



**COLLEGE OF COMPUTING, INFORMATICS, AND
MATHEMATICS**

DIPLOMA IN COMPUTER SCIENCE

PRACTICAL TRAINING REPORT

AT

LEMBAGA ZAKAT NEGERI KEDAH

MENARA ZAKAT, JALAN TELUK WANJAH, 05200 ALOR SETAR, KEDAH

BY:

NURJANNAH BINTI MOHD NIZAM

2021825562

18 September 2023 – 29 February 2024

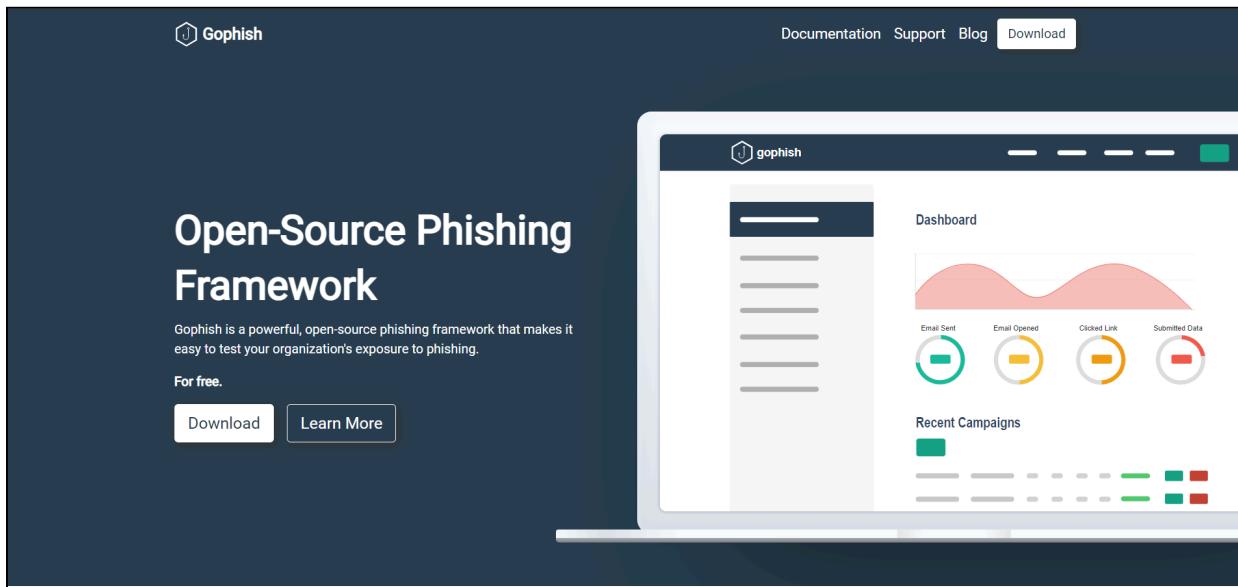


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DOWNLOAD SOFTWARE GOPHISH

The first step in getting Gophish is to download the application from its official website. Once at the website, locate the 'Download' option and click on it. I was able to access the Gophish software by successfully completing this command.



When I click the 'Download' button, it will send to the GitHub page. I have selected the operating system I want to use which is gophish-v0.12.1-windows-64bit.zip.

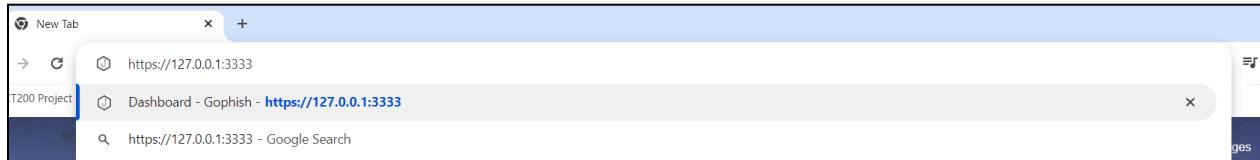
A screenshot of the GitHub page for the gophish repository. The page shows the 'Contributors' section with profiles for mcab and 29vivek. Below this is the 'Assets' section, indicated by a dropdown menu with the number '6'. A table lists six files: 'gophish-v0.12.1-linux-32bit.zip' (31.4 MB, Sep 14, 2022), 'gophish-v0.12.1-linux-64bit.zip' (31.8 MB, Sep 14, 2022), 'gophish-v0.12.1-osx-64bit.zip' (33.2 MB, Sep 14, 2022), 'gophish-v0.12.1-windows-64bit.zip' (32.1 MB, Sep 14, 2022), 'Source code (zip)' (Sep 14, 2022), and 'Source code (tar.gz)' (Sep 14, 2022).

I went to the folder where I saved the Gophish files after I had finished downloading Gophish. I then select the Gophish application to begin using it.

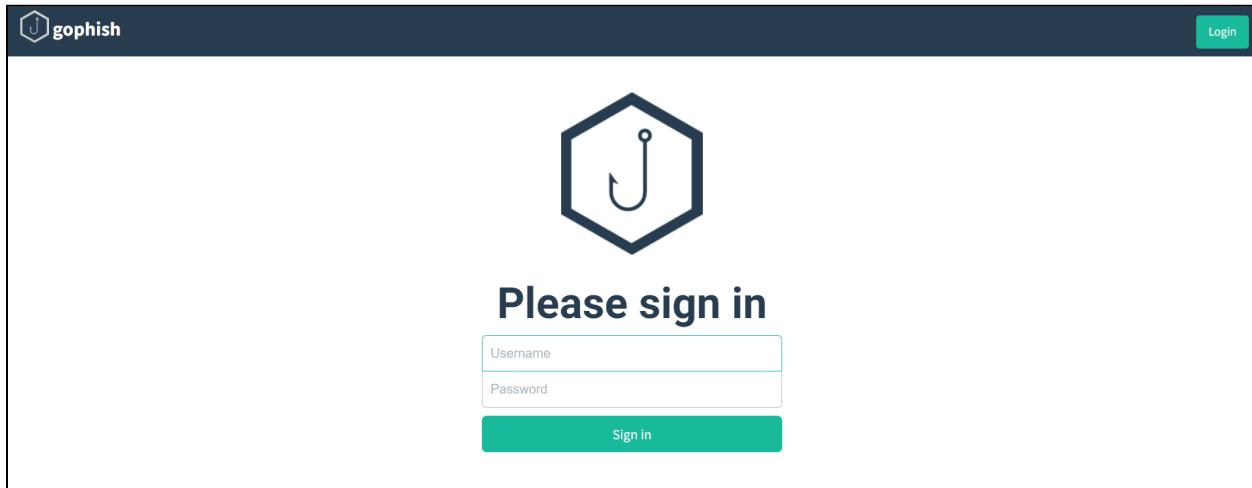
Name	Date modified	Type	Size
db	08/11/2023 08:27	File folder	
static	08/11/2023 08:27	File folder	
templates	08/11/2023 08:27	File folder	
config	26/11/2023 11:16	JSON Source File	1 KB
gophish	14/01/2024 10:45	Data Base File	868 KB
gophish	08/11/2023 08:27	Application	33,780 KB
gophish_admin	08/11/2023 08:28	Security Certificate	1 KB
gophish_admin	08/11/2023 08:28	KEY File	1 KB
LICENSE	08/11/2023 08:27	File	2 KB
README	08/11/2023 08:27	Markdown Source ...	4 KB
VERSION	08/11/2023 08:27	File	1 KB

To launch Gophish, I copied and pasted the address <https://127.0.0.1:3333> into a Google Chrome or web browser tab.

```
time="2024-01-14T11:34:26+08:00" level=warning msg="No contact address has been configured."
time="2024-01-14T11:34:26+08:00" level=warning msg="Please consider adding a contact_address entry in your config.json"
goose: no migrations to run. current version: 20220321133237
time="2024-01-14T11:34:26+08:00" level=info msg="Starting IMAP monitor manager"
time="2024-01-14T11:34:26+08:00" level=info msg="Starting phishing server at http://0.0.0.0:80"
time="2024-01-14T11:34:26+08:00" level=info msg="Starting admin server at https://127.0.0.1:3333"
time="2024-01-14T11:34:26+08:00" level=info msg="Starting new IMAP monitor for user admin"
time="2024-01-14T11:34:26+08:00" level=info msg="Background Worker Started Successfully - Waiting for Campaigns"
```



The website will then open according to the diagram below. Following that, I will log in with the username "admin" and the password that Gophish provided.



