# **Postal Automation System**

# **Technical and User Manual**

# Supervised by

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# **Acknowledgment**

We are highly indebted for getting such a wonderful opportunity to prepare the User-Manual and Technical report of the project "Postal Automation System". We would like to thank whole-heartedly to our supervisor, Mr. Abdus Satter, Lecturer, Institute of Information Technology, University Of Dhaka for giving us guidelines on preparing this report. A warm sign of appreciation also goes to Mr.Sabbir, the Computer Administrator of Room No.306, Registrar Building, University of Dhaka , for his immense help and support.

## **Abstract**

The Registrar Building of University of Dhaka has been working relentlessly since the birth of this university. There are separate departments for every work like Admission, Scholarship, Fees, Certificate withdrawal, Marksheet withdrawal etc. Among these, "Letter Sending Department", Room No:306, Registrar Building has been sending letters to teachers and officials for different types of responsibilities. They send letters to faculty about exam question setting, syllabus setting, exam script scrutinization, calling meetings in order to form exam committees, viva board etc. Some letters have deadlines about replying. Everytime the letter is sent to departments through Letter Dispatch services. A Faculty has a number of multi-dimensional responsibilities. So, a lot of letters are sent to a faculty daily and some of them go unnoticed, sometimes these letters are noticed after the deadline. "Postal Automation System "automates the analog process of the letter sending department so that the Faculty and the employee both can keep track of the letters and the deadlines and get reminders about the approaching deadline of any official work.

# **Chapter 1: INTRODUCTION**

Postal Automation System (PAS) is an automated system for the "Letter-Sending Department" of the Registrar Building, University Of Dhaka. The sole purpose of this department is to send letters to teachers and officials regarding different types of responsibilities e.g. Question Setter, Script Setter, Member of Exam Committees (Internals and Externals), Exam Question Coordination , Result Finalization. This system automates the process.

# **Chapter 2: SETTING UP THE SYSTEM**

**Users Point of View:** This has been developed as a web application and only for the Officials of University Of Dhaka. So if any of the concerned users want to use the application, he/she will have to simply go to the hosted link(which is now officially on http://letter.du.ac.bd/) and he/she can access things according to his/her needs.

**Testers/Developers Point of view:** If any developer wants to run the code to open the application, he/she will need to host it on a local machine(LocalHost) using any of the servers e.g. Apache Servers through XAMPP on windows. MySQL will also be needed for the database. Change the BASE\_URL on base\_url.php if the host ip is changed from default.

# **Chapter 3: Source Code Description**

Some partial code snippets are given here to give an idea about the project:

## Faculty Sign-up: facultySignup.php

```
28
         $sucess="";
29
         $error="";
30
         $errorFlag=0;
31
         $pattern="/.du.ac.bd/i";
         $num=mt_rand(10000000,99999999);
32
33
         $intro_msg=0;
34
35
         if(isset($_POST['create']))
36
37
             $intro_msg=1;
38
             if($ POST['firstname english'] == "")
39
40
41
42
                  $errorFlag++;
43
                  $error=$error."You need to provide your name in English.<br>";
44
45
46
47
             else if($_POST['firstname_bangla'] == "")
48
49
50
                  $errorFlag++;
                  $error=$error."You need to provide your name in Bangla.<br>>";
```

## Faculty Log-in:facultyLogin.php

## Password-Recovery: forgetPassword.php

```
<?php
         include("dbconnect.php");
         include("brandop.php");
11
         $obj = new OS_BR();
13
         function generateNewString($len = 10) {
14
         $token = "qwertyuiopasdfghjkll123456789";
16
         $token = str_shuffle($token);
         $token = substr($token, 0, $len);
18
19
         return $token;
20
21
22
23
24
25
         $sucess="";
         $error="";
26
27
         $errorFlag=0;
28
         if (isset($_POST['reset'])) {
30
31
             $token=generateNewString();
32
             $token_expire=time()+86400;
```

## One of the Templates(Committee): committee\_pdf.php

```
session_start();

include $_SERVER['DOCUMENT_ROOT'].'/spl/base_url.php';
include BASE_URL."dbconnect.php';
include (bTMIne.php');
require_once BASE_URL. '/vendor/autoload.php';
$time - time();
$date = BBdate($time);
//echo'';print_r($_POST);exit;

//$memo= $_POST['memo'];
//$memo= $_POST['memo'];

/$memo= $_SESSION['memo'];

$nemo= $_SESSION['memo'] - $memo;

$en_month = array("আন্ডুল্লারি", "ফেফ্ডুলারি", "মার্চ", "এপ্রিল", "মো", "জুন", "জুলাই", "আগস্ট", "সেস্টেব্ল", "মাডেব্ল", "মিডেব্ল");
$date= $_POST['date'];

$date_explode - explode("-",$date);
$date_m = $en_month[($date_explode[a]));
$data_d = BanglaConverter::en2bn($date_explode[a]);
$data_y - BanglaConverter::en2bn($date_explode[a]);
```

## Verifying Teacher by Admin: adminLogin/verify.php

```
include $_SERVER['DOCUMENT_ROOT'].'/spl/base_url.php';
include BASE_URL."dbconnect.php";

?>
<?php

if(isset($_GET['tid']))

$ tid=$_GET['tid'];
$ tempQuery2="

UPDATE 'signed_teacher'
SET status=1
WHERE teacher_id=$tid
LIMIT 1;

";

mysqli_query($link,$tempQuery2);
header('location:verify.php');
}

?>
```

## Bulk SMS Sending Function: msg\_form()

### Email Sending function : send(\$a,\$email,\$type)

### One of the Bar charts for stats:adminLogin/index.php

```
// Bor Chart Example

var ctx - document.petElementById("myBarChart");

var myBarChart - asc Chart(ctx, {
    type: 'bar',
    data: {
        labels: [<chpp echo date("Y-m/d") ?>", "<?php echo date("Y-m-d", strtotime("-1 days")); ?>", "<?php echo date("Y-m-d", strtotime("-2 days")); ?>", "<?php echo date("Y-m-d", strtotime("-1 days")); ?>", "<?php echo date("Y-m-d", st
```

All the headers and footers are included in include/footer.php, include/sidebar.php.

All the concerned class files and utility files are separated in folders based on stakeholders to make the directory code cleaner.

Base\_url.php: Makes the internal URLs dynamic to host the application on any server by just editing the host url and document root.

#### **Used Libraries:**

**phpMailer:** 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.

mPDF: mPDF is a PHP library which generates PDF files from UTF-8 encoded HTML

# **Chapter 4: Features and User Manual**

There are three types of users who interact with this system. They are:-

- Admin
- General staff
- Teacher.

