

**Project Name:** Hall Management System.

## Objectives:

- Streamline room allocation process to ensure fairness and transparency.
- Enable secure online payment and tracking of hall fees.
- Implement an efficient and secure token system for various purposes.
- Provide a platform for residents to submit and track complaints or service requests.
- Maintain a centralized notice board for important announcements and updates.
- Design an intuitive and user-friendly interface for residents and administrators.
- Implement robust security measures to protect user data and privacy.
- Ensure scalability to accommodate potential growth in users and data volume.
- Establish a feedback mechanism for continuous improvement.
- Offer comprehensive training materials and support for users and administrators.

Overall, the primary objective of a Hall Management System is to enhance the efficiency, security, and convenience of managing student accommodation while ensuring a positive and safe environment for residents.

## Implementation Details:

Here are the potential pages that are included in our MERN-based Hall Management Website:

### Home Page:

On our Home page, at first, we notice a Navbar where various page name is shown. After that, we can see a marque announcement bar where various notices are shown. Then we can see a slide bar where our Shahid Tarek Huda Hall's images are shown. After that, there is an about section where Hall's details and the Provost's message are shown. Then we can see the achievement sections. Various achievements are shown in that section. Then we can see the notices regarding our Hall. After that, we see the contact sections where various contact details are provided for helping the students. At last, we can see the Footer.

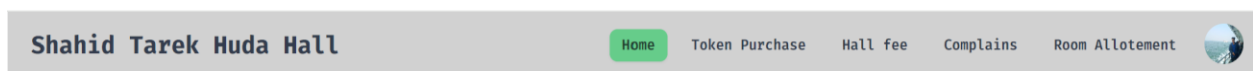


Figure 1: Navbar

Figure 2:Marquee Bar



Figure 3: Image Bar

## About

**Shaheed Tareq Huda Hall**

It is named after the freedom fighter Shaheed Tareq Huda who gave away his life for his Motherland during the freedom war of 1971. There are accommodations for a total of 415 students. It has a dining room and a TV room and a small library.

**Provost Message**

Lorem ipsum dolor sit amet consectetur adipisicing elit. Quos optio error officiis pariatur fugit odit distinctio deleniti repellendus totam rerum, ratione alias minus veritatis explicabo itaque, amet sit facere voluptatem nemo unde laudantium accusamus perspiciatis a? Maiores, natus. Esse, nam saepe. Possimus sapiente minima exercitationem aliquid mollitia odio iure sed?

Provost: Dr. Md. Sanaul Rabbi

Assistant Provost:

Kamrul Hasan, Bipul Chandra Mondal, Animesh Chandra Roy, Dr. Md. Sarfaraz Gani Adnan, Mohammad Mahmudul Hasan Tareq

Figure 4: About Section

## Achievements



Figure 5: Achievements Section

## Notice

No	Announcements
1	ajke amra duality part 2 dekhbo
2	ager ta hy nai abr dekhbo duality 2
3	abr abr dekhte hobe duality 3
4	academi porasona dekhte hobe cse
5	twp_poster_quantum_computing
6	Operation research application algorithm
7	routine
8	Hall annual function

