

Experiment No. 6

Title: E-mail handling using PHP

Batch: B-2

Roll No.: 16010422234

Experiment No.: 6

Aim: To perform E-mail handling using PHP

Resources needed: Windows OS, Web Browser, Editor, XAMPP Server

Pre-Lab/ Prior Concepts:

Students should have prior knowledge of HTML/CSS/Basic Programming.

Theory:

1) How to send Emails using PHP mail() Function

To use the PHP send mail feature, users hosting their PHP application or site on a local server will need to configure a **Sendmail** program by changing the **php.ini** file in their PHP installation folder. If you use a hosting server, **Sendmail** is usually already configured. However, you need to make sure that your hosting provider allows you to manually manage the **Sendmail service** option.

PHP is a widely used server side scripting language. It provides many built-in functions. PHP provides email support via a built-in mail() function. Using this function, you can easily send emails directly through your PHP script.

Email Syntax –

mail (to, subject, message, headers, parameters);

Here,

1. To: The first parameter which we have in the email () function is „to“. It is a mandatory parameter. You will have to give the receiver's email id with this parameter.
2. Subject: It is also a mandatory field. It must be specified with the subject of the email. It can't contain newline characters.
3. Message: This field is also not optional. Message parameter has a character limit of 70 characters so it should not exceed the limit. Moreover, the lines should be separated by (\n).
4. Headers: It is used to specify additional headers like BCC and CC. They must be separated by (/r/n). Form header is essential in sending emails. It is set with this parameter or by php.ini file.

5. Parameters: It can be used to set additional parameters like setting envelope sender address.

Example –

```
<?php
$to = "yourname@yourwebsite.com";
$headers = "From: $email_from \r\n";
$headers = "Reply-To: $visitor_email \r\n"; mail($to, $email_subject, $email_body,
$headers);
?>
```

When we want to send the email to more than one recipient, then we just need to add these email addresses in the “\$to” variable.

```
<?php
$to = "name1@website-name.com,
name2@website-name.com,name3@website-name.com"; mail($to, $email_subject,
$email_body,$headers);
?>
```

We can use the CC (carbon copy) and BCC (Blind Carbon Copy) parameters as well. The CC and BCC emails are added in the „headers“ parameter.

Example –

```
<?php
$to="name1@website-name.com, name2@website-name.com,name3@website-name.com";
$headers = "From: $email_from \r\n";
$headers = "Reply-To: $visitor_email \r\n";
$headers="Cc: someone@domain.com \r\n";
$headers="Bcc: someoneelse@domain.com \r\n"; mail($to, $email_subject, $email_body,
$headers);
?>
```

What is PHP Mailer?

PHPMailer is the classic email sending library for PHP. It supports several ways of sending email messages such as mail(), Sendmail, qmail, and direct dispatch to SMTP servers. In addition, it provides a list of advanced features:

- SMTP authentication
- secure/MIME encryption
- support of TLS and SSL protocols
- HTML content along with plain text

- multiple fs, string, and binary attachments
- embedded images support

PHPMailer is a code library used to send emails safely and easily via PHP code from a web server. Sending emails directly via PHP code requires a high-level familiarity to SMTP standard protocol and related issues and vulnerabilities about Email injection for spamming. PHPMailer simplifies the process of sending emails and it is very easy to use.

Step-1: Installation of Library PHPMailer –

To install PHPMailer in PHP Project, run the below shown composer command –

composer require phpmailer / phpmailer

Step-2: Load the Composer's Autoloader -

require 'vendor/autoload.php';

Step-3: Create a PHPMailer class object –

\$mail = PHPMailer()

Step-4: Configure Server Setting –

```
$mail->SMTPDebug = 2;    // Enable verbose debug output
$mail->isSMTP();         // Set mailer to use SMTP
$mail->Host = 'smtp.gfg.com';    // Specify main SMTP server
$mail->SMTPAuth = true;    // Enable SMTP authentication
$mail->Username = 'user@gfg.com'; // SMTP username
$mail->Password = 'password';    // SMTP password
$mail->SMTPSecure = 'tls'; // Enable TLS encryption, 'ssl' also accepted
$mail->Port = 587;    // TCP port to connect
```