Features and Concern User's Manual has been described and illustrated step by step based on the stakeholders:

## Homepage:

Our system's homepage looks like this:-

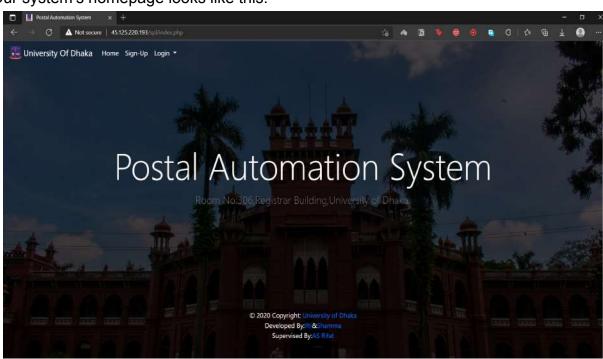


Figure 1:Homepage

There are two options on the homepage which are Signup and Login. There are three types of login for three different users. Signup is only for teachers.

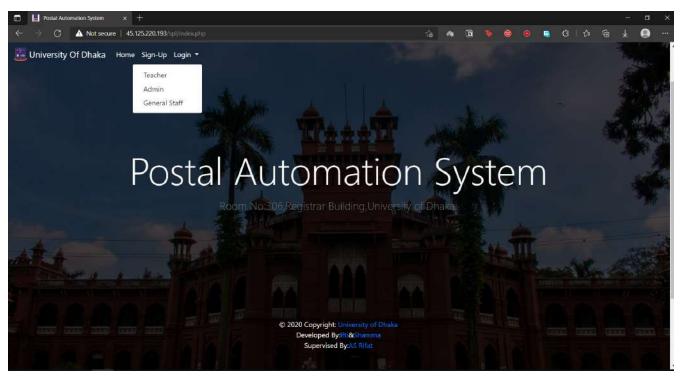


Figure 2:Homepage(extended)

# **Admin Features and Manual:**

# **Admin Login:**

Admin can login by providing predefined admin Id and Password.

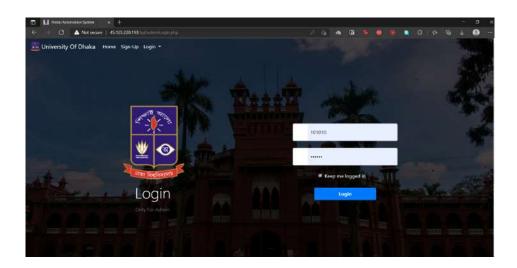


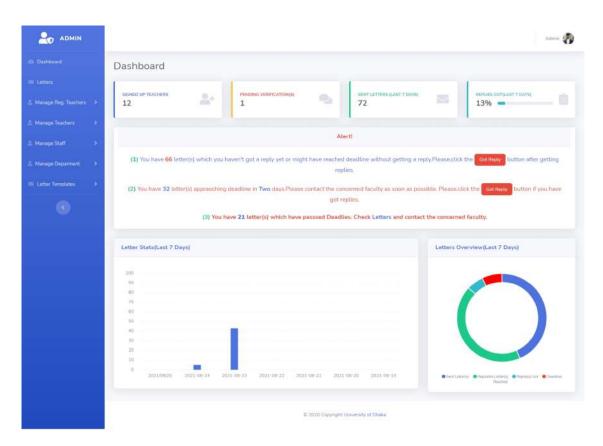
Figure 3: Admin login

### **Admin Dashboard:**

After successful login, the admin will enter into the system and can see the admin's dashboard.

Here admin can see :-

- Signed up teacher's list
- Pending verification list of faculties
- Sent letters list(Last 7 days)
- Replies of letters(Last 7 days)
- An alert box that shows the letters which might have reached the deadline without getting a reply, letters approaching the deadline in two days, letters which have passed deadlines.
- Letter statistics of the last 7 days.
- Letter overview of the last 7 days.



## **Viewing Letters:**

By clicking on the "letters" option from the left menu, Admin can see all the letters that have been sent.

There are some operations:-

- From the Search Box on top of the table, Admin can search letters by Reference number, Recipient, Sending Date, Subject, Deadline.
- Admin can view the letter by clicking that Pdf in the body column.
- Admin can sort the table data by clicking on the arrow button in every column header.
- If there are more than 10 letters, then the rest can be navigated by clicking the next/previous button.

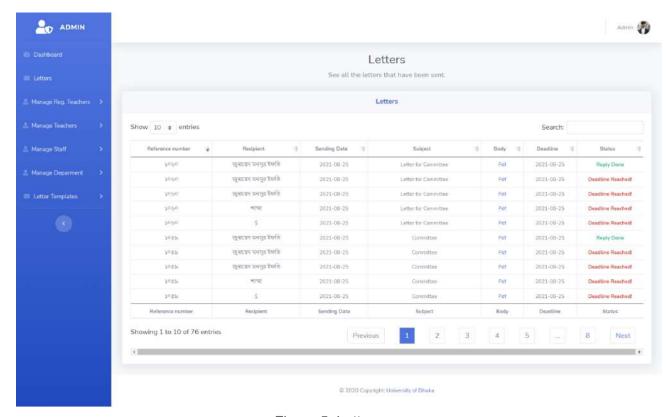


Figure 5: Letters

## **Manage Registered Teachers:**

By clicking on "Manage Reg teachers" from the left menu, Admin can Verify and update teachers.

Then, if Admin clicks on verify teacher, the following page comes:-

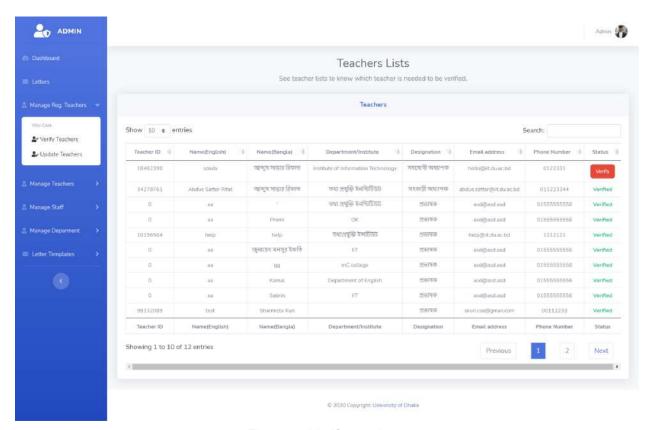


Figure 6: Verify teachers

Here, Admin can verify the registered teachers by checking their credentials or by contacting them over phone. Then he clicks on the verify button to verify teachers.

By clicking on Update Teachers, Admin can Update registered teacher information. After providing updated information about the teacher, Admin clicks the 'update' button.