I have to copy and paste the password provided by Gophish in order to obtain the password. Gophish will then prompt me to reset the password once more and create the new password.

```
OK 20201201000000_0.11.0 account_locked.sql
OK 20220321133237 0.4.1_envelope_sender.sql
time="2023-02-26T08:32:08Z" level=info msg="Please login with the username admin and the password bf174a9fb68676fa" →
time="2023-02-26T08:32:08Z" level=info msg="Starting phishing server at http://0.0.0.0:80"
time="2023-02-26T08:32:08Z" level=info msg="Starting IMAP monitor manager"
time="2023-02-26T08:32:08Z" level=info msg="Creating new self-signed certificates for administration interface"
time="2023-02-26T08:32:08Z" level=info msg="Background Worker Started Successfully - Waiting for Campaigns"
time="2023-02-26T08:32:08Z" level=info msg="Starting new IMAP monitor for user admin"
time="2023-02-26T08:32:08Z" level=info msg="TLS Certificate Generation complete"
time="2023-02-26T08:32:08Z" level=info msg="Starting admin server at https://127.0.0.1:3333"
```

SENDING PROFILE

I have made a sending profile and will use it to send emails to the users I want to target in order to begin using Gophish. I have to click '**+New Page**' in order to set up a sending profile first.

The screenshot shows the Gophish application's 'Sending Profiles' section. On the left is a sidebar with links: Dashboard, Campaigns, Users & Groups, Email Templates, Landing Pages, **Sending Profiles** (which is selected and highlighted in dark blue), and Account Settings. The main area has a title 'Sending Profiles' and a teal button '+ New Profile'. Below that is a search bar 'Search:' and a table with one entry. The table columns are 'Name' (sorted by arrow), 'Interface Type' (sorted by arrow), and 'Last Modified Date' (sorted by arrow). The single entry is 'Google' with 'SMTP' as the Interface Type and 'November 15th 2023, 10:12:51 am' as the Last Modified Date. To the right of the table are three small teal icons: a pencil, a person, and a trash can.

Name	Interface Type	Last Modified Date
Google	SMTP	November 15th 2023, 10:12:51 am

Then I need to fill in all the information in the profile session such as profile name, SMTP From, Host, Username and Password.

New Sending Profile

Name: Gophish

Interface Type: SMTP

SMTP From: [?](#) noreply_lznk@gmail.com

Host: smtp.gmail.com:465

Username: infomanagment08@gmail.com

Password: *****

Ignore Certificate Errors [?](#)

Email Headers:

3, 10: 3, 10: 3, 3: 3, 11: 6

I have used my Gmail account as the username, but I also can use any kind of account, including Outlook, Hotmail, and others. To get a password for sending profile in Gophish, I have to access my **Google Account**, go to the **Security section**, and **select 2-Step Verification** in order to retrieve the password for Gmail. After that, click the **App Password**.

The screenshot shows the Google Account security interface. On the left, there's a sidebar with links: Home, Personal info, Data & privacy, **Security** (which is highlighted with a blue bar), People & sharing, and Payments & subscriptions. The main content area has a header "How you sign in to Google" with a sub-instruction "Make sure you can always access your Google Account by keeping this information up to date". Below this, under "2-Step Verification", it says "On since Nov 13, 2023". At the bottom of the main content area, there's a box titled "App passwords" containing the text "App Passwords aren't recommended and are unnecessary in most cases. To help keep your account secure, use 'Sign in with Google' to connect apps to your Google Account." and a link "App passwords 2 passwords".

Then, after clicking on the ‘Create button’, I will receive a password as shown in the diagram below. I need to copy this password and paste it into the password section of the sending profile.

The image consists of two screenshots of the Google Account 'App passwords' page.

Screenshot 1 (Top): Shows the 'Your app passwords' section. It lists two entries:

-]hope (Created on Jan 7, last used on Jan 7)
- Gophish (Created on Nov 13, 2023, last used on Nov 15, 2023)

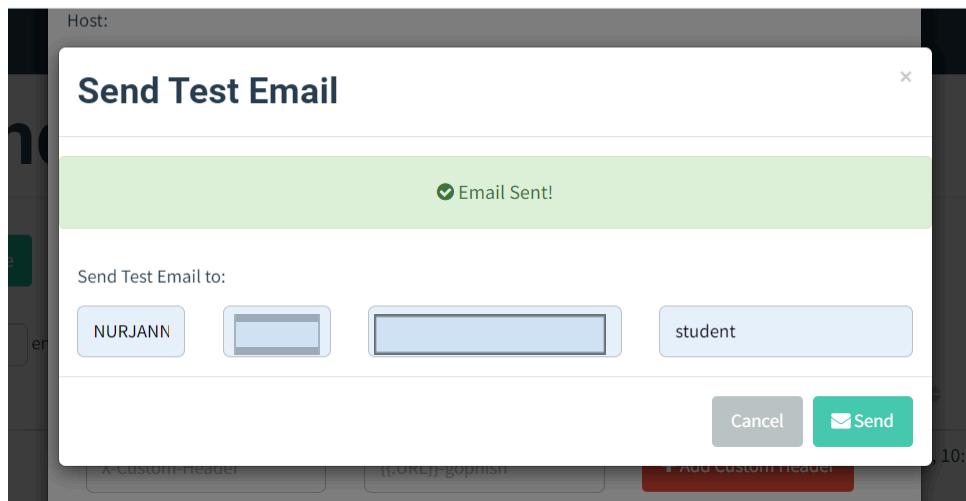
Below the list is a text input field labeled 'App name' containing '3'. A 'Create' button is located at the bottom right of the list area.

Screenshot 2 (Bottom): A modal window titled 'Generated app password' displays the password 'meht nnqs wdqy mihp'. Below the password, there is a 'How to use it' section with instructions and a 'Done' button.

Next, click on '**Ignore Certificate Errors**' and save the profile so that the information I filled in a moment ago is not lost. Then, I clicked the 'Send Test Email' button to test whether the email I filled in just now was successfully sent to the user or not.

The screenshot shows the 'Email Headers' configuration page. At the top, there is a checked checkbox labeled 'Ignore Certificate Errors'. Below it, there is a table titled 'Email Headers' with columns 'Header' and 'Value'. A red button labeled '+ Add Custom Header' is located at the top right of the table area. The table displays the entry 'X-Custom-Header' with the value '{[.URL]}-gophish'. Below the table, there are buttons for 'Previous' and 'Next'. At the bottom right of the page are 'Cancel' and 'Save Profile' buttons.

Then I enter my email or the user's email and send the email.



If the email is successfully sent then I will get an email message like the picture below.

Default Email from Gophish Inbox ×

 infomanagment08@gmail.com
to me ▾

It works!

This is an email letting you know that your gophish configuration was successful.
Here are the details:

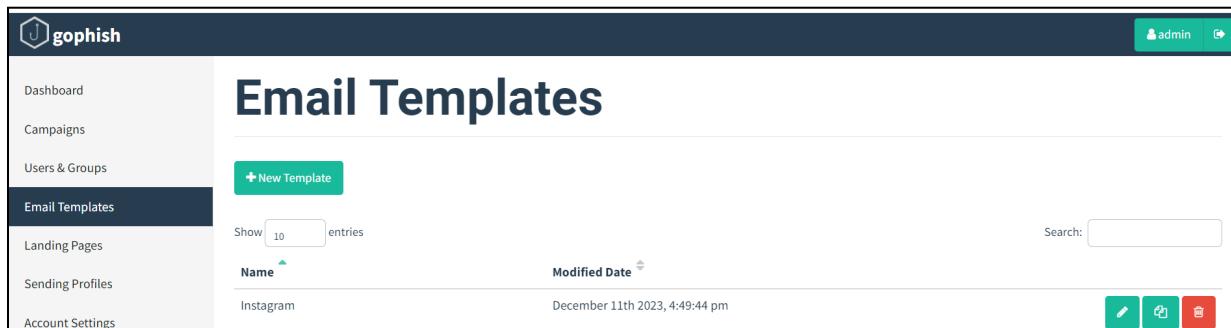
Who you sent from: noreply_lznk@gmail.com

Who you sent to:
First Name: nur
Last Name: jannah
Position: student

Now go send some phish!

EMAIL TEMPLATE

Next step, I create an email template. I went to the Email Templates section and clicked '**+New Template**'.