Activity:

- Implement Email functionality using SendEmail configuration or PHP Mailer library
 - Functions should have simple message sending, use of CC feature and use of additional header parameters.
-

Output: (Code with result Snapshot)

```
<?php
require 'PHPMailer/src/Exception.php';
require 'PHPMailer/src/PHPMailer.php';
require 'PHPMailer/src/SMTP.php';

use PHPMailer\PHPMailer\PHPMailer;
use PHPMailer\PHPMailer\Exception;

$mail = new PHPMailer(true);

try {
    // Server settings
    $mail->SMTPDebug = 2;
    $mail->isSMTP();
    $mail->Host = 'smtp.gmail.com';
    $mail->SMTPAuth = true;
    $mail->Username = 'chandana.g@somaiya.edu'; // Your email
    $mail->Password = 'yrmugjiyzylovvsf'; // Your email password
    $mail->SMTPSecure = 'tls';
    $mail->Port = 587;

    // Recipients
    $mail->setFrom('chandana.g@somaiya.edu', 'Perfume Paradise');
    $mail->addAddress('prachi.gandhi@somaiya.edu', 'Prachi Gandhi');
    $mail->addAddress('mahek.jt@somaiya.edu', 'Mahek Thakkar');
    $mail->addCC('samrudhi.b@somaiya.edu');
    $mail->addCC('t.mangaonkar@somaiya.edu');
    $mail->addBCC('anand.pt@somaiya.edu');

    // Email Content
    $mail->isHTML(true);
    $mail->Subject = 'Exclusive Offer Just for You at Perfume Paradise!';

    // HTML Body with a perfume promotional theme
    $mail->Body = '
        <html>

        <body style="font-family: Arial, sans-serif; background-color: #ffffff;
color: #333333; margin: 0; padding: 20px;">

        <div style="max-width: 600px; margin: auto; background-color:
#0b1d3b; padding: 20px; border: 1px solid #b39555; border-radius: 8px;">
```

```

        <h2 style="color: #b39555; text-align: center; border-bottom: 2px
solid #b39555; padding-bottom: 10px;">
            Welcome to <span style="color: #ffffff;">Perfume
Paradise</span>, <br>Your Fragrance Destination!
        </h2>
        <p style="font-size: 1.1em; color: #ffffff;">Dear
<strong>Customer</strong>,</p>
        <p style="font-size: 1em; color: #ffffff;">
            We are thrilled to have you as part of the Perfume Paradise
family! To show our appreciation, we are offering an
            exclusive <strong style="color: #b39555;">15%
discount</strong> on your next purchase. Indulge in the luxury of our latest
arrivals
            and signature scents.
        </p>
        <h3 style="color: #0b1d3b; text-align: center; margin-top: 20px;
padding: 10px; background-color: #b39555; border-radius: 8px;">
            Exclusive Offer Code: <span style="color:
#0b1d3b;">CHANDANA20</span>
        </h3>
        <p style="font-size: 1em; color: #ffffff; text-align: center;">
            Use this code at checkout to redeem your discount. Dont wait
too long - this offer is valid only for the next 7 days!
        </p>
        <hr style="border: none; border-top: 2px solid #b39555; margin:
20px 0;">
        <h3 style="color: #b39555;">Our Recommendations for You:</h3>
        <ul style="color: #ffffff; font-size: 1em; line-height: 1.5em;">
            <li><strong style="color: #b39555;">Midnight Blossom</strong>
- A delicate blend of floral and woody notes, perfect for evening wear.</li>
            <li><strong style="color: #b39555;">Summer Breeze</strong> -
Fresh and vibrant, capturing the essence of a sunny day by the beach.</li>
            <li><strong style="color: #b39555;">Vanilla Dreams</strong> -
A warm, comforting scent with hints of vanilla and sandalwood.</li>
        </ul>
        <p style="font-size: 1em; color: #ffffff;">
            Visit our website to explore more <a
href="https://keva.co.in/" style="color: #b39555; text-decoration:
none;">here</a>.
        </p>
        <hr style="border: none; border-top: 2px solid #b39555; margin:
20px 0;">

