

# **Project Title: BAUET Result Processing and Student Management System**

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System Definition: A system is a set of detailed methods, procedures and routines created to carry out a specific activity, perform a duty, or solve a problem.

An organized, purposeful structure that consists of interrelated and interdependent elements (components, entities, factors, members, parts etc.). These elements continually influence one another (directly or indirectly) to maintain their activity and the existence of the system, in order to achieve the goal of the system.

Systems underlie every phenomenon and all are part of a larger system. Systems stop functioning when an element is removed or changed significantly.

And we are developing a system named “BAUET result processing and student management system” with its main purpose is to,

1. Process the result in a significant way by using the candidate system.
2. To avoid the manually processed publication system used in MS EXCEL.
3. To avoid the Black and White method by using the candidate system.
4. Course registration and Semester final exam registration can be done by our system.
5. Every student can view their payment and dues.
6. Students can view their results online.
7. Teachers can manage students and admin can manage teachers.

Implementation method: This system has been implemented using MEAN STACK language.

MEAN goes for MongoDB, Express, Angular and Node.

MongoDB is an open source database management system (DBMS) that uses a document-oriented database model which supports various forms of data.

Instead of using tables and rows as in relational databases, the MongoDB architecture is made up of collections and documents. Other NoSQL databases, MongoDB doesn't require predefined schemas and it stores any type of data. This gives users the flexibility to create any number of fields in a document, making it easier to scale MongoDB databases compared to relational databases.

Express.js, or simply Express, is a web application framework for Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs. It has been called the de facto standard server framework for Node.js.

AngularJS is a structural framework for dynamic web apps. It lets you use HTML as your template language and lets you extend HTML's syntax to express your application's components clearly and succinctly. AngularJS's data binding and dependency injection eliminate much of the code you would otherwise have to write. And it all happens within the browser, making it an ideal partner with any server technology.

Node.js is an open-source, cross-platform JavaScript run-time environment that executes JavaScript code outside of a browser. Node.js lets developers use JavaScript to write command line tools and for server-side scripting—running scripts server-side to produce dynamic web page content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm, unifying web application development around a single programming language, rather than different languages for server- and client-side scripts.

### Requirements:

1. Every user must create an account first to sign in to the system.
2. Super admin can access all over the system.
3. Admin can access, edit, customize only those filed which permitted by super admin.
4. Student can only edit his/her profile.
5. Student can view their CT marks.
6. Student can view their pays and dues.
7. Student can able to register their course (Close Credit).
8. Student can able to view their results.
9. Each department admin can only access modify and manage their respected sub-admin and students.
10. Course teacher can publish class test marks into the system database.
11. Course coordinator can process the result.
12. Exam controller can publish the whole result.

### Expected Outcome:

1. To publish and process the result during a short time and an easy way.
2. By avoiding the Black & White method.
3. To ensure the system user friendly and reliable.
4. To store the data backup and recovery at any situation.
5. Get connected from anywhere and any condition if slow internet connection hence using the cache server.
6. Not to fill up the form again when to register the course (Course registration recent method).
7. Finally, publish the result with grade sheet and it will be dedicated to the students profile thus they can download the pdf of their result.

Feasibility Study: An initial investigation culminates in a proposal that determines whether an alternative system is feasible. A proposal summarizing the thinking of the analyst is presented to the user for review.

To do a feasibility study there are three basic considerations-

- ❖ Economical Factor
- ❖ Technical Factor
- ❖ Behavioural Factor

Existing System: In our existing system there consumes more time and manpower as it is a totally manual system. Every task like admission, course registration, payment, result publication etc. are done by paper work.

To do a course registration a form is filled up manually and after that there is some validation process to valid that form. To check pays and dues students have to go to account office and to wait in a long queue. To check marks of class test students have to check the notice board. To process the result MS Excel is used. It is not efficient and time consuming and it can be modified by anyone, so it is not secured. To publish the result at first course coordinator of each department make a result, then it is sent to control office to verify. Then it is sent to Vice Chancellor sir for seeking his permission to publish finally. After that when the permission is granted then it is published in notice board. There are some cons of this because maximum time the result is published in vacation for which it is a trouble for student to check their result. After result publishing student can check the validation of the result through grade sheet. But the procedure is also troublesome here.

To eliminate all these limitations and get rid of those problems, we develop an easy and efficient system which can save our times, costs, manpower and to manage the all procedures in a modern way.