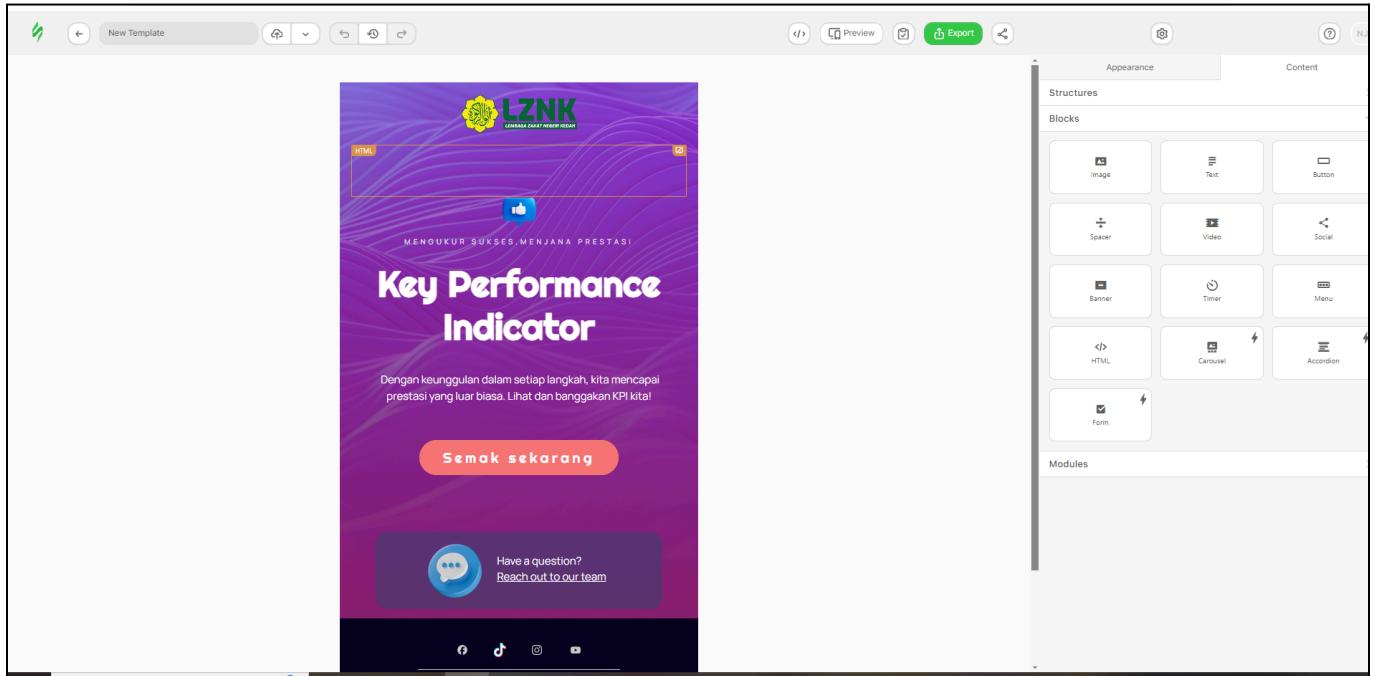
The screenshot shows the Gophish web application's 'Email Templates' page. The left sidebar has a dark theme with white text and includes links for Dashboard, Campaigns, Users & Groups, Email Templates (which is highlighted in blue), Landing Pages, Sending Profiles, and Account Settings. The main content area has a light background. At the top, there's a green button labeled '+ New Template'. Below it, a table lists one template entry: 'Instagram' by 'admin' from 'December 11th 2023, 4:49:44 pm'. The table has columns for 'Name' and 'Modified Date'. At the bottom of the table are three icons: a pencil for edit, a magnifying glass for preview, and a trash can for delete. On the far left of the table, there's a 'Show 10 entries' dropdown and a 'Search:' input field. The overall layout is clean and modern.

I entered all the details, including the template name, in the email template. '**kpi2**' is the template name that I have selected.



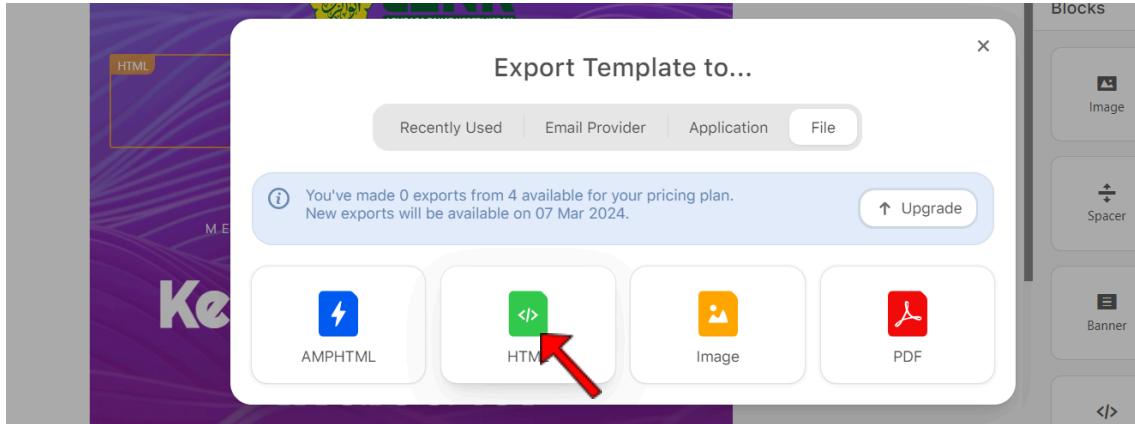
This screenshot shows a simplified version of an email template interface. It features a single row with a 'kpi2' label on the left, a timestamp 'January 31st 2024, 4:18:31 pm' in the center, and three small green icons with white symbols on the right (likely for edit, preview, and delete).

I then created my email template on the Stripo website to get the style I wanted.



This screenshot shows the Stripo website's drag-and-drop editor. On the left, there's a preview of a purple landing page for 'LZNK' with a yellow logo and a 'Key Performance Indicator' section. The right side of the screen contains a toolbar with various icons for file operations like New Template, Save, and Export. Below the toolbar is a sidebar with sections for Appearance, Structures, and Blocks. The 'Blocks' section is expanded and shows a grid of icons for different content types: Image, Text, Button, Spacer, Video, Social, Banner, Timer, Menu, HTML, Carousel, and Form. The 'Form' icon is currently selected. The overall interface is user-friendly with a focus on visual design and easy customization.

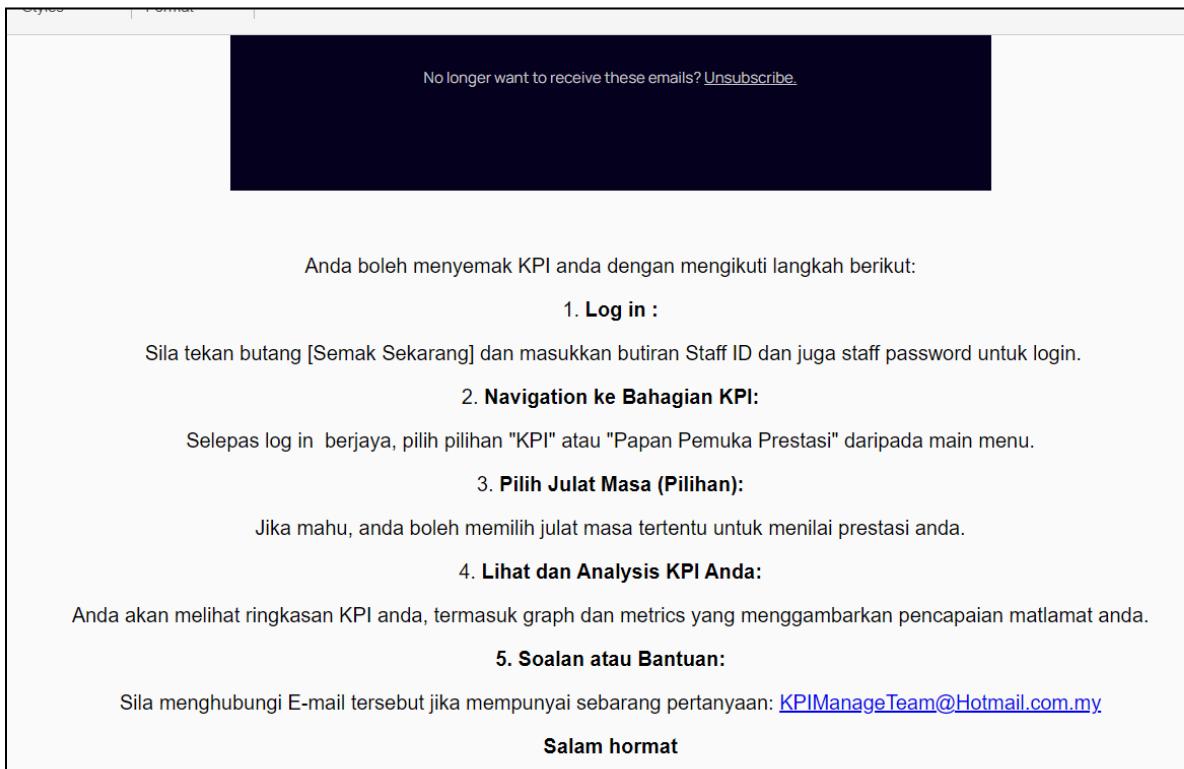
After I finished editing the template, I exported the template in HTML format.