```

```

        <p style="color: #ffffff;">Thank you for choosing Perfume
Paradise. We look forward to bringing you more enchanting scents!</p>
        <p style="color: #ffffff;">
            Sincerely,<br><span style="font-weight: bold; color:
#b39555;">Perfume Paradise Team</span>
        </p>
    </div>
</body>
</html>
';

// Plain text alternative body
$mail->AltBody = 'Thank you for being a valued customer at Perfume
Paradise! Enjoy 15% off your next purchase with the code CHANDANA20. Visit us
at https://keva.co.in/ to explore our exclusive fragrances.';

// Send the email
$mail->send();
echo 'Promotional email has been sent successfully';
} catch (Exception $e) {
    echo "Message could not be sent. Mailer Error: {$mail->ErrorInfo}";
}

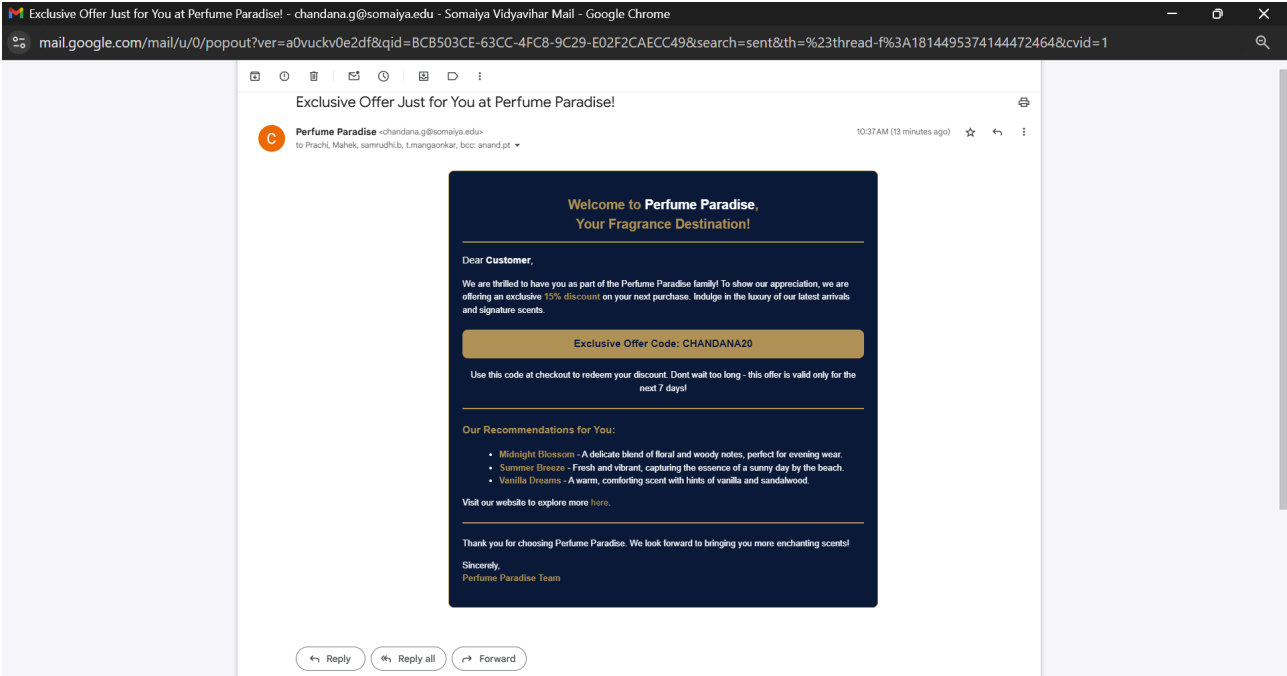
```