Figure 6: Notice Section





Figure 7: Contact Us Section

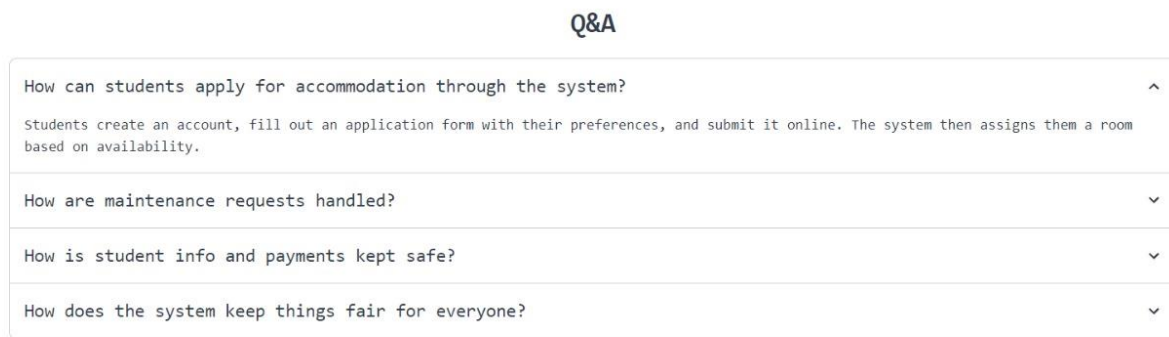


Figure 8: Q&A Section

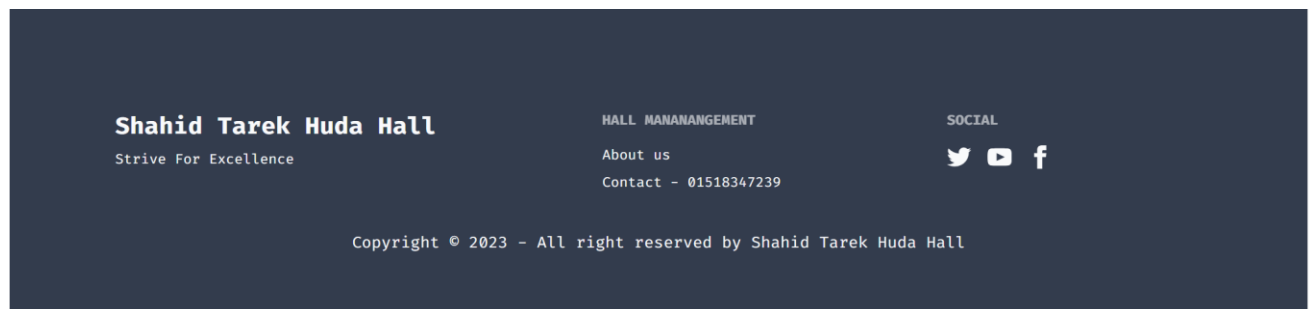
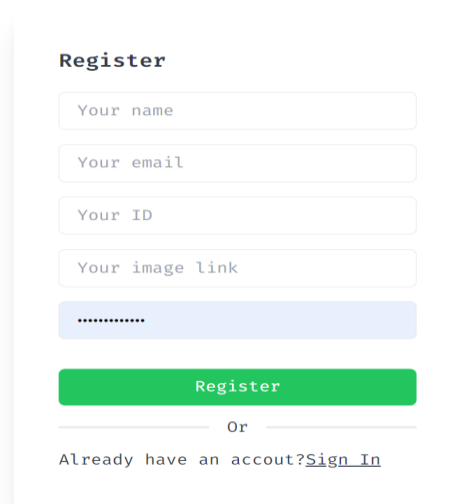


Figure 9: Footer

### Register Page:

Here Students provide their info for example Name, Student ID, Email, Image, and Password. All this data is saved in the MongoDB database as well as Firebase. Here Firebase is used only for authentication purposes.

A registration form titled "Register" with a light blue border. It contains five input fields: "Your name", "Your email", "Your ID", "Your image link", and a password field with a blue background and masked characters. Below the fields is a green "Register" button. Underneath the button is a horizontal line with the word "Or" in the center. At the bottom, it says "Already have an account? [Sign In](#)".

**Register**

Your name

Your email

Your ID

Your image link

\*\*\*\*\*

**Register**

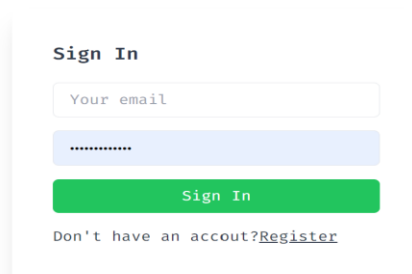
Or

Already have an account? [Sign In](#)

Figure 10: Register Page

### Sign In Page:

Student need to provide their Email address and Password for Sign In. Here Firebase is used for authentication.

A sign-in form titled "Sign In" with a light blue border. It contains two input fields: "Your email" and a password field with a blue background and masked characters. Below the fields is a green "Sign In" button. Underneath the button, it says "Don't have an account? [Register](#)".