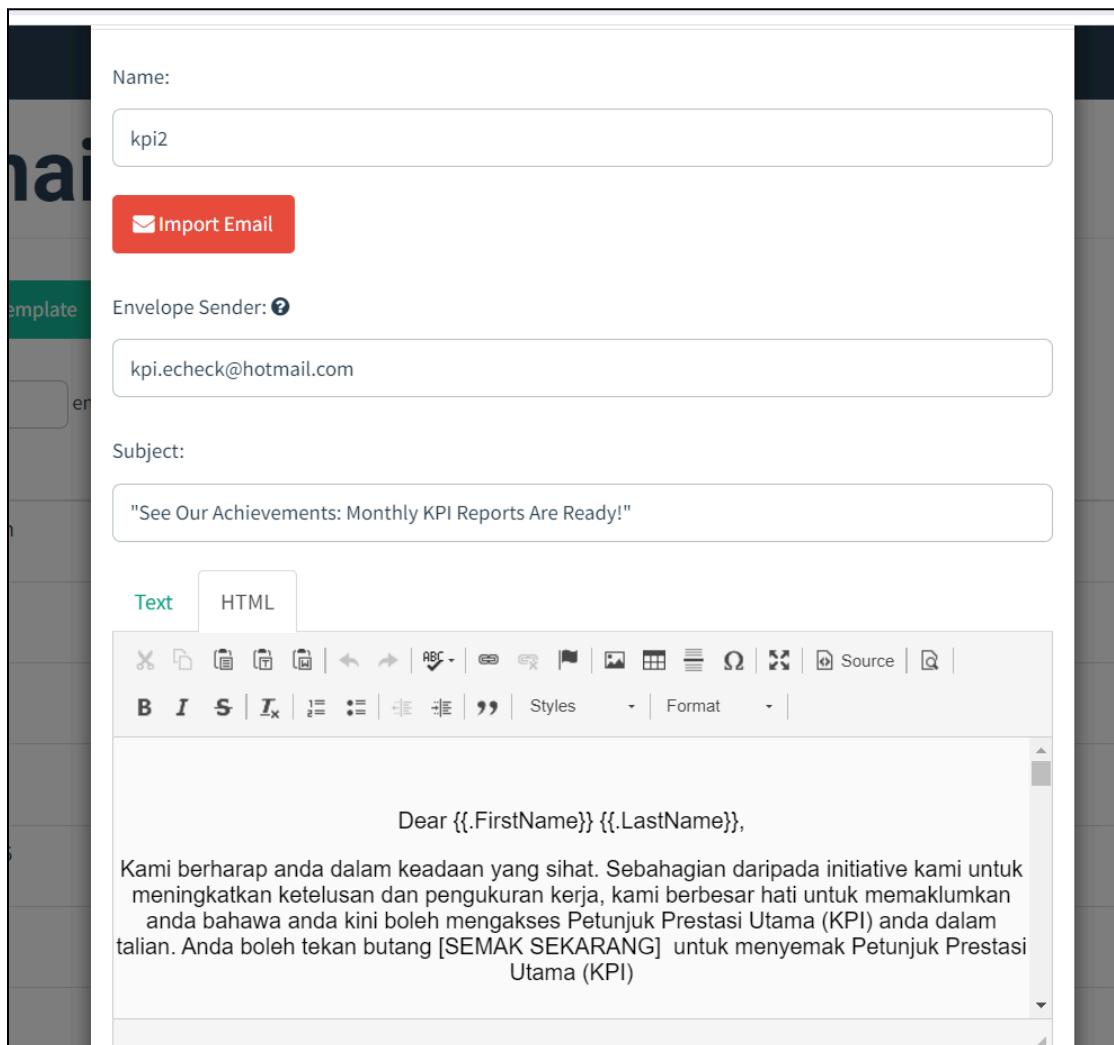
Next, I click "save template" to save my template after copying and pasting the HTML code into the email template.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html dir="ltr" lang="id" style="font-family:arial, 'helvetica neue', helvetica, sans-serif" xmlns="http://www.w3.org/1999/xhtml" xmlns:o="urn:schemas-microsoft-com:office:office">
<head><meta charset="UTF-8"><meta content="width=device-width, initial-scale=1" name="viewport"><meta name="x-apple-disable-message-reformatting"><meta http-equiv="X-UA-Compatible" content="IE=edge"><meta content="telephone=no" name="format-detection">
<title>New Template</title>
<!--[if (mso 16)]>
<style type="text/css">
a {text-decoration: none;}
</style>
<![endif]--><!--[if gte mso 9]><style>sup { font-size: 100% !important; }</style><![endif]--><!--[if gte mso 9]>
<xm1>
<o:OfficeDocumentSettings>
<o:AllowPNG></o:AllowPNG>
<o:PixelsPerInch>96</o:PixelsPerInch>
</o:OfficeDocumentSettings>
</xm1>
<![endif]--><!--[if !mso]><!-- -->
<link href="https://fonts.googleapis.com/css2?family=Manrope:wght@200;300;400;500;600;700;800&display=swap" rel="stylesheet" />
<link href="https://fonts.googleapis.com/css2?family=Righteous&display=swap" rel="stylesheet" /><!--<!--[endif]-->
<style type="text/css">#outlook a {
padding:0;
}
.es-button {
mso-style-priority:100!important;
text-decoration:none!important;
}
```

Like the diagram below, I have also created a hype verse.



The overview of the email template.



LANDING PAGES

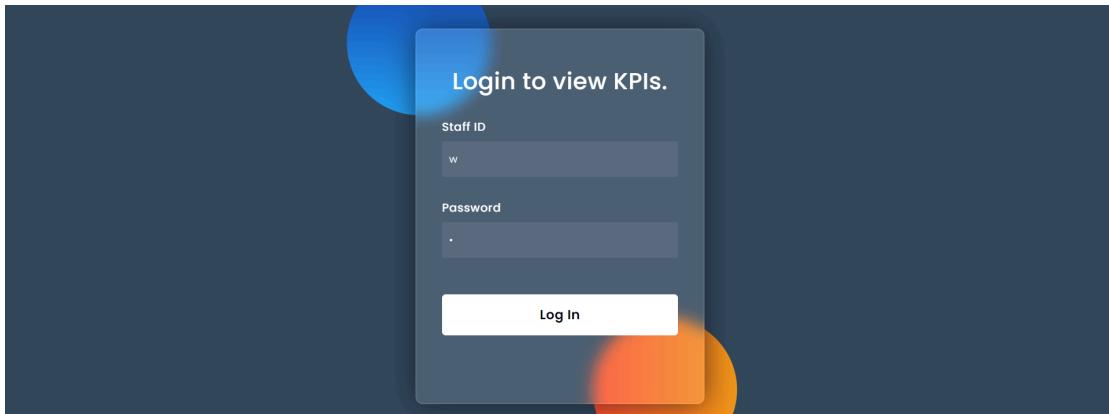
I made the landing pages after creating the email template. I selected the "+New Page" button after selecting "landing pages" from the sidebar.

The screenshot shows the 'Landing Pages' section of the gophish application. The left sidebar has a dark blue background with white text and icons. The 'Landing Pages' option is highlighted with a dark blue background. The main area has a light gray background. At the top, there is a green button labeled '+ New Page'. Below it, there is a search bar with 'Show 10 entries' and a 'Search:' input field. A table lists one entry: 'Name' (1), 'Last Modified Date' (January 3rd 2024, 9:33:39 am). On the right side of the table are three small icons: a green pencil, a blue square with a white arrow, and a red square with a white icon.

I went to the CodePen website and downloaded the login template I wanted to use to create a landing page.

The screenshot shows the CodePen website with a dark theme. The left sidebar has a dark background with white text and icons. The main area has a light gray background. The search bar at the top contains the word 'login'. Below the search bar, there are several navigation buttons: 'Your Work', 'Pens', 'Projects', and 'Collections'. Underneath these, there are filters: 'SORT BY Relevance & Popularity', 'SEARCH DEPTH Everything', and 'INCLUDE FORKS?'. The main content area displays five login form templates. Each template is shown in a card format with a preview image, a title, and a brief description. The titles include 'Login Form with floating pla...', 'Flat HTML5/CSS3 Login Form', and 'Sign-Up/Login Form'. The descriptions mention authors like Soufiane Khalifaoui HaSsani, Aigars Silkalns, and Eric.

Overview Login template that I choose. However, Gophish's requirement that the template be in HTML format only is one of its weaknesses. I subsequently combined HTML and CSS formatting together.



Subsequently, I press the "**Capture Submitted Data**" and "**Capture Password**" buttons to obtain user data. Next, I entered the link under 'Redirect to'. Thus, the user will be directed to the URL I have provided as soon as they click the "Log In" button.

A screenshot of the Gophish configuration interface. It shows an HTML editor with the following code:

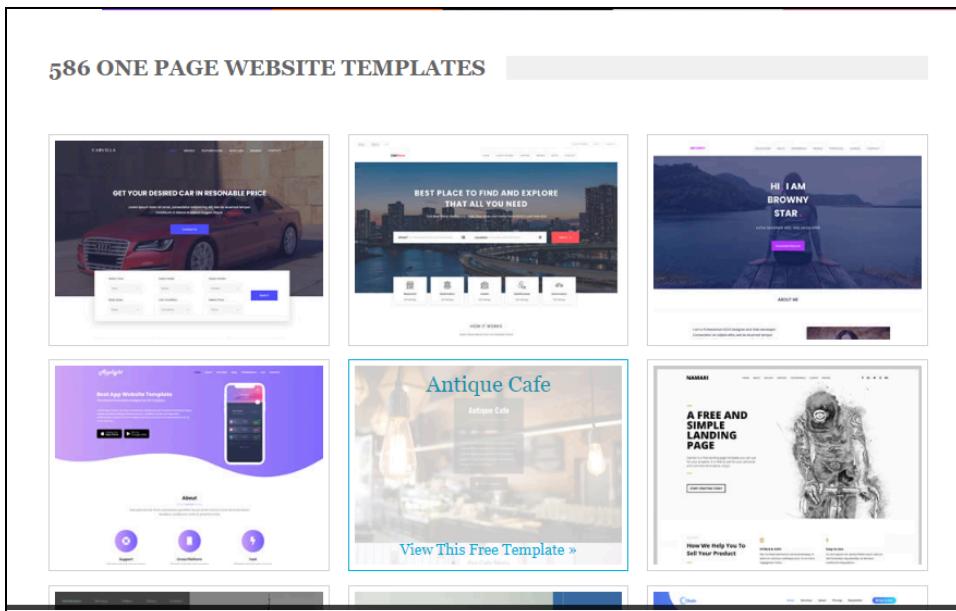
```
<!DOCTYPE html><html lang="en"><head><meta charset="UTF-8"/>
<title>LOGIN</title>
</head>
<body><!-- partial:index.partial.html --><!-- Design by foolishdeveloper.com -->