KJSCE/IT/TYBTECH/SEMV/WP-II/2024-25

```
2024-11-01 05:07:12 SERVER -> CLIENT: 220 smtp.gmail.com ESMTP d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:12 CLIENT -> SERVER: EHLO localhost
2024-11-01 05:07:12 SERVER -> CLIENT: 250-smtp.gmail.com at your service, [2401:4900:1c96:531a:7982:c533:88e:7623]250-SIZE 35882577250-8BITMIME250-STARTTLS250-
ENHANCEDSTATUSCODES250-PIPELINING250-CHUNKING250-SMTPUTF8
2024-11-01 05:07:12 CLIENT -> SERVER: STARTTLS
2024-11-01 05:07:12 SERVER -> CLIENT: 220 2.0.0 Ready to start TLS
2024-11-01 05:07:13 CLIENT -> SERVER: EHLO localhost
2024-11-01 05:07:13 SERVER -> CLIENT: 250-smtp.gmail.com at your service, [2401:4900:1c96:531a:7982:c533:88e:7623]250-SIZE 35882577250-8BITMIME250-AUTH LOGIN PLAIN
XOAUTH2 PLAIN-CLIENTOKEN OAUTHBEARER XOAUTH250-ENHANCEDSTATUSCODES250-PIPELINING250-CHUNKING250-SMTPUTF8
2024-11-01 05:07:13 CLIENT -> SERVER: AUTH LOGIN
2024-11-01 05:07:13 SERVER -> CLIENT: 334 VXNlcm5hbWU6
2024-11-01 05:07:13 CLIENT -> SERVER: [credentials hidden]
2024-11-01 05:07:14 SERVER -> CLIENT: 334 UGFzc3dvcmQ6
2024-11-01 05:07:14 CLIENT -> SERVER: [credentials hidden]
2024-11-01 05:07:14 SERVER -> CLIENT: 235 2.7.0 Accepted
2024-11-01 05:07:14 CLIENT -> SERVER: MAIL FROM:<chandana.g@somaiya.edu>
2024-11-01 05:07:14 SERVER -> CLIENT: 250 2.1.0 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:14 CLIENT -> SERVER: RCPT TO:<prachi.gandhi@somaiya.edu>
2024-11-01 05:07:14 SERVER -> CLIENT: 250 2.1.5 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:14 CLIENT -> SERVER: RCPT TO:<mahek.jt@somaiya.edu>
2024-11-01 05:07:14 SERVER -> CLIENT: 250 2.1.5 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:14 CLIENT -> SERVER: RCPT TO:<samrudhi.b@somaiya.edu>
2024-11-01 05:07:15 SERVER -> CLIENT: 250 2.1.5 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:15 CLIENT -> SERVER: RCPT TO:<t.mangaonkar@somaiya.edu>
2024-11-01 05:07:15 SERVER -> CLIENT: 250 2.1.5 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:15 CLIENT -> SERVER: RCPT TO:<anand.pt@somaiya.edu>
2024-11-01 05:07:15 SERVER -> CLIENT: 250 2.1.5 OK d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:15 CLIENT -> SERVER: DATA
2024-11-01 05:07:15 SERVER -> CLIENT: 354 Go ahead d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:15 CLIENT -> SERVER: Date: Fri, 1 Nov 2024 06:07:11 +0100
2024-11-01 05:07:15 CLIENT -> SERVER: To: Prachi Gandhi <prachi.gandhi@somaiya.edu>, Mahek Thakkar <mahek.jt@somaiya.edu>
2024-11-01 05:07:15 CLIENT -> SERVER: From: Perfume Paradise <chandana.g@somaiya.edu>
2024-11-01 05:07:15 CLIENT -> SERVER: Cc: samrudhi.b@somaiya.edu, t.mangaonkar@somaiya.edu
2024-11-01 05:07:15 CLIENT -> SERVER: Subject: Exclusive Offer Just for You at Perfume Paradise!
2024-11-01 05:07:15 CLIENT -> SERVER: Message-ID: <xkGH93pVVj7ReEtvWaX1Ytc0eHaocBOR2L5ssifiok@localhost>
2024-11-01 05:07:15 CLIENT -> SERVER: X-Mailer: PHPMailer 6.9.2 (https://github.com/PHPMailer/PHPMailer)
2024-11-01 05:07:15 CLIENT -> SERVER: MIME-Version: 1.0
2024-11-01 05:07:15 CLIENT -> SERVER: Content-Type: multipart/alternative;
2024-11-01 05:07:15 CLIENT -> SERVER: boundary="b1=_xkGH93pVVj7ReEtvWaX1Ytc0eHaocBOR2L5ssifiok"

2024-11-01 05:07:15 CLIENT -> SERVER: Content-Transfer-Encoding: 8bit
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: --b1=_xkGH93pVVj7ReEtvWaX1Ytc0eHaocBOR2L5ssifiok
2024-11-01 05:07:15 CLIENT -> SERVER: Content-Type: text/plain; charset=us-ascii
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: Thank you for being a valued customer at Perfume Paradise! Enjoy 15% off your next purchase with the code CHANDANA20. Visit us at
https://keva.co.in/ to explore our exclusive fragrances.
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: --b1=_xkGH93pVVj7ReEtvWaX1Ytc0eHaocBOR2L5ssifiok
2024-11-01 05:07:15 CLIENT -> SERVER: Content-Type: text/html; charset=us-ascii
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: <html>
2024-11-01 05:07:15 CLIENT -> SERVER: <body style="font-family: Arial, sans-serif; background-color: #ffffff; color: #333333; margin: 0; padding: 20px;">