**Sign In**

Your email

\*\*\*\*\*

**Sign In**

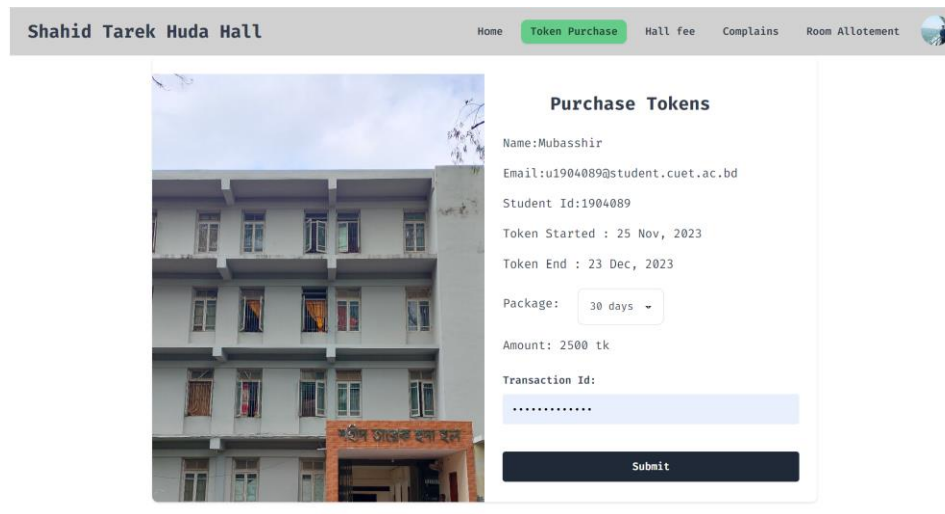
Don't have an account? [Register](#)

Figure 11: Sign In page

### Token Purchase Page:

Here Students can Purchase their token by providing the required information. First, they need to Sign In. Then their Name, Student ID, and Email are automatically fetched from the database. The token's start date and ending date are shown. Student needs to select their package and the amount is shown according to their selected package. After completing the payment students should

provide the Transaction ID and submit their information. Within 24 hours confirmation Email should be sent.

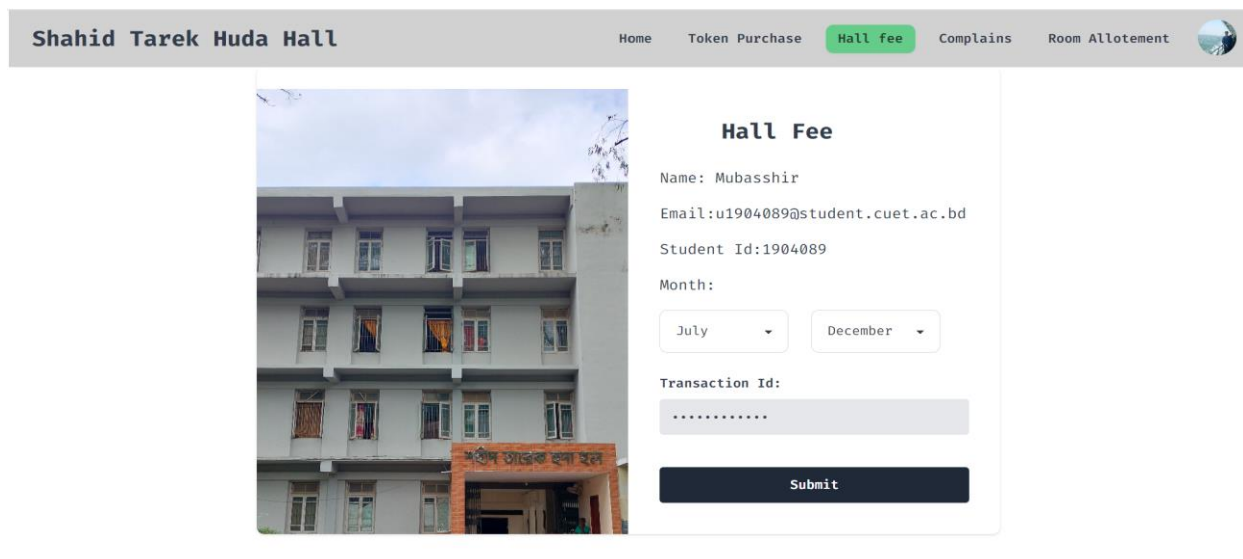


The screenshot shows the 'Token Purchase' page of the Shahid Tarek Huda Hall website. The header includes the site name and navigation links: Home, Token Purchase (active), Hall fee, Complains, and Room Allotement. The main content area is divided into two sections. On the left is a photograph of a multi-story building with a sign that reads 'শহীদ তারেক হুদা হল' (Shahid Tarek Huda Hall). On the right is a form titled 'Purchase Tokens'. The form contains the following fields: Name (Mubasshir), Email (u1904089@student.cuet.ac.bd), Student Id (1904089), Token Started (25 Nov, 2023), Token End (23 Dec, 2023), Package (30 days), Amount (2500 tk), and Transaction Id (a masked field with dots). A 'Submit' button is located at the bottom right of the form.