Proposed System: As our existing system is so much complex and time consuming, we are proposing a new modern system which may remove those complexities and make the system reliable and user friendly.

In our proposed system the main issue is to provide an automatic and reliable process of result publication and student management system. There are also some other proposals:

- ❖ Each user must have an account to login into the system.
- ❖ Students can view and edit their own profile.
- ❖ Students can view their class test marks.
- ❖ Students can view their pays and dues.
- ❖ Students can view their final result and can download the grade sheet.
- ❖ Students can register his/her courses.
- ❖ Teachers can view and edit their profile.
- ❖ Teachers can manages the students.
- ❖ Teachers can upload the CT marks and attendance percentage.
- ❖ Teachers can process the result.
- ❖ Department Head can manages of their respective teachers and staffs.
- ❖ Treasurer section can maintain the payment procedures.
- ❖ Exam controller can maintain the procedure of publish the result.
- ❖ At last VC sir will be treated as super admin and can access all the system.

**Screenshot (Admin)**

Subject	Batch	Department ID
Program	Year	Department
Semester	Admission Date	

GO

BACK


Basic Info		Educational Info		Billing Mode	Payment Mode	Quota
Student Name	+88 Telephone	Mother Name	+88 Telephone			
Father Name	+88 Telephone	Birth Certificate No				
Blood Group	Religion	Gender: <input type="radio"/> Male <input type="radio"/> Female	Marital Status	Birth Date		
<u>Parmanent Address</u>			<u>Present Address</u>			
Village/city			village/city			
Road			Road			
Post			Post			
Thana			Thana			
Upozila			Upozila			
District			District			
<div>Submit and Go</div>						

Basic Info		Educational Info	Billing Mode	Payment Mode	Quota
Admission Fee(Not Refundable)		Semester Fee			
Establishment Fee		Security Mont(Refundable)			
Term Registration		Tution Fee			
Library Fee		Student Activities			
MRC NO		Total Fee			
<div>Submit and Go</div>					













Figure 1: Adding student and their information to the application from admin panel.

Student List

Dashboard / Student


BAUET


Search

Id	Name	Department	Semester	Actions
16114022	Faisal kabir	eee	2nd	  
123	S M shakil Ahmed	eee	5th	  
16104068	MD Makhon Lal	eee	3rd	  
16104023	Md.Ariul islam	cse	7th	  

Items per page: 15
1 - 4 of 4

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Figure2: Added student list



Name

Sm Shakil ahmed

Gender

Male

ID

16104025

Department

CSE

Batch

3rd

Email

shakil@gmail.com

Phone

+88 01723654456

Address

Dayarampur Bazar, Natore

Basic

Educational

Billing and Payment

Father's Name:

SM Abdus Salam.

Phone:

+88 01677147584

Mother's Name:

Farida lasmin.

Phone:

+88 017771475856

Birth Date:

20/05/1996

Birth Certificate No:

328478237498237489723

Blood Group:

O+

Religion:

Islam

Marital Status:

Single

Present Address

Permanent Address

City/Village:

Naogoan

Road:

Dayalermor Road

District:

Naogoan

Post:

Naogoan

Figure 3: Instant student information profile

Semester \*  
3rd semester

Search Semester

Overall GPA  
3.5

Set

Current GPA  
3.57

Semester GPA  
3.45

Total Credit  
22.5

Earned Credit  
22.59

Status  
Passed

Update


Add Course +

### Subject Grades and Points

Serial	Subject Name	Subject ID	Earned GPA	Grade	Actions
1	Data communication	CSE-121	3.67	A	
2	Mathmatics	CSE -105	3.08	C	
3	Civil Engineering Drawing	CSE -101	3	B	
4	java programing language	CSE -105	3.8	A	
5	Software Engineering	CSE -109	3.67	A	

Figure 4: Manage and control a particular student's all semester result.

### Screenshot (Student)



বাংলাদেশ সেনাবাহিনী প্রকৌশল ও প্রযুক্তি বিশ্ববিদ্যালয়  
BAUET INSTITUTIONAL INFORMATION SYSTEM

Home Campus Life Notice Board Feedback Contact

LOGIN

LOGIN

Department ID:

Password:

Login

Forgot Password ? [Click Here.](#)

Figure 5: Student login page