<title></title>
<link href="https://fonts.gstatic.com" rel="preconnect"/>
<link href="https://cdnjs.cloudflare.com/ajax/libs/font-
```

Below the editor, there are two checked checkboxes: "Capture Submitted Data" and "Capture Passwords". A yellow warning box states: "Warning: Credentials are currently **not encrypted**. This means that captured passwords are stored in the database as cleartext. Be careful with this!". At the bottom, there is a "Redirect to:" field containing "https://njniz.github.io/SCAM-ALERT/" and two buttons: "Cancel" and "Save Page".

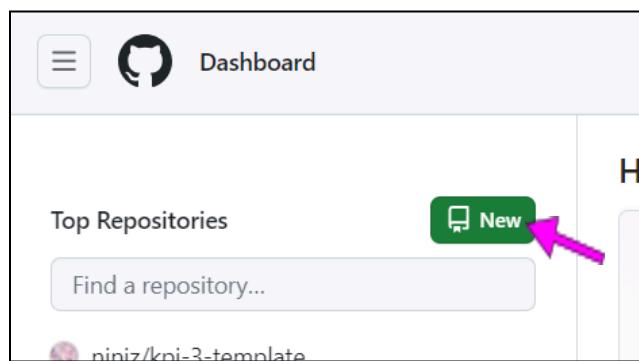
This is the step on how I do the Warning Page and convert it to the link to put at Redirect to.

First, I chose the Warning template at CSS One Page Website. After that, I select the template, download it, and then design it.

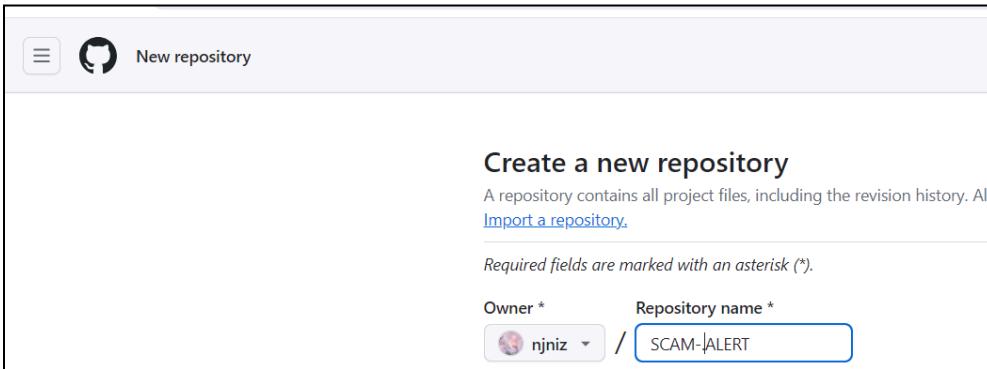


Here is how I get my warning page to show up in link form using GitHub.

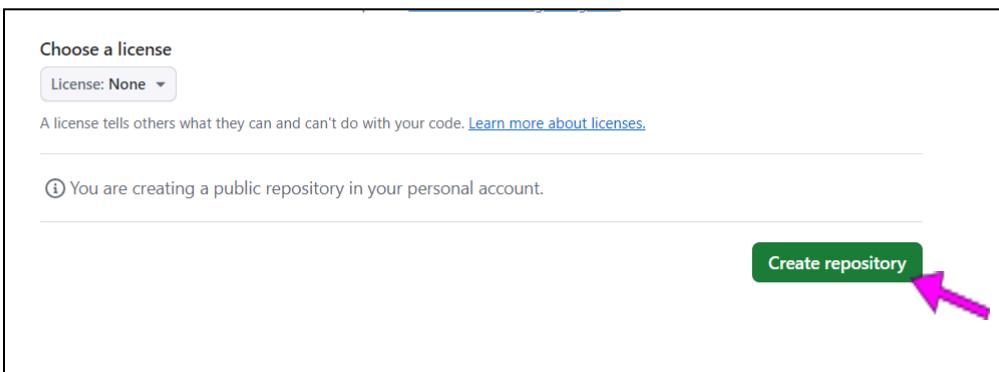
1. First, I click 'New'



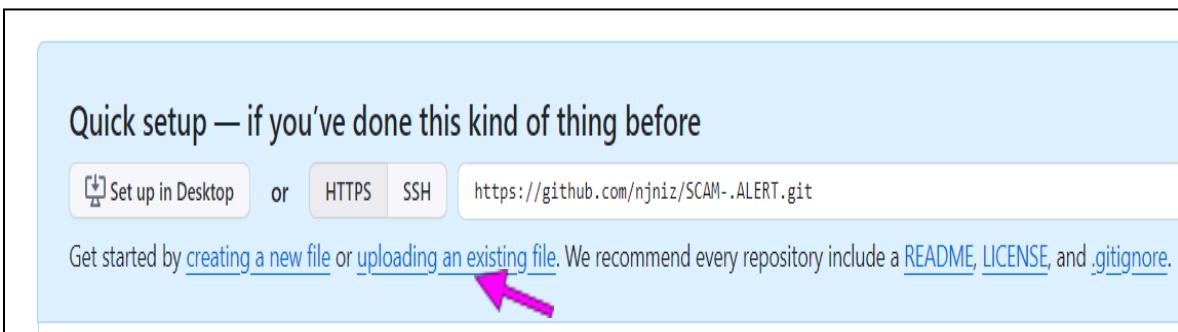
2. Then, I named my repository as 'SCAM-ALERT'.



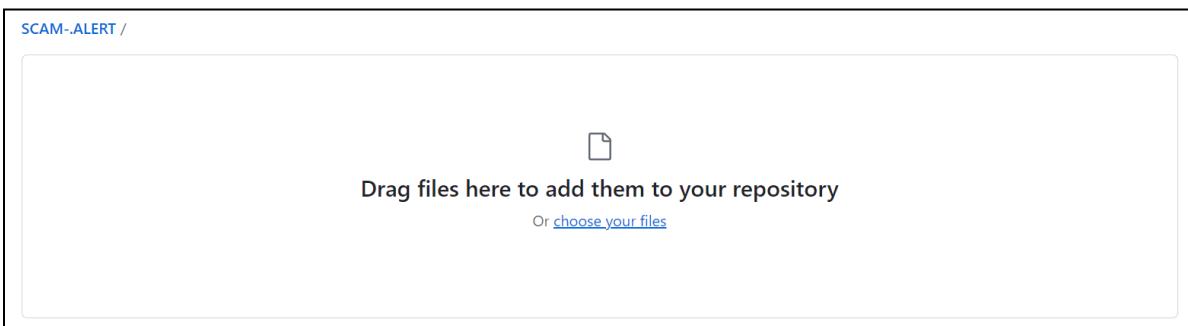
3. After that, I click 'Create repository.'



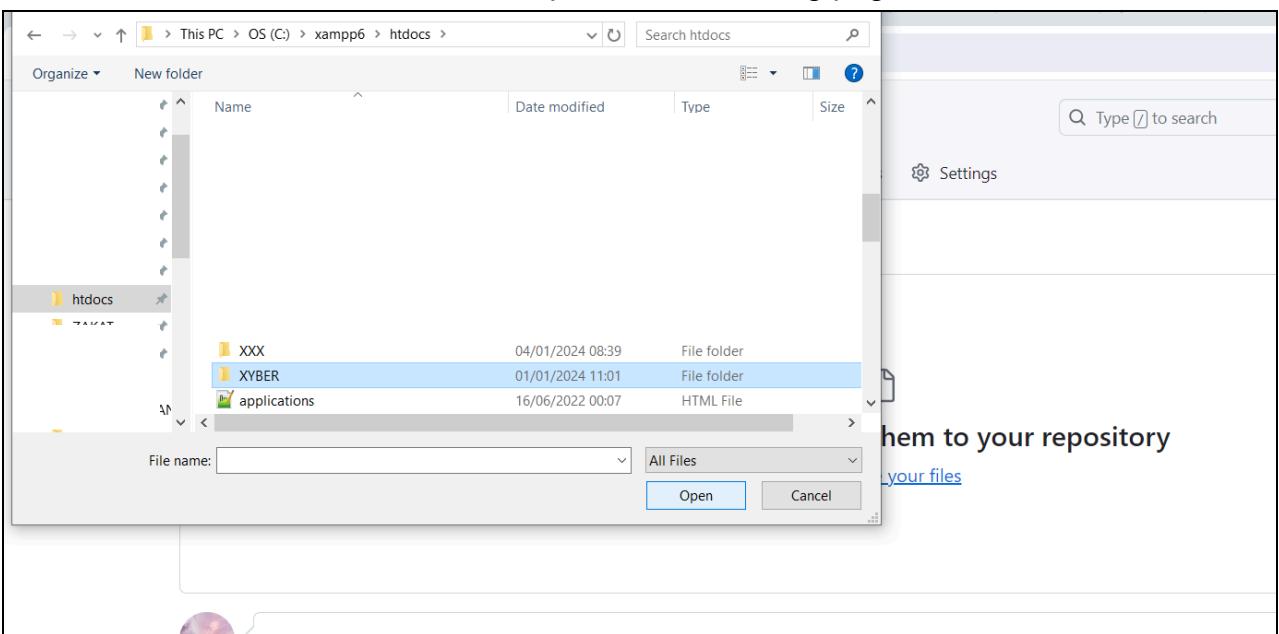
4. Then I click 'uploading an existing file'.



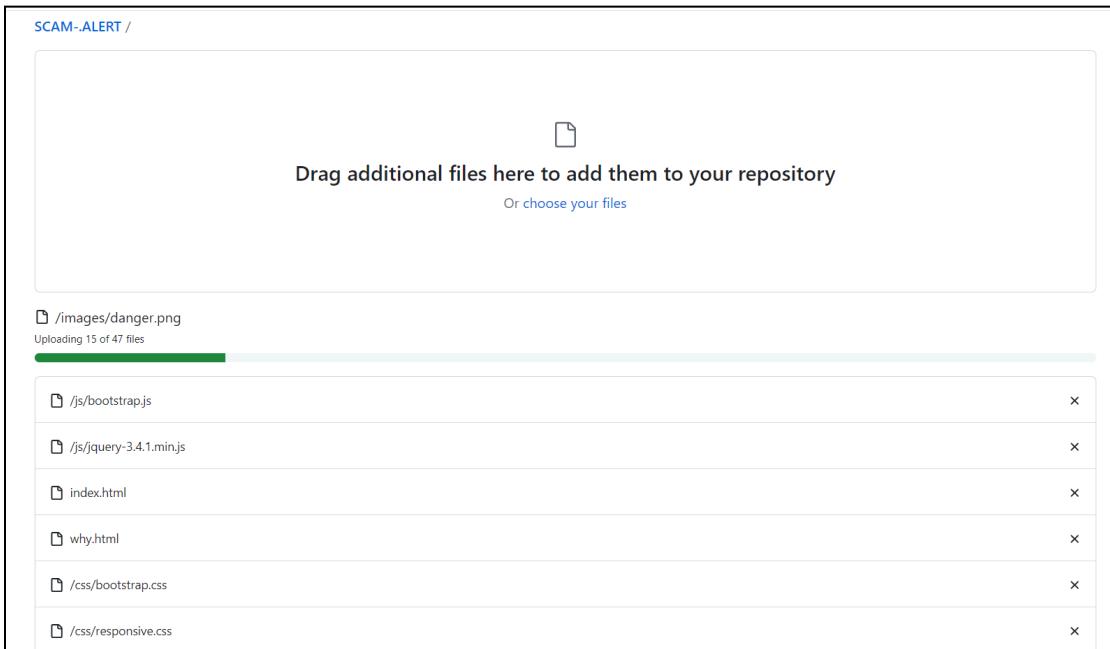
5. Next, I drag the Warning page file in here.



6. I chose a folder called XYBER where I placed the Warning page file.



7. Next I wait for the file to be uploading.



8. Once the file has finished uploading, I select "Setting."

A screenshot of a GitHub repository page for "SCAM-ALERT". The header includes links for Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. A pink arrow points to the "Settings" link. The main content area shows a list of files:

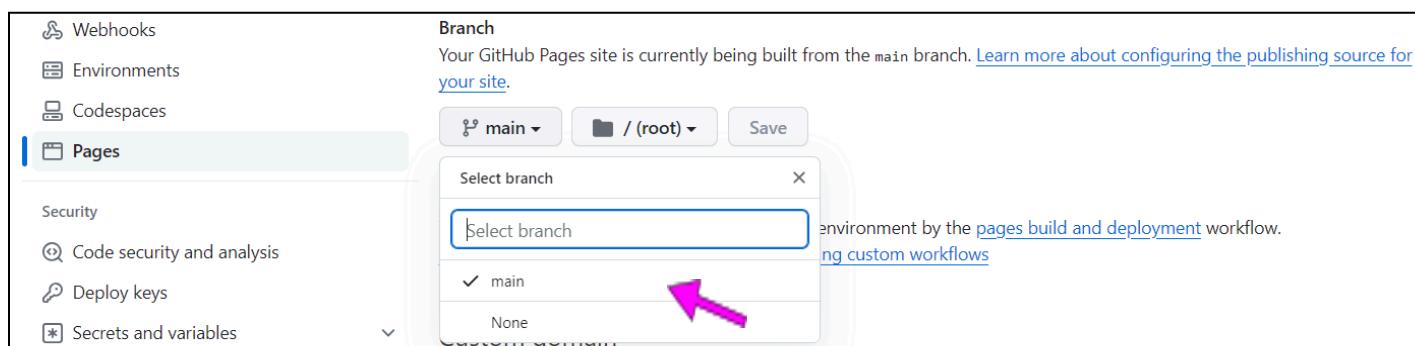
- njniz Add files via upload ✓
- css Add files via upload last month
- images Add files via upload last month
- js Add files via upload last month
- index.html Add files via upload last month
- why.html Add files via upload last month

At the bottom, there's a "README" file. On the right side, there's an "About" section with "No description, website, or topics provided." and an "Activity" section showing 0 stars, 1 watching, and 0 forks. There are also sections for "Releases" (No releases published) and "Packages".

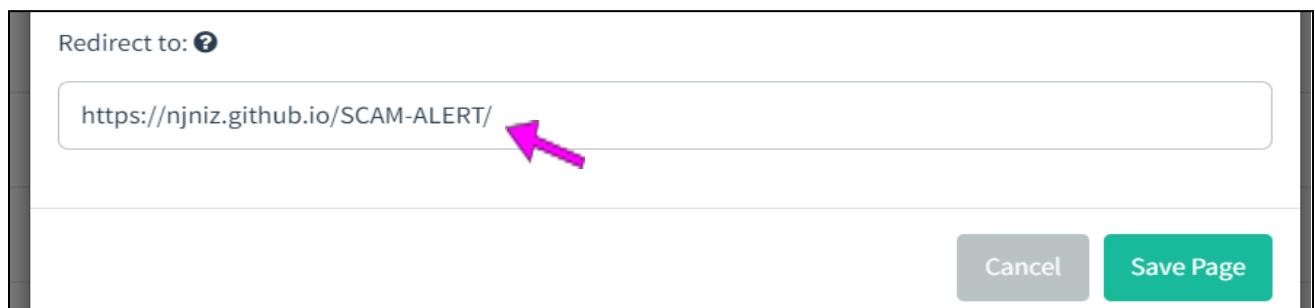
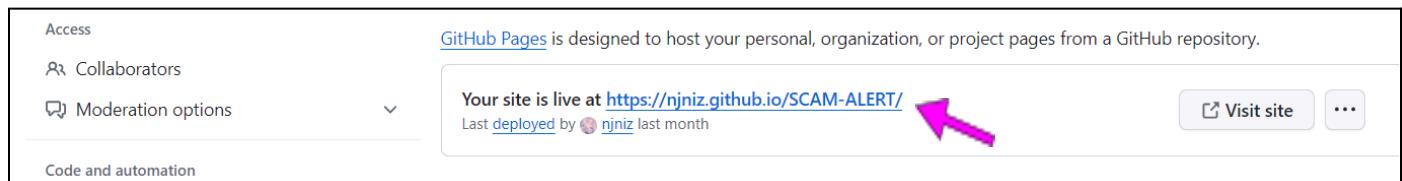
9. Then I click 'Pages'



10. Then I select 'main' and then I click 'Save'.



11. After waiting a few seconds, the link will be generated. And I will copy and paste the link in 'Redirect to' on the landing page and save the file.



USER & GROUP

To create a User & Group, first I navigate to the "**User & Group**" page in the navigation menu and I click the '**+ New Group**' button.

Name	# of Members	Modified Date
10 org	7	January 2nd 2024, 10:47:57 am

There are 9 groups of workers after being divided. To insert each group into users & groups, the file needs to be formatted in CSV format or in Notepad.

In addition, make sure there is a first name, last name, email, and even position. If there is a lack of any such information, it will cause an error.

Edit Group

Name: Gophish

+ Bulk Import Users Download CSV Template

NURJANN NIZAM z@gmail.com + Add + Position

Show 10 entries Search:

First Name Last Name Email Position

No data available in table

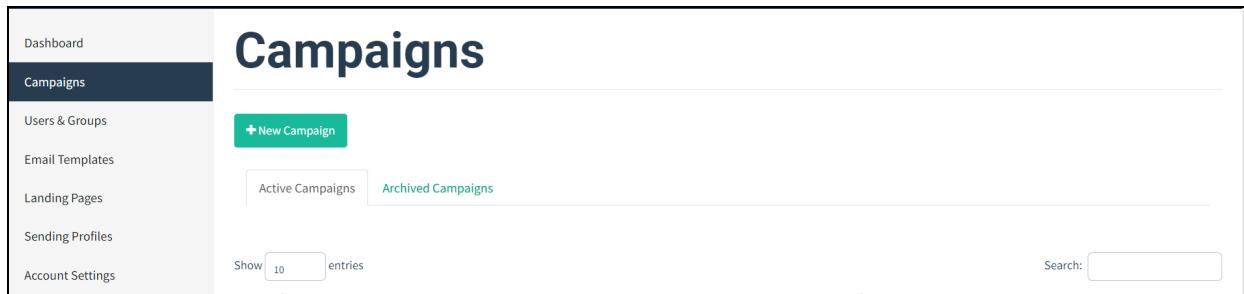
Showing 0 to 0 of 0 entries

Close Save changes

KUMPULAN 1	24	January 4th 2024, 10:48:41 am
KUMPULAN 2	21	January 4th 2024, 10:49:46 am
KUMPULAN 3	40	January 4th 2024, 11:04:10 am
KUMPULAN 4	40	February 3rd 2024, 11:00:56 pm
KUMPULAN 5	40	January 4th 2024, 11:05:05 am
KUMPULAN 6	40	January 4th 2024, 11:05:29 am
KUMPULAN 7	40	January 4th 2024, 11:05:42 am
KUMPULAN 8	40	January 4th 2024, 11:10:47 am
KUMPULAN 9	8	January 4th 2024, 11:06:13 am

CAMPAIGNS

To configure and launch a campaign, I click on the "Campaign" entry in the navigation sidebar and click the '**+New Campaigns**' button.



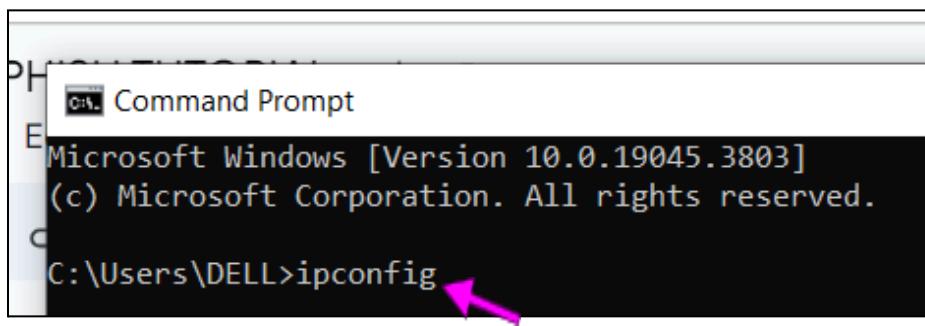
I enter the campaign details, like the campaign name, and the names I have set for the "Landing Pages" and "Email Template." Next, I enter the URL to be used and select the launch date. After that, I enter the sending profile I have configured, and enter the name of the group I want to target.

A screenshot of a 'New Campaign' dialog box. It contains the following fields:

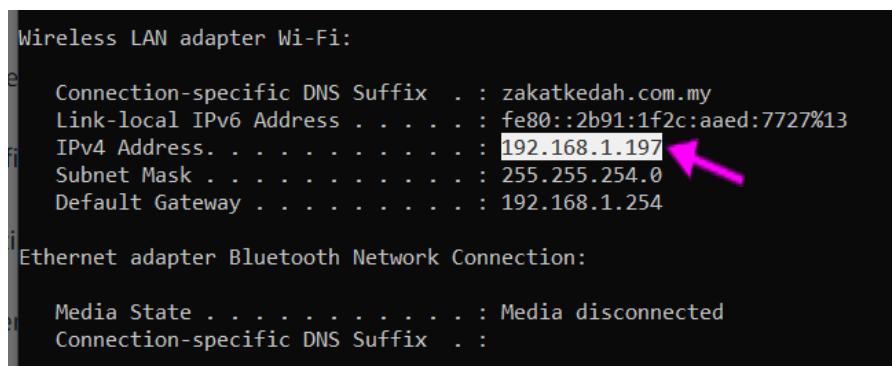
- Name: KUMPULAN 8
- Email Template: kpi2
- Landing Page: 1
- URL: http://192.168.0.215
- Launch Date: January 11th 2024, 10:57 am
- Send Emails By (Optional): (empty field)
- Sending Profile: info management
- Groups: * KUMPULAN 8

At the bottom right are 'Close' and 'Launch Campaign' buttons, with the 'Launch Campaign' button being teal.

To get the URL for the campaign, I go to the taskbar and search for 'Command Prompt'. After successfully getting into the Command Prompt, I typed the command 'ipconfig', and that will display the IP address as shown in the picture below.



I copied the IP address and pasted it into the URL in the campaign, as shown in the diagram below.



The overview of campaigns. Once I have finished filling in all the information in the campaigns, I will click the "Launch Campaign" button.

New Campaign

Name:

Email Template:

Landing Page:

URL: [?](http://192.168.0.215)

Launch Date

Send Emails By (Optional) [?](#)

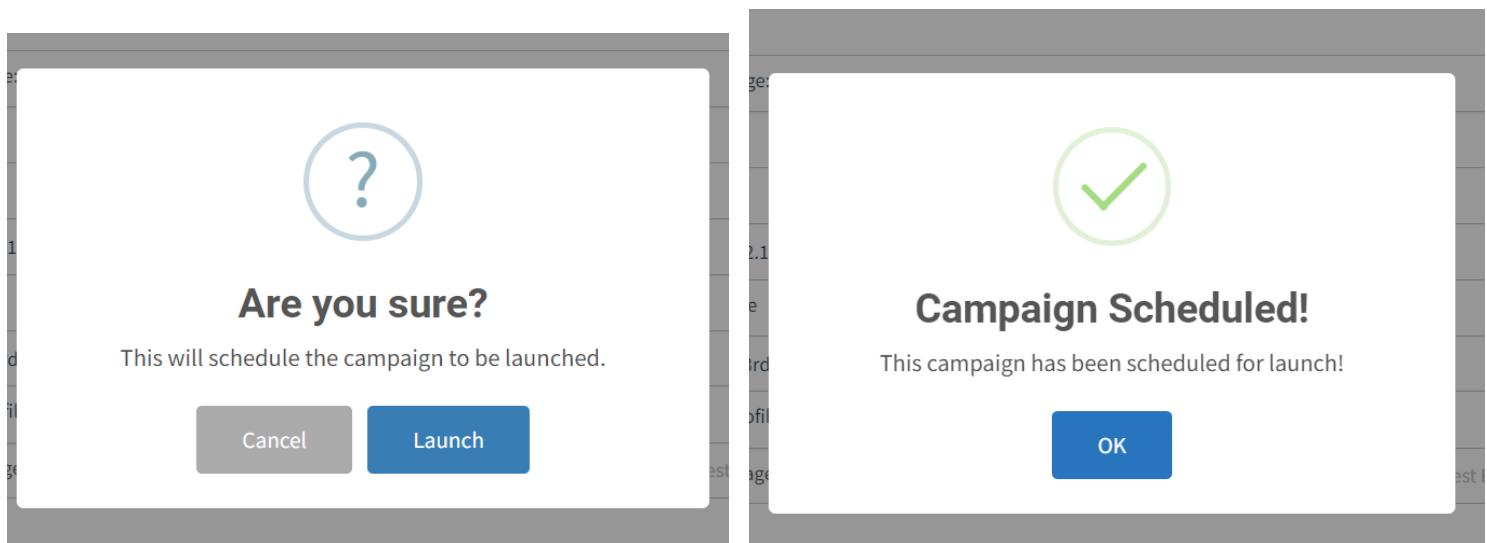
Sending Profile:

 [▼](#) [Send Test Email](#)

Groups:

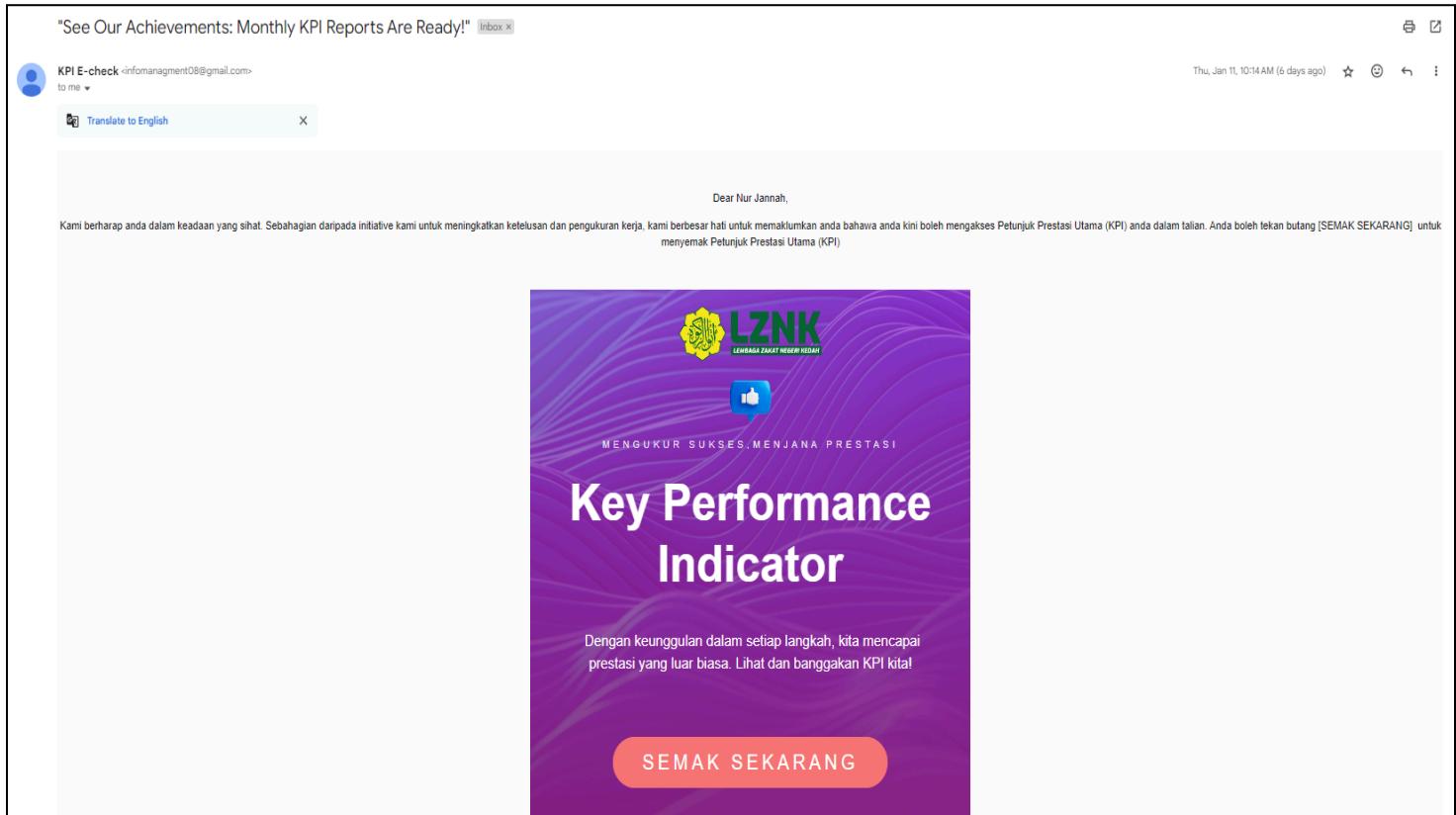
[Close](#) [Launch Campaign](#)

After I click the 'Launch Campaign' button, the system at Gophish will ask me again if I want to launch the campaign or not. If I want to continue, then I have to press the Launch button and then press the OK button, indicating that I have launched the campaign.

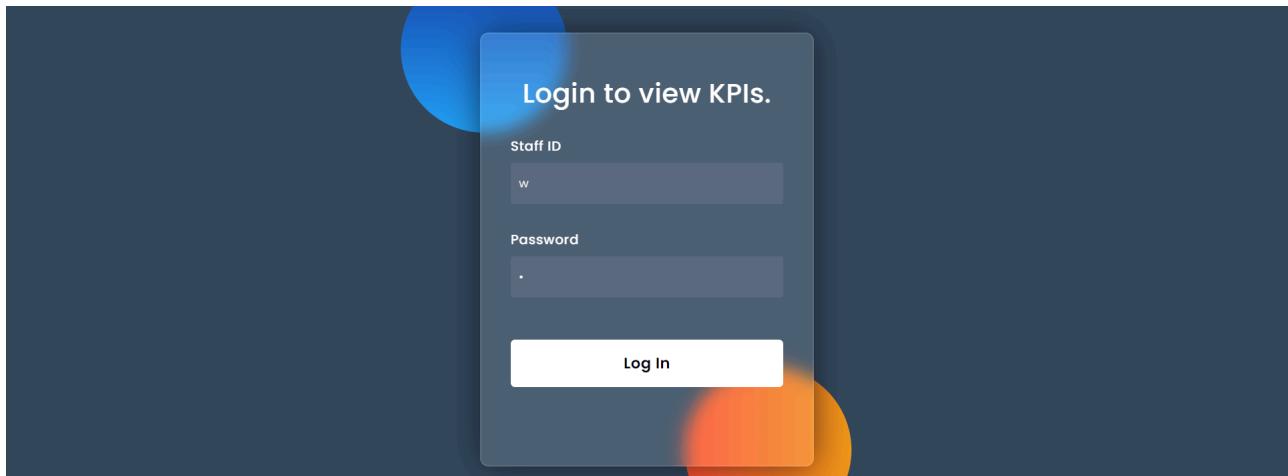


GMAIL

After I succeed in launching the campaign, the user will get an email from my campaign as shown in the diagram below. When the user clicks the 'SEMAK SEKARANG' button, it will go to the next page which is the landing page that I have created on Gophish.



The landing page that I set in Gophish will be displayed to the user upon clicking the "SEMAK SEKARANG" button. I ask users to enter in their staff ID and password, as indicated in the diagram below.



After the user fills in the information on the Login Pages, the user will click the 'Login' button. After the user clicks the button, it will take the user to the Waring Page as shown in the diagram below.



Here, I want to say that this phishing email is just an experiment to find out how aware LZNK employees are of email phishing.



In addition, I give a little bit of advice to employees not to fall victim to email phishing schemes.

TERDAPAT BANYAK CARA UNTUK MENGELAKI TERKENA SERANGAN PHISHING

Jangan Dedahkan Maklumat Peribadi Anda

Jangan mendedahkan maklumat peribadi anda di internet. Antara maklumat peribadi yang tidak seharusnya dikongsikan adalah nama penuh, alamat kediaman, nombor kad pengenalan, nombor telefon atau plat kenderaan dan lain-lain. Ini membolehkan penipu mencuri identiti anda dan menyamar untuk melakukan perbuatan yang tidak bermoral seperti memohon pinjaman atau sebarang aktiviti jenayah.

Elakkan Klik Link Yang Mencurigakan/Suspicious

Hindari klik pautan dalam email yang mencurigakan atau email yang meminta anda melengkapkan maklumat peribadi atau maklumat akaun online anda. Jika ada keraguan, terus semak maklumat sumber email dengan melayari aplikasi internet yang sah.

Berhati-hati dengan Permintaan untuk Maklumat Peribadi

Tiada agensi rasmi yang akan meminta maklumat peribadi, seperti kata laluan atau nombor kad kredit, melalui e-mel. Jika anda menerima e-mel yang meminta maklumat sensitif, terus laporkan e-mel tersebut sebagai e-mel scam.

Laporkan E-mel Phishing

Jika anda menerima e-mel palsu (phishing email), laporan dengan kadar segera kepada pihak bertanggungjawab Divisyen Pengurusan Keselamatan Siber (DPKS.US@zakatkedah.com.my). Dengan bertindak cepat, kita dapat meminimumkan risiko dan memberi peluang kepada pihak berkuasa untuk menyiasat dan menangani penjenayah dalam talian.

Next, I give words of warning to employees so that they will not get caught up in phishing emails. In addition, I also confirm that this campaign is under the cyber security management division (CSMD).