Figure 12: Token Purchase Page.

### Hall Fee Page:

Here student can easily pay their hall fees by providing the required information. First, they need to Sign In. Then their Name, Student ID, and Email are automatically fetched from the database. Then students need to select the months and after completing payments they need to provide the Transaction ID. Within 24 hours confirmation mail will be sent to their mail.

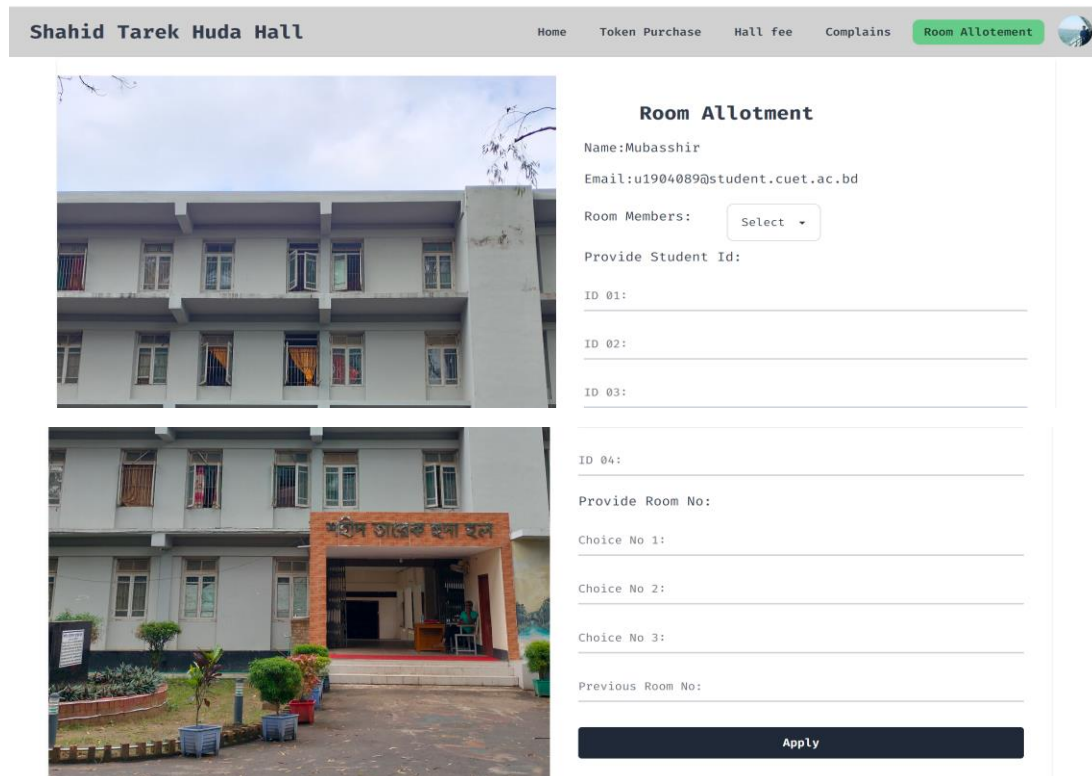


The screenshot shows the 'Hall Fee' page of the Shahid Tarek Huda Hall website. The header is identical to the previous page, with the 'Hall fee' link now active. The main content area also features the building photograph on the left and a form titled 'Hall Fee' on the right. The form fields are: Name (Mubasshir), Email (u1904089@student.cuet.ac.bd), Student Id (1904089), Month (with two dropdown menus showing 'July' and 'December'), Transaction Id (a masked field with dots), and a 'Submit' button at the bottom.

Figure 13: Hall Fee Page

### Room Allotment Page:

Here Student can apply for their interested rooms. First, they need to Sign In. Then their Name and Email are automatically fetched from the database. Then students need to select the number of room members and provide their Student ID. Then they need to provide the interested room numbers and previous room numbers. After that, they need to click the Apply button. The Hall authority will inform the result through Notice and Email.



