The other one using my personal email succeed.}

{Screenshots:



1

Finish your account setup in order to select a paid plan and unlock the full potential of Twilio SendGrid.

Bolin Zheng

Dashboard

Email API

Marketing

Design Library

Stats

Activity

Suppressions

Settings

Twilio SMS NEW

Reputation 0%

VIEW ACCOUNT USAGE

Activity Feed

Search emails by:

To email address

Dates

2023/09/16 - 2023/09/16

STATUS	MESSAGE
Delivered	To: aaronzheng0111@gmail.com FIT5032
Not Delivered	To: bzhe0018@student.monash.edu FIT5032
Not Delivered	To: bzhe0018@student.monash.edu FIT5032
Not Delivered	To: bzhe0018@student.monash.edu FIT5032

Email Information

[Close](#)

Details

To	aaronzheng0111@gmail.com
From	aaronzheng0111@gmail.com
Subject	FIT5032
More Details	

Event History

Received by SendGrid	
Processed	2023/09/19 10:39pm UTC+10:00 >
Received by gmail-smtp-in.l.google.com	
Delivered	2023/09/19 10:39pm UTC+10:00 >
Received by aaronzheng0111@gmail.com	

1

Finish your account setup in order to select a paid plan and unlock the full potential of Twilio SendGrid.

Bolin Zheng

Dashboard

Email API

Marketing

Design Library

Stats

Activity

Suppressions

Settings

Twilio SMS NEW

Reputation 0%

VIEW ACCOUNT USAGE

Activity Feed

Search emails by:

To email address

Dates

2023/09/16 - 2023/09/16

STATUS	MESSAGE
Not Delivered	To: bzhe0018@student.monash.edu FIT5032
Not Delivered	To: bzhe0018@student.monash.edu FIT5032
Not Delivered	To: bzhe0018@student.monash.edu FIT5032

Email Information

[Close](#)

Details

To	bzhe0018@student.monash.edu
From	bzhe0018@student.monash.edu
Subject	FIT5032
More Details	

Event History

Received by SendGrid	
Processed	2023/09/19 10:27pm UTC+10:00 >
Received by ASPMX.L.GOOGLE.COM	
Blocked	2023/09/19 10:27pm UTC+10:00 >
Received by bzhe0018@student.monash.edu	

```

FIT5032_Week08A | SendEmailViewModel.cs | HomeController.cs | EmailSender.cs* | X
FIT5032_Week08A | FIT5032_Week08A.Utils.EmailSender | Send(string toEmail, string subject, string contents)
9
10 namespace FIT5032_Week08A.Utils
11 {
12     2 references
13     public class EmailSender
14     {
15         // Please use your API KEY here.
16         private const String API_KEY = "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";
17
18         1 reference
19         public void Send(String toEmail, String subject, String contents)
20         {
21             var client = new SendGridClient(API_KEY);
22             var from = new EmailAddress("bzhe0018@student.monash.edu", "FIT5032 Example Email User");
23             var to = new EmailAddress(toEmail, "");
24             var plainTextContent = contents;
25             var htmlContent = "<p>" + contents + "</p>";
26             var msg = MailHelper.CreateSingleEmail(from, to, subject, plainTextContent, htmlContent);
27             var response = client.SendEmailAsync(msg);
28         }
29     }
30 }

```

{Link to code repository: }

{References}

{URLs}

Task {8.2}:

{Answers:

Advantages using email services from third parties:

- Save resources and time.
gives you connectivity with your website's content management system (CMS), enabling you to show visitors simple subscription and sign-up forms.
- Provides strong reporting and analysis features, which are lacking in many plugins and extensions.
- High email deliverability rates allow companies to rely on it to reach as many clients as possible. Better privacy protection
- cheaper than professional email services, especially when utilized in large quantities.

Disadvantages of using email services from third parties:

- Email automation is rudimentary and need improvement.
- Service to customers could be slow.

- Blacklist of IPs.
- Unreliable and may misleading clients.
- To operate effective email marketing campaigns. Resources and knowledge are needed.
- Scale problems. Certain email providers may limit the number of users or emails delivered.

}

{Screenshots: }

{Link to code repository: }

{References: <https://savoirfaire-us.com/blog/email-service-providers/>,
<https://www.websitepulse.com/blog/using-third-party-for-mass-email-campaigns>,
<https://www.marketingtutor.net/advantages-and-disadvantages-of-email-marketing/>,
<https://www.mailmodo.com/guides/sendgrid-review/>}

{URLs}