2024-11-01 05:07:15 CLIENT -> SERVER: <div style="max-width: 600px; margin: auto; background-color: #0b1d3b; padding: 20px; border: 1px solid #b39555; border-radius: 8px;">
2024-11-01 05:07:15 CLIENT -> SERVER: <h2 style="color: #b39555; text-align: center; border-bottom: 2px solid #b39555; padding-bottom: 10px;">
2024-11-01 05:07:15 CLIENT -> SERVER: Welcome to <span style="color: #ffffff;">Perfume Paradise</span>, <br>Your Fragrance Destination!
2024-11-01 05:07:15 CLIENT -> SERVER: </h2>
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="font-size: 1.1em; color: #ffffff;">Dear <strong>Customer</strong>,</p>
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="font-size: 1em; color: #ffffff;">
2024-11-01 05:07:15 CLIENT -> SERVER: We are thrilled to have you as part of the Perfume Paradise family! To show our appreciation, we are offering an
2024-11-01 05:07:15 CLIENT -> SERVER: exclusive <strong style="color: #b39555;">15% discount</strong> on your next purchase. Indulge in the luxury of our latest arrivals
2024-11-01 05:07:15 CLIENT -> SERVER: and signature scents.
2024-11-01 05:07:15 CLIENT -> SERVER: <p>
2024-11-01 05:07:15 CLIENT -> SERVER: <h3 style="color: #0b1d3b; text-align: center; margin-top: 20px; padding: 10px; background-color: #b39555; border-radius: 8px;">
2024-11-01 05:07:15 CLIENT -> SERVER: Exclusive Offer Code: <span style="color: #0b1d3b;">CHANDANA20</span>
2024-11-01 05:07:15 CLIENT -> SERVER: </h3>
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="font-size: 1em; color: #ffffff; text-align: center;">
2024-11-01 05:07:15 CLIENT -> SERVER: Use this code at checkout to redeem your discount. Dont wait too long - this offer is valid only for the next 7 days!
2024-11-01 05:07:15 CLIENT -> SERVER: <p>
2024-11-01 05:07:15 CLIENT -> SERVER: <hr style="border: none; border-top: 2px solid #b39555; margin: 20px 0;">
2024-11-01 05:07:15 CLIENT -> SERVER: <h3 style="color: #b39555;">Our Recommendations for You:</h3>
2024-11-01 05:07:15 CLIENT -> SERVER: <ul style="color: #ffffff; font-size: 1em; line-height: 1.5em;">
2024-11-01 05:07:15 CLIENT -> SERVER: <li><strong style="color: #b39555;">Midnight Blossom</strong> - A delicate blend of floral and woody notes, perfect for evening wear.</li>
2024-11-01 05:07:15 CLIENT -> SERVER: <li><strong style="color: #b39555;">Summer Breeze</strong> - Fresh and vibrant, capturing the essence of a sunny day by the beach.</li>
2024-11-01 05:07:15 CLIENT -> SERVER: <li><strong style="color: #b39555;">Vanilla Dreams</strong> - A warm, comforting scent with hints of vanilla and sandalwood.</li>
2024-11-01 05:07:15 CLIENT -> SERVER: </ul>
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="font-size: 1em; color: #ffffff;">
2024-11-01 05:07:15 CLIENT -> SERVER: Visit our website to explore more <a href="https://keva.co.in/" style="color: #b39555; text-decoration: none;">here</a>.
2024-11-01 05:07:15 CLIENT -> SERVER: <p>

2024-11-01 05:07:15 CLIENT -> SERVER: <hr style="border: none; border-top: 2px solid #b39555; margin: 20px 0;">
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="color: #ffffff;">Thank you for choosing Perfume Paradise. We look forward to bringing you more enchanting scents!</p>
2024-11-01 05:07:15 CLIENT -> SERVER: <p style="color: #ffffff;">
2024-11-01 05:07:15 CLIENT -> SERVER: Sincerely,<br><span style="font-weight: bold; color: #b39555;">Perfume Paradise Team</span>
2024-11-01 05:07:15 CLIENT -> SERVER: </p>
2024-11-01 05:07:15 CLIENT -> SERVER: </div>
2024-11-01 05:07:15 CLIENT -> SERVER: </body>
2024-11-01 05:07:15 CLIENT -> SERVER: </html>
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: --b1=_xkGH93pVVj7ReEtvWaX1Ytc0eHaocBOR2L5ssifiok--
2024-11-01 05:07:15 CLIENT -> SERVER:
2024-11-01 05:07:15 CLIENT -> SERVER: .
2024-11-01 05:07:16 SERVER -> CLIENT: 250 2.0.0 OK 1730437636 d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
2024-11-01 05:07:16 CLIENT -> SERVER: QUIT
2024-11-01 05:07:16 SERVER -> CLIENT: 221 2.0.0 closing connection d2e1a72fcca58-720bc2eb7d7sm1984746b3a.157 - gsmt
Promotional email has been sent successfully
```