**Shahid Tarek Huda Hall** Home Token Purchase Hall fee Complains **Room Allotment**

### Room Allotment

Name: Mubasshir  
Email: u1904089@student.cuet.ac.bd

Room Members:

Provide Student Id:

ID 01:

ID 02:

ID 03:

ID 04:

Provide Room No:

Choice No 1:

Choice No 2:

Choice No 3:

Previous Room No:

Figure 14: Room Allotment Page

### Complains Page:

First students need to Sign In and then they need to type their complain regarding hall and submit it. Within 24 hours action will be taken. Here, They can call also call and send their mail to the hall authority.

### Complains

Name: Mubasshir

Email: u1904089@student.cuet.ac.bd

Student Id: 1904089

Your message

Write your complains here ...

Submit

For Emergency:

Call Email

Figure 14: Complains Page

### Admin Page:

Here all types of data are stored. There are many Sub-sections for example students, Notices, Allotment Requests, Room Details, Complains, Token Requests, Token Details, Hall fees Requests, and Hall Fees Details.

**Students:** Here, All student's data is stored. Every Student's Name, Student ID, Email, Allotted room, Hall Fee Status, and Token Status are Shown. The allotted room is fetched from the allotment request and Hall fees status is fetched from the Hall Fees Request and the Token status is fetched from the Token request.

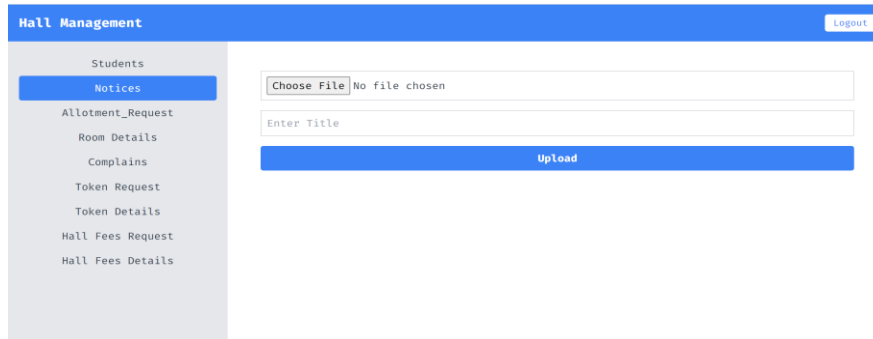
Hall Management						Logout
<div>Students</div> <div>Notices</div> <div>Allotment_Request</div> <div>Room Details</div> <div>Complains</div> <div>Token Request</div> <div>Token Details</div> <div>Hall Fees Request</div> <div>Hall Fees Details</div>						
<input type="text" value="Search for students"/>						
<input type="checkbox"/>	NAME	STUDENT ID	ALLOTTED ROOM	HALL FEE	TOKEN	
<input type="checkbox"/>	<b>Saikat</b> saikat@gmail.com	1904088	423	<span>● pending</span>	<span>● pending</span>	
<input type="checkbox"/>	<b>Mubasshir</b> u1904089@student.cuet.ac.bd	1904089	423	<span>● Approved</span>	<span>● Approved</span>	
<input type="checkbox"/>	<b>Rhythm</b> u1904086@student.cuet.ac.bd	1904086	423	<span>● pending</span>	<span>● pending</span>	
<input type="checkbox"/>	<b>Zubaer</b> u1904076@student.cuet.ac.bd	1904076	423	<span>● pending</span>	<span>● pending</span>	

Figure 15: Students Portal



## Notice:

Here Admin can Upload the Notice.



The screenshot shows the 'Hall Management' interface with a sidebar menu. The 'Notices' option is selected. The main content area contains a 'Choose File' button, a text input field for the title, and an 'Upload' button.

Students
Notices
Allotment_Request
Room Details
Complains
Token Request
Token Details
Hall Fees Request
Hall Fees Details