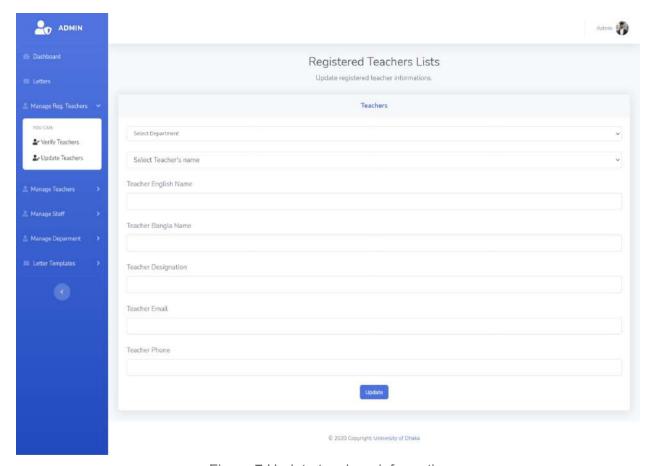


Figure 7:Update teachers information

# Add A New Teacher To The Existing Database of Non-Signed Teachers:

By clicking on Manage teachers, Admin can get two options. They are:-

- Update teachers
- Add new teachers

'Update teachers' option is for updating teacher information.

'Add new teachers' option is for adding a newly enrolled teacher's information to our existing database. By providing credentials ,Admin can add new teachers.

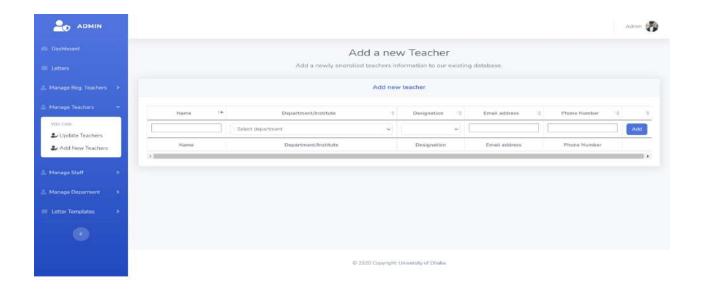


Figure 8: Adding new teacher information

## Manage staff:

"Manage Staff" option has three operations:-

- Create staff account
- Update staff account
- Update staff password

Admin can create staff account by giving following credentials:-

- Staff ID
- Staff name
- Staff phone number
- Password
- Confirm password

After providing data, Admin can create a staff account by clicking on Signup.

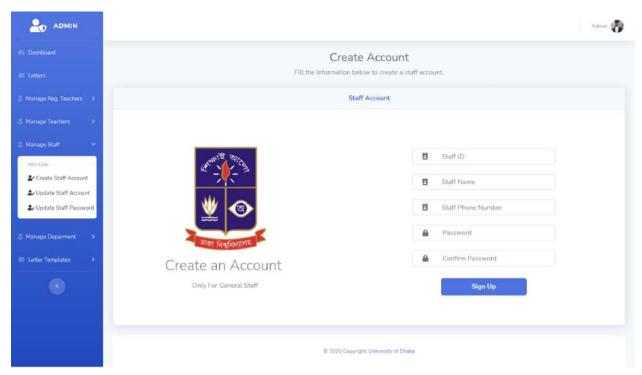


Figure 9: Create Staff account

## Admin can update staff accounts information.

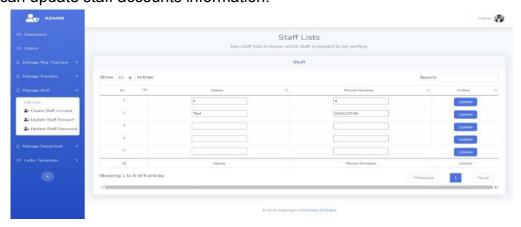


Figure 10: Update staff account

Admin can reset Staff Password if a staff has forgotten the password. By providing required credentials of the following page, password can be reset.

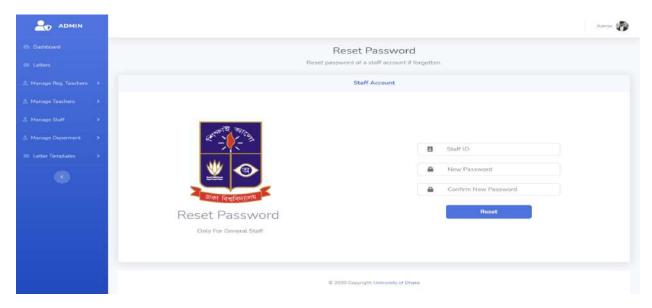


Figure 11: Reset staff password

## Manage department information:

"Manage department" option on the left menu has two operations:-

- Create department
- Update department

By clicking on "Create department", the following page will be shown.

Admin can create a new department/ Institution by providing a new department/ Institution name and then click "Add".

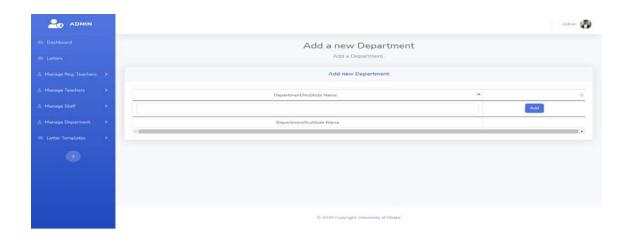


Figure 12:Create department

Admin can update department information by providing updated data and then click on "Update".

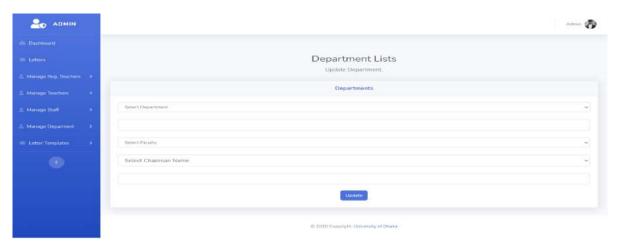


Figure 13: Update department information.

## **Emergency Letter Template:**

Admin can create emergency letter templates. Admin can choose the department name, teacher's name and write the letter body and send it to the respective teacher through email.



Select department Select teacher's name V Select teacher's name V Select department V Select teacher's name V Select teacher	ধ্বীক্ষা নিয়ন্ত্রকের অফিস াক্ষা বিশ্ববিদ্যালয় ছানা:আইদ্যাচিন্ত্র ১২৮০ ৬৬৬১৯০০-৫৯/৪০৮০ লাজ্য:৮৮০-২-৯৬৬৭২২২	W (8)	OFFICE OF THE CONTROL EXAMINATIONS UNIVERSITY OF DHAKA DHAKA-1000, BANGLADES Phone: (off) 3613280 9661900-594000 Fax: 88-02-9667222 Email: co_letter@du.ac.bd
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Figure 14: Emergency letter template

## **General Staff Features and Manual:**

## **Staff Login Page:**

General staff can login by providing staff Id and Password created by the Admin.

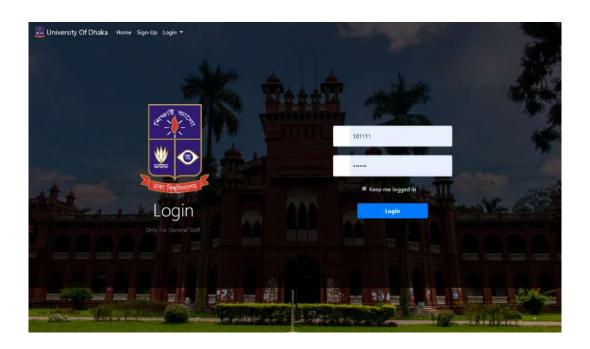


Figure 15:Staff login

## **Dashboard:**

After successful login, the general staff will enter into the system and can see the staff dashboard.

Here staff can see :-

- Sent letters list(Last 7 days)
- Replies of letters(Last 7 days)
- An alert box that shows the letters which might have reached the deadline without getting a reply, letters approaching the deadline in two days, letters which have passed deadlines.
- Letter statistics of the last 7 days in a bar chart.
- Letter overview of the last 7 days in a pie chart.

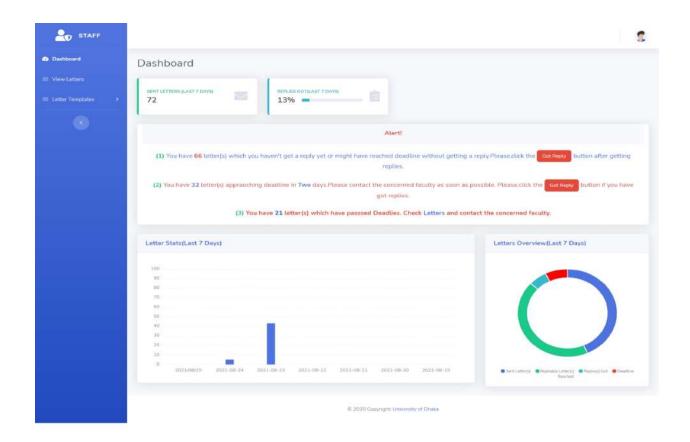


Figure 16: Staff dashboard

### **View Letters:**

By clicking on the "View letters" option from the left menu, Staff can see all the letters that have been sent.

There are some operations:-

- From the Search Box on top of the table, Staff can search letters by Reference number, Recipient, Sending Date, Subject, Deadline.
- Staff can view the letter by clicking that Pdf in the body column.
- Staff can sort the table data by clicking on the arrow button in every column header.
- If there are more than 10 letters, then the rest can be navigated by clicking the next/previous button.

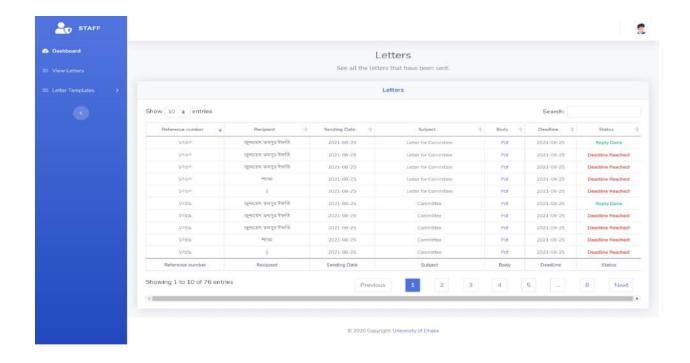


Figure 17: View letters on staff dashboard.

## **Automated Templates of Letters:**

"Letter templates" has three types of letter's templates. They are:-

- Letter for Script Scrutinizer
- Letter for Question Setter and Script Scrutinizer
- Letter for Committee.

## 1.Letter for Script Scrutinizer:

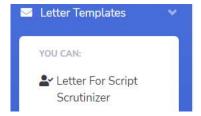


Figure 18:Script Scrutinizer

By choosing "Letter for Script Scrutinizer", The following template will be shown.

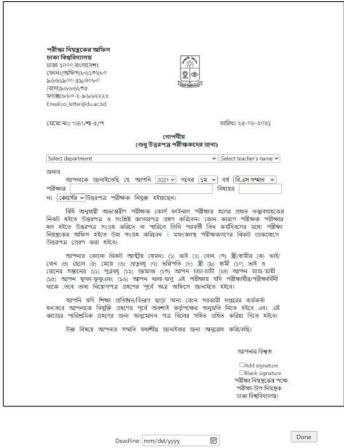


Figure 19: Letter template for Script Scrutinizer

Staff will fill the blanks of the templates from dropdown boxes and other options. After finishing filling up and selecting a deadline, he will click on "Done".

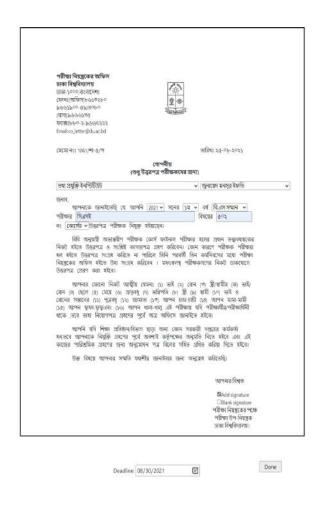


Figure 20: After filling letter template for Script Scrutinizer

After clicking on "Done" the final output of the letter template is shown as a pdf.



Figure 21: Output pdf of Letter template for Script Scrutinizer

After Clicking Send, the system will automatically send the letter to the respective faculty's email and an automated sms will be sent to the specific phone number of the faculty.

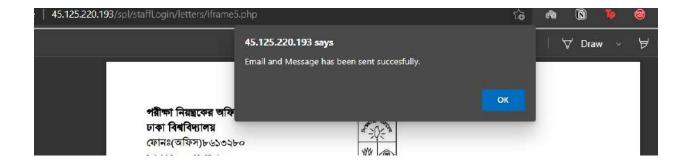


Figure 22: Popup alert for email and message.

The message is shown below:-

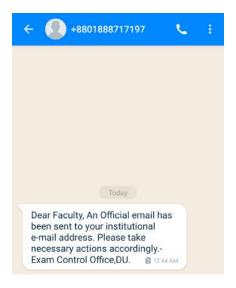


Figure 23: Message notification.

An Email with attached letter comes to the respective faculty's mailbox.

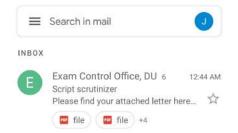


Figure 24: Faculty mailbox

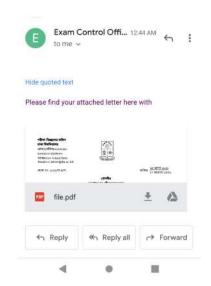


Figure 25: View received email

# 2.Letter for Question Setter and Script Scrutinizer:



Figure 26:Question Setter and Script Scrutinizer

By clicking on "Letter For Question Setter and Script Scrutinizer", the following template is shown:-

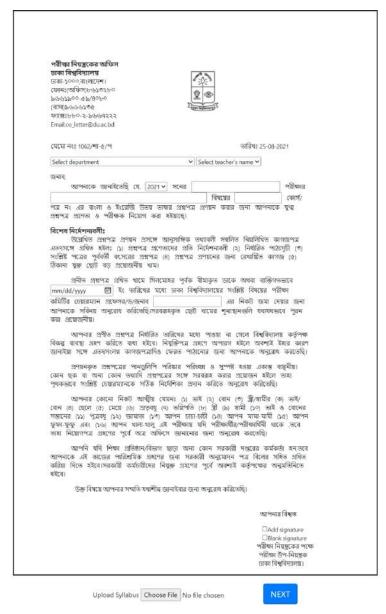


Figure 27:Letter template for Question Setter and Script Scrutinizer

Staff will fill the blanks of the templates from dropdown boxes and other options. After finishing filling up and selecting a syllabus file, he will click on "Next".

পরীক্ষা নিয়ন্ত্রকের অফিস ভাকা বিশ্ববিদ্যালয় ভাকা ত্রপারিকাল্য ভাকা তেও বালাদেশ। ফোনঃ(অফিস)ল-১১৩২৮০ ৯৬৬১৯০০ এ৯/৪০৮০ (বাসা)৯৬৬৬৬৩ ৩৫ ফ্যান্তর্যাচনত ২-৯৬৬৭২২ Emailto letro-durac bd	\$\tag{\tag{\tag{\tag{\tag{\tag{\tag{	
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পরে নং এর বংলা ও ইংরেজি উভয় ভাষার প্রেমপত্র		
তে/২০/২০০21   ইং তারিখের মধ্যে তাক বি কমিটির চেয়ারমান অফেসর/ড/জনাব শরিস্থল ইসনাম আপনাক সবিদয় অদুরোধ করিভেছি/সারবারস্কৃত ছো করা প্রয়োজনীয়।  আপনার প্রণীত প্রপ্নপর নিধারিত তারিখের ম বিকল্প বাবস্থা প্রশাস্ত করিছে বাবস্থা ইইব। নিয়ন্তিশন্ত  জানাইয়া সঙ্গে তাবসংগার কাগজনারানিও ভেকত পা প্রসামকৃত প্রপ্রপ্রের পান্যভূগিপ পরিয়ার পরি কেন ছক বা অনা কেন তথাাদি প্রশাসরের সঙ্গে  পৃথকভাবে সংশ্লিষ্ট চোল্লমানকে সঠিক নির্মেশিকা প্র আপনার (তানো নিকাচ আছিছ বেমনং (তা বাবা ৪) তেলে (৫) মেয়ে (৬) মান্তব্যু (৭) ভারিপতি সন্তানের (১১) পুরবন্ধু (২২) জামাতা (১৩) আপন চাচ মুক্তা-মৃক্তু এবং (১৬) আপন খালা-যাল্ এই পরীকরে আম নিয়োগসতা গ্রহণের পূর্বে তার বিভিন্ন বিজ্ঞাপ আম নিয়োগসতা গ্রহণের পূর্বে তার বিভিন্ন বিজ্ঞাপ ভারা আমা	রার নিকট গুমা ট খামের শূনাস্থানগুলি যথায থ্যে পাওয়া না গেলে বিশ্ববিদ রহমে অপারস ইইলে অবশ্য রামের জনা আপনাকে অনু রামরের ও সুস্পর্ট হওয়া একল সরবরাহ করার প্রয়োজন মই রামের জিলা আপনাকে অনু রাম্বরাহ করার প্রয়োজন মই রাম করিতে অনুরোধ করিতে চাই (২) বোন (৩) স্ক্রি/মামীর (৮) স্ক্রি (২) বাম এটি রামি পরীক্ষার্থীর পরীক্ষার্থীর রাম জন্য তদ্বরোধ করতেছি।	দেয়ার জনা  ফভাবে পুরন  বাদেয়া কর্তৃপক্ষ  ই ইহার ক্যারশ  রোখ করতেছি।  র বাঞ্চনীয়া  ক্রি তাহা  ছি  (ক) ভাই/  ই ও বোনের  যি,১৫) আপন  থাকে ভবে
আপনাকে এই কাড়ের পারিশ্রমিক গ্রহণের ছেন। সর কবিয়া দিতে হইবে।সরকারী কর্মচারীদের নিযুক্ত গ্রহণ হইবে।	কারী অনুযোদন পত্র বিলের র পূর্বে অবশ্যই কর্তৃপক্ষের	সৃহিত গ্ৰন্থিত
উক্ত বিষয়ে আপনার সম্মতি যথাশীয় জানাইবার জ	ন্য অনুধোৰ কারতোহ্য।	
	জ্ঞা	পনার বিশ্বস্ত
	া পরীং	Add signature Blank signature চা নিয়ন্ত্রকের পক্ষে জা উপ-নিয়ন্ত্রক

Figure 28:After filling letter template for Question Setter and Script Scrutinizer

After clicking on "Next" the final output of the letter template is shown as a pdf. It includes:-

- The letter template
- Syllabus of the exam
- Instruction manual

#### Number form.

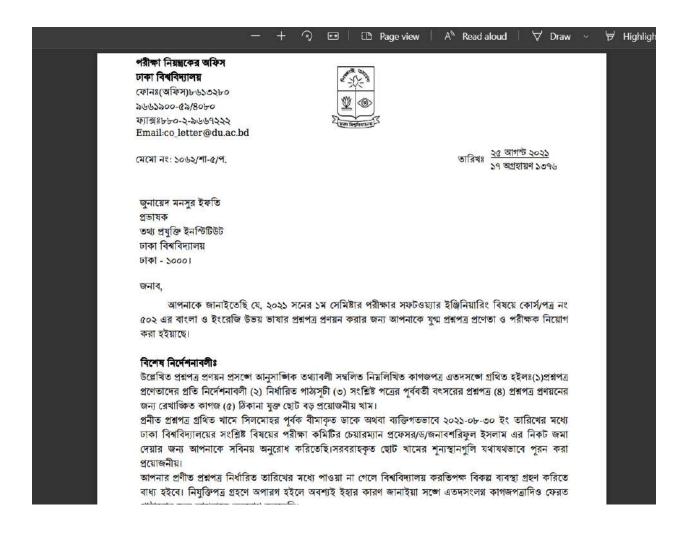


Figure 29: Output pdf of Question Setter and Script Scrutinizer (part 1)

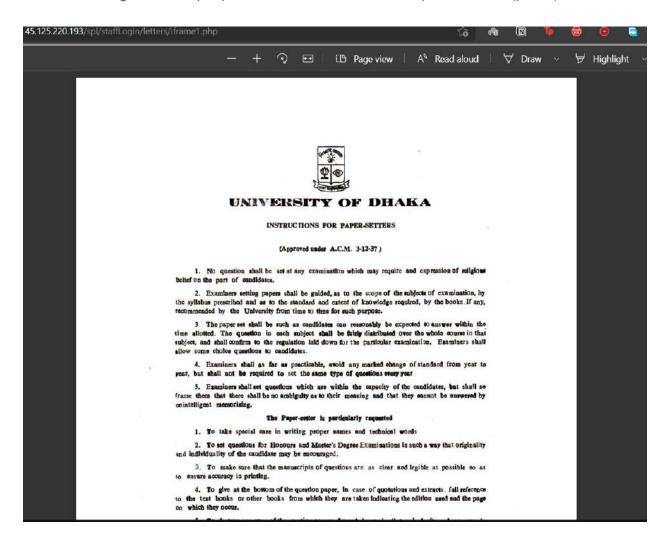


Figure 30:Output pdf of Question Setter and Script Scrutinizer (part 2)

After that, by clicking "SEND", the system will automatically send the letter to the respective faculty's email and an automated sms will be sent to the specific phone number of the faculty.

#### 3.Letter for Committee:



Figure 31:Committee

By clicking "Letter For Committee", the following template is shown:-

লনঃ(অফিস)৮৬১৩২৮০ ৬৬১৯০০-৫৯/৪০৮০ শক্ষঃ৮৮০-২-৯৬৬৭২২২		**************************************		OFFICE OF THI EXAMINATION UNIVERSITY OF DHAKA-1000, I Phone: (off.) 81 9661900-59/40 Fax: 88-02-966 Email: co_letter	F DHAKA BANGLADESH 613280 180 57222
যমো নংঃ 1062/শা-৫/প		ভারি	48 25-08-2021		
পরিচালক 🗸 Select depa	rtment			-	
ভাকা বিশ্ববিদ্যালয় ভাকা - ১০০০। মহোদয়, আপনার ভারিখের		রিখের paper_no	ন	ং পরের বরাতে	
				বিষয়ের	
আপনাকে জানাইতেছি যে		(a)	T. Kiloner		
সনের বাচ বর্ষ কর্মাট নিম্নগিখিতভাবে গ অনুমোদিত হইয়াছে।	সনের     প   বর্ষ (সেমিস্ট  ঠনের    জন্য	বিভাগীয় একাডেফি	ব্যাচ সেমিস্টার পরীক্ষ কৈ কমিটির সভাগ		
সন্মের বাচ বর্গ কমিটি নিম্নলিখিতভাবে স্থ অনুমোদিত হইয়াছে। ১) Select teacher's name \	সনের	ার বিভাগীয় একাডেফি	সেমিস্টার পরীক্ষ		. , छाः वि
সনের বাচ বর্থ কমিটি নিম্নলিখিতভাবে গ্র অনুমোদিত হইয়াছে।	সনের     পর্ব সেমিন্ট    বর্ষ সেমিন্ট  ঠনের     জন্ম  জন্ম  জাচ, বর্ষ পরীক্ষার পরী	ার বিভাগীয় একাডেফি	সেমিস্টার পরীক্ষ		
সন্মে বাচ   বৰ্ষ কমিট নিম্নলিখিতভাবে   গ্ অনুমোদিত হুইমাছে। ব ১৷   Select teacher's name \	সনের     পর্ব সেমিন্ট    বর্ষ সেমিন্ট  ঠনের     জন্ম  জন্ম  জাচ, বর্ষ পরীক্ষার পরী	ার বিভাগীয় একাডেফি	সেমিস্টার পরীক্ষ		়, চাঃ বি
সাদের বাচ বর্ষ কমিট নিমালিখিজভাবে স্থ ক্রমাদিভ ইইমাছে। Select teacher's name \ সভাপতি Select teacher's name \ সমস্য তা Select teacher's name	সনের       বর্ষ সেমিন্ট  বর্ষ সেমিন্ট  ঠনের       জন্য  চাচ, বর্ষ পরীক্ষার পরী	ার বিভাগীয় একাডেফি	সেমিস্টার পরীক্ষ		্, ডাঃ বি
সন্দের বাচ বর্গ কমিটি নির্মাণিখভয়াবে গ্র ক্রমিটি নির্মাণিখভয়াবে গ্র ক্রম্মাদিত হট্যাছে।  Select teacher's name \ সদস্য  Select teacher's name \ সদস্য  Select teacher's name \ সদস্য	সন্দের   বর্ষ সেফিন্ট  বর্ষ সেফিন্ট  ইনের   জন্ম  জন্ম  জন্ম  জন্ম  জন্ম  ভব্  জন্ম  ভব  জনম  ভব  জন্ম  ভব  জনম  ভব  জন্ম  ভব  জনম   ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব  জনম  ভব	ার বিভাগীয় একার্ডেফি	সেমিস্টার পরীক্ষ		়, চাঃ বি
সাদের বাচ বর্ষ কমিট নিমালিখিজভাবে স্থ ক্রমাদিভ ইইমাছে। Select teacher's name \ সভাপতি Select teacher's name \ সমস্য তা Select teacher's name	সনের       বর্ষ সেমিন্ট  বর্ষ সেমিন্ট  ঠনের       জন্য  চাচ, বর্ষ পরীক্ষার পরী	ার বিভাগীয় একাডেফি	সেমিস্টার পরীক্ষ		ডাঃ বি

Figure 32: Letter template for Committee

Staff will fill the blanks of the templates from dropdown boxes and other options. After finishing filling up and selecting a syllabus file, he will click on "Next".

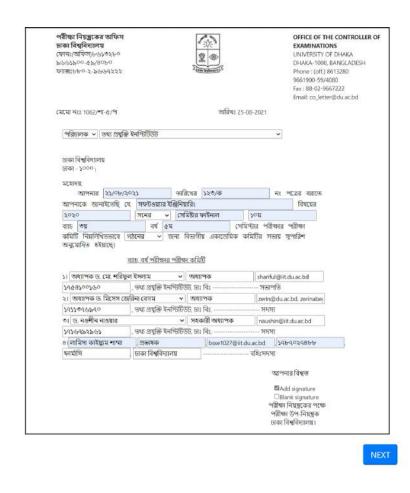


Figure 33:After filling the letter template for Committee.

By clicking "NEXT", 5 pdfs are generated. They are for the four exam committee members and the chairman of the department. After checking the pdfs, they are automatically sent to the respective recipient's email and an automated sms is also sent.

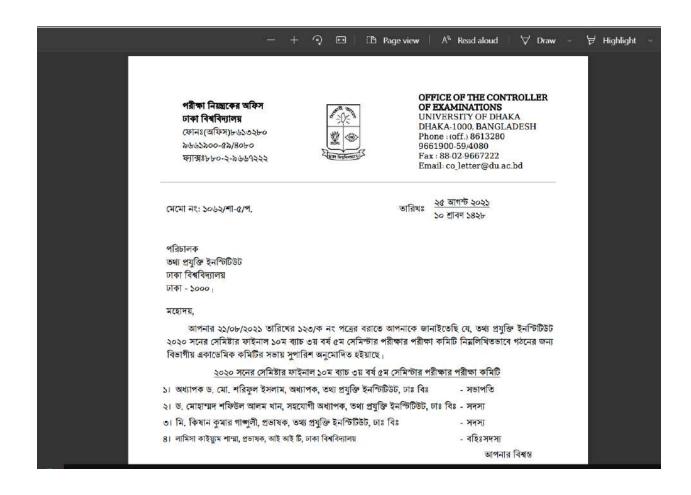


Figure 34: Output pdf of Letter template for Committee.

# Faculty/Teacher's Features and Manual:

## Signup page:

After clicking Sign-Up, Sign-Up form will appear as like:-

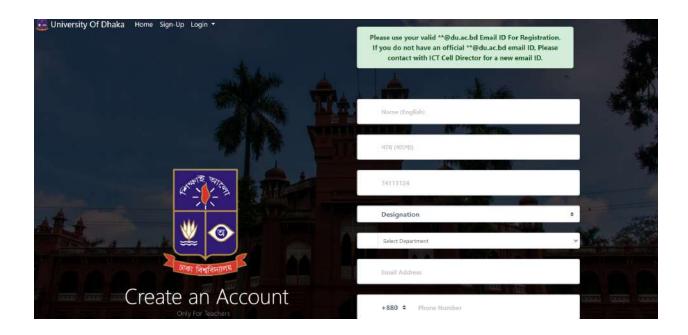


Figure 35: Faculty signup

## Login:

To login, Faculty has to click on the Login button and from the submenu, click on teacher.

Faculty will get a login form given below and need to Login. To login, Faculty need to provide required credentials and then click on "Login"

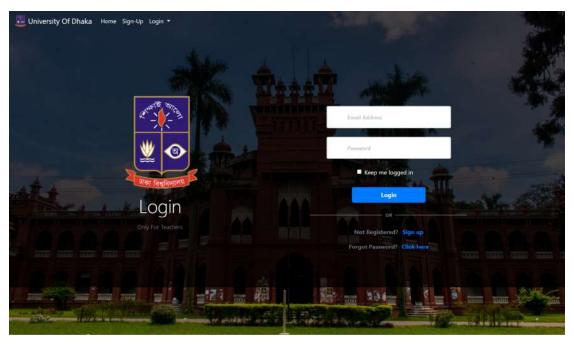


Figure 36: Faculty login

#### **Dashboard:**

After successful Login ,Faculty will enter into the system and can see the faculty dashboard.

Here faculty will see the

- Received Letters (LAST 7 DAYS),
- Replies Sent (LAST 7 DAYS),
- Bar chart of Letter Statistics (Last 7 Days),
- Pie chart of Letters Overview (Last 7 Days).

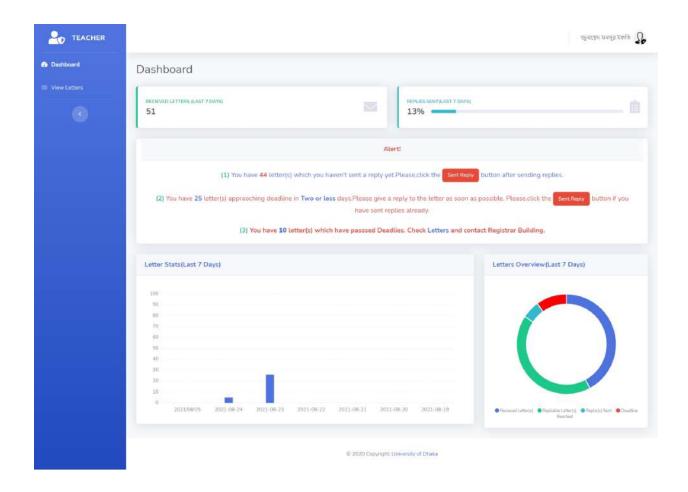


Figure 37: Faculty dashboard

#### **View Received Letters:**

By clicking on the View Letters option from the left menu, faculty will see all the received letters.

#### Operations:

- Faculty can sort the table data by clicking on the arrow button in every column header.
- From the Search Box on top of the table, Faculty can search letters by Reference number, Recipient, Sending Date, Subject, Deadline.
- Faculty can view the letter by clicking that Pdf in the body column.

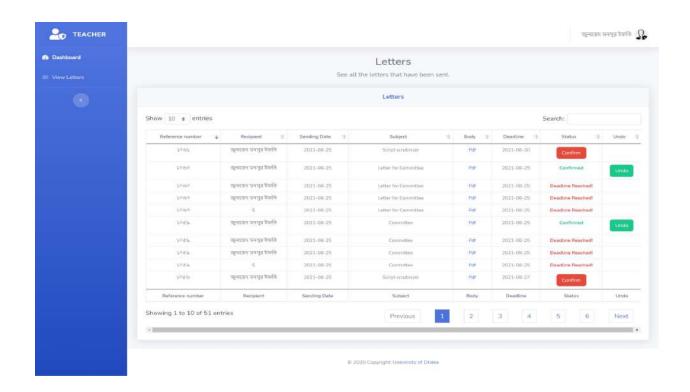


Figure 38: Received letters of faculty

Faculty can send an acknowledgement of receipt by clicking the Confirm button. Acknowledgement of receipt can be reverted by the undo button after mistakenly pressing the Confirm button.

#### **Letter PDF Download:**

Faculty can download or print that pdf file of the letter.