Questions:

1) What are the advantages of using PHPMailer over mail() function to send mail in PHP?

PHPMailer provides better security and error handling than the mail() function. It supports SMTP authentication, which allows for secure transmission through various email providers. PHPMailer also supports HTML content, attachments, CC, BCC, and embedded images, making it more versatile. Additionally, PHPMailer handles SMTP errors more effectively, which is beneficial for debugging and ensuring reliable email delivery.

2) How to use PHPMailer with Gmail?

To use PHPMailer with Gmail, follow these steps:

- Install PHPMailer using Composer with composer require phpmailer/phpmailer.
- Enable “Less Secure App Access” in your Gmail account settings or set up OAuth authentication for better security.
- Use the following settings in your PHPMailer configuration:

```
$mail->isSMTP();  
$mail->Host = 'smtp.gmail.com';  
$mail->SMTPAuth = true;  
$mail->Username = 'your_email@gmail.com';  
$mail->Password = 'your_password';  
$mail->SMTPSecure = 'tls';  
$mail->Port = 587;
```

- Configure your email content and recipients, then use \$mail->send() to send the email.

Outcomes: Demonstrate the use advanced features such as REST API, email handling, localization and internationalization in PHP

Conclusion: (Conclusion to be based on the objectives and outcomes achieved)

In this experiment, we implemented email handling in PHP using both the native mail() function and the PHPMailer library. We explored the basic syntax of the mail() function and understood its limitations, particularly regarding security, flexibility, and control over SMTP configuration. By implementing PHPMailer, we were able to leverage advanced features such as SMTP authentication, support for TLS and SSL encryption, HTML content with plain text, and attachment handling. The experiment successfully demonstrated how PHPMailer simplifies and enhances the process of sending emails in PHP, making it a preferred choice over the native mail() function for secure and reliable email delivery.

Grade: AA / AB / BB / BC / CC / CD/ DD

Signature of faculty in-charge with date

References:

Books:

- 1) Thomson PHP and MySQL Web Development Addison-Wesley Professional , 5th Edition 2016.
 - 2) Peter MacIntyre, Kevin Tatro Programming PHP O'Reilly Media, Inc, 4th Edition 2020
 - 3) Frank M. Kromann Beginning PHP and MySQL: From Novice to Professional, Apress 1st Edition, 2018
 - 4) <https://www.w3schools.com/>
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