Choose File

No file chosen

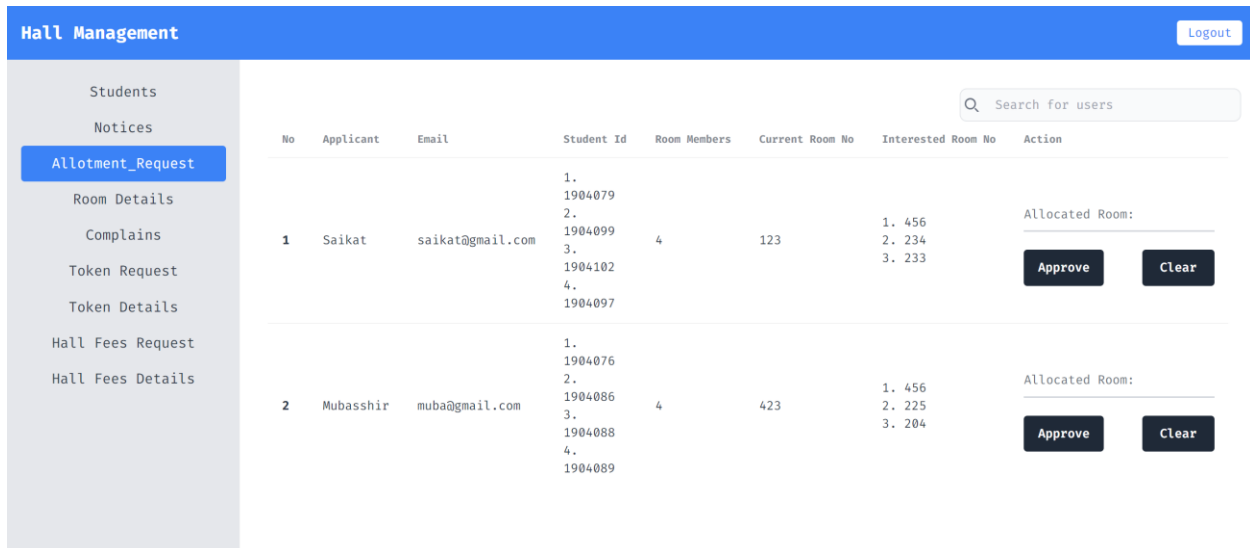
Enter Title

Upload

Figure 16: Notice Portal

## Allotment Request and Room Details:

Here, all Allotment Request is stored. Admin verifies the data and then admin can provide the vacant room number and confirmation mail will be sent automatically to the students. After that, the Final data will be stored in the Room Details Section.



The screenshot shows the 'Hall Management' interface with a sidebar menu. The 'Allotment\_Request' option is selected. The main content area displays a table of allotment requests with columns: No, Applicant, Email, Student Id, Room Members, Current Room No, Interested Room No, and Action. There are two rows of data, each with an 'Approve' and 'Clear' button.

No	Applicant	Email	Student Id	Room Members	Current Room No	Interested Room No	Action
1	Saikat	saikat@gmail.com	1. 1904079 2. 1904099 3. 1904102 4. 1904097	4	123	1. 456 2. 234 3. 233	Allocated Room: <div>Approve Clear</div>
2	Mubasshir	muba@gmail.com	1. 1904076 2. 1904086 3. 1904088 4. 1904089	4	423	1. 456 2. 225 3. 204	Allocated Room: <div>Approve Clear</div>

Figure 17: Allotment Request

Hall Management							Logout
<ul style="list-style-type: none"> <li>Students</li> <li>Notices</li> <li>Allotment_Request</li> <li>Room Details</li> <li>Complains</li> <li>Token Request</li> <li>Token Details</li> <li>Hall Fees Request</li> <li>Hall Fees Details</li> </ul>							<input type="text" value="4"/>
	No	Student Id	Room Members	Previous Room No	Current Room No	Action	
	1	1. 1904079	4	123	456	<div>Clear</div>	
		2. 1904099					
		3. 1904102					
		4. 1904097					
	2	1. 1904076	4	423	204	<div>Clear</div>	
		2. 1904086					
		3. 1904088					
		4. 1904089					

Figure 18: Room Details

## Token Request And Token Details:

Here, all Token Request is stored. Admin verifies the data and then admin can approve or deny the request and mail will be sent automatically to the students. After that, the Final data will be stored in the Token Details Section.

Hall Management

Logout

Students

Notices

Allotment\_Request

Room Details

Complains

Token Request

Token Details

Hall Fees Request

Hall Fees Details

Search for users

No	Applicant	Email	Student Id	Package	Amount	Transaction Id	Action
1	Mubasshir	muba@gmail.com	1904089	30 days	2500 tk	t2J9L7@ibfJqR	<div>Approved Or Deny:</div> <div>Submit</div> <div>Clear</div>

Figure 19: Token Request Portal.