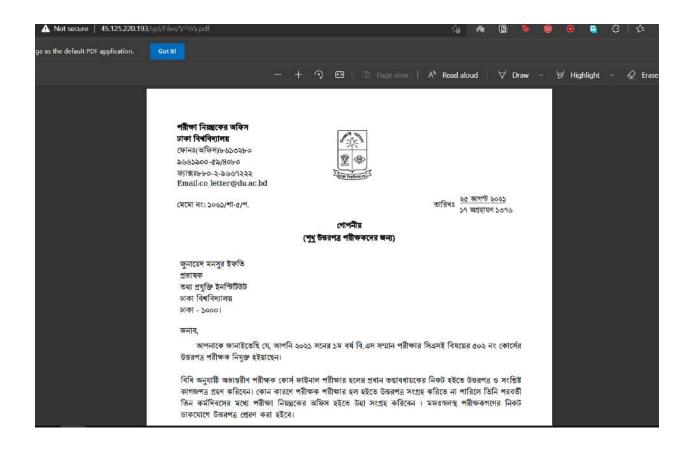


Figure 39: Letter pdf.

## Logout:

Faculty can logout by clicking the Logout button.

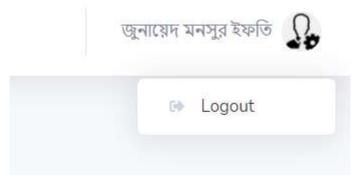


Figure 40: Logout

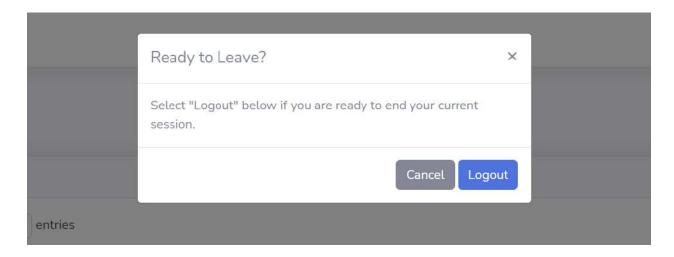


Figure 41: Confirm alert before logout

## **Forgot Password:**

If any faculty forgets the password, then he/she clicks on "Forget password". Then he/she has to provide the registered email address to reset the password.

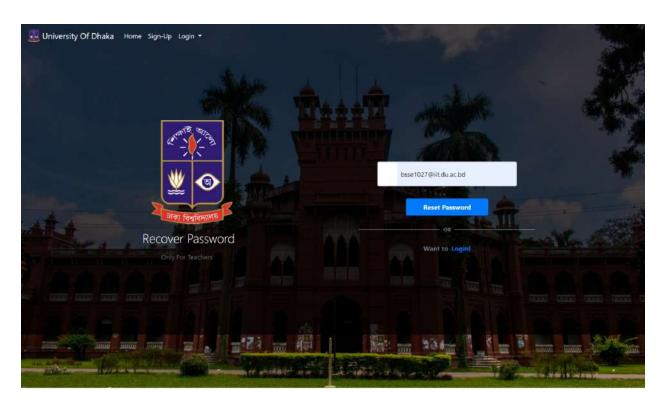


Figure 42: Forget password

After clicking the Reset Password button a reset email will be sent to the corresponding email address which will be active for 24 hours.

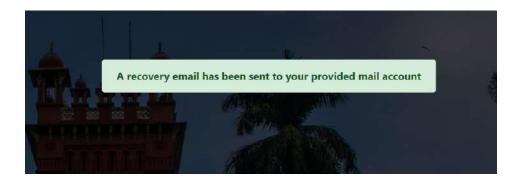


Figure 43: Recovery email notification

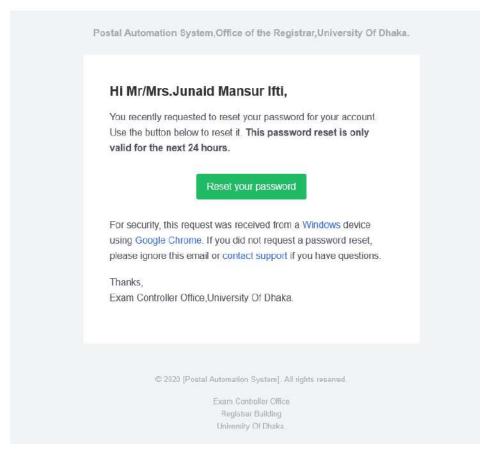


Figure 44: Recovery email.

After clicking reset your password user will redirect to the password reset form as below:-

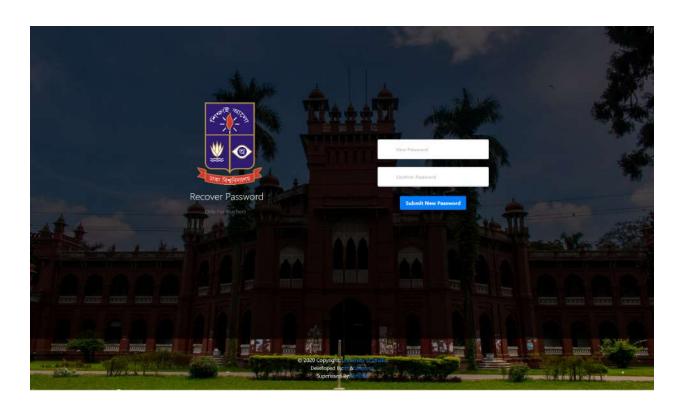


Figure 45: Password reset form

After clicking Submit New Password user will see the page as like this:-



Figure 46: Success notification on password reset.

# Chapter 5:CONCLUSION AND IMPLEMENTATION LIMITATIONS

#### **Achievements:**

This project helped us to achieve a lot of experiences-

- As in this semester we got our first Web technology course, It was challenging for us to build a proper web application for Official works in the same semester. But this project helped us take the challenge to develop a real-life web application which would be used officially by DU Authority. This has been a great kick-start to our developing journey.
- This project helped us to understand how Requirements Engineering works with a real Client. We went from corner to corner, from person to person to take notes, requirements and necessary details needed to be in the project.
- Finally implementing an application aligning with the requirements was a challenging but enjoyable task. It helped us learn Web basics more thoroughly and taught us how to develop an application based on SRS.
- Finally we deployed the project in the official server of DU which was a completely new experience for us.

### **Obstacles:**

During the project's development, we faced some hurdles:-

- As we were just novices in the field of Web-Development, it was really difficult for us to get the kick-start of this project.
- As our project was intended to Automate the System of Registrar Building, taking requirements from them was a big challenge as the whole system there is archaic and employees are not technically sound.
- Managing the big official databases was also a big obstacle for this project being complete. We had to manually gather the excel sheets from them and convert them to concrete database tables by rearranging the whole sheets with meaning

primary fields, field names etc by preserving the dependency of the whole system.

## Future plan:

We have plans to extend this project in the future:-

- Strengthening the security of our application.
- Some more features can be implemented to make the Letter Sending Process easier.

#### **Limitations:**

We have some limitations of this project:-

- There are officially many Letter templates that are dispatched from the Registrar Building. We only got the authority to cover a portion of the templates during our project development lifetime.
- As no frameworks were used in both front and back end, codes have been raw, the project is a bit tough to maintain.