Hall Management								Logout
Students	Notices	Allotment_Request	Room Details	Complains	Token Request	Token Details	Hall Fees Request	Hall Fees Details
<div> <div>Q</div> <div>Search for users</div> </div>								
No	Name	Email	Id	Package	Amount	Comments	Action	
1	Mubasshir	muba@gmail.com	1904089	30 days	2500 tk	Approved	Clear	

Figure 20:Token Details Portal

### Hall Fees Request And Hall Fees Details:

Here, all Hall Fees Request is stored. Admin verifies the data and then admin can approve or deny the request and mail will be sent automatically to the students. After that, the Final data will be stored in the Hall Fees Details Section.

Hall Management								Logout
Students	Notices	Allotment_Request	Room Details	Complains	Token Request	Token Details	Hall Fees Request	Hall Fees Details
<div> <div>Q</div> <div>Search for users</div> </div>								
No	Applicant	Email	Student Id	From	To	Transaction Id	Action	
1	zahid	zahid@gmail.com	12	February	July	t2J9L7@ibfJqR	Approved or Deny:	
							Submit	Clear
2	Naib	naib@gmail.com	1904089	July	December	t2J9L7@ibfJqR	Approved or Deny:	
							Submit	Clear
3	Mubasshir	muba@gmail.com	1904089	March	August	t2J9L7@ibfJqR	Approved or Deny:	
							Submit	Clear

Figure 21: Hall Fees Request

Hall Management								Logout
<ul style="list-style-type: none"> <li>Students</li> <li>Notices</li> <li>Allotment_Request</li> <li>Room Details</li> <li>Complains</li> <li>Token Request</li> <li>Token Details</li> <li>Hall Fees Request</li> <li><b>Hall Fees Details</b></li> </ul>	<div> <div>Search for users</div> </div>							
	No	Name	Email	Id	From	To	Comments	Action
	1	Mubasshir	muba@gmail.com	1904089	March	August	Approved	Clear

Figure 22: Hall Fees Details

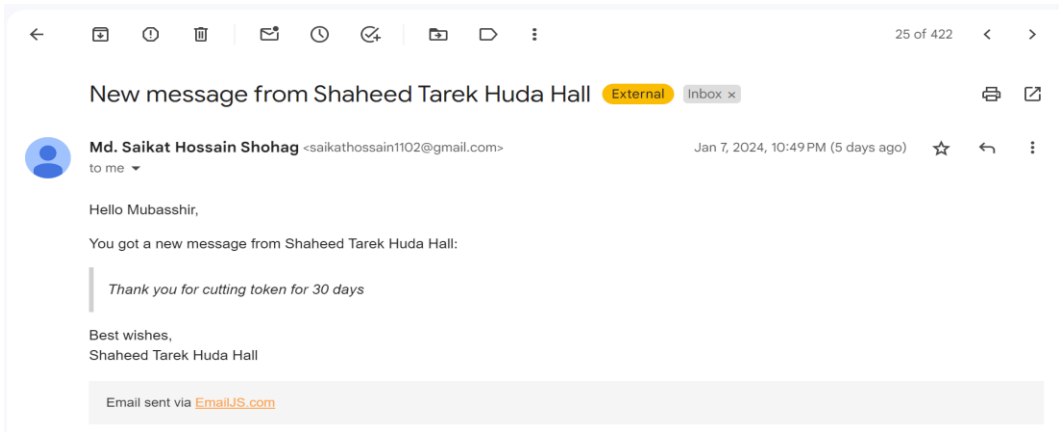


Figure 23: Sample of Confirmation Email

**Complains:** All types to complains are stored here.

Hall Management							Logout
<ul style="list-style-type: none"> <li>Students</li> <li>Notices</li> <li>Allotment_Request</li> <li>Room Details</li> <li><b>Complains</b></li> <li>Token Request</li> <li>Token Details</li> <li>Hall Fees Request</li> <li>Hall Fees Details</li> </ul>	<div> <div>Search for users</div> </div>						
	No	Name	Email	Id	Complains	Action	
	1	Mubasshir	muba@gmail.com	1904089	Wifi Kaj kore Na	Clear	

Figure 24: Complains

**Conclusion:**

Hall Management System is a technology-driven solution that enhances the management of student accommodations. It provides a user-friendly platform for room allocation, fee collection, token management, complaints, and security, ultimately improving the overall experience for residents. By automating administrative tasks and promoting efficiency, it simplifies operations for hall staff while ensuring the safety and satisfaction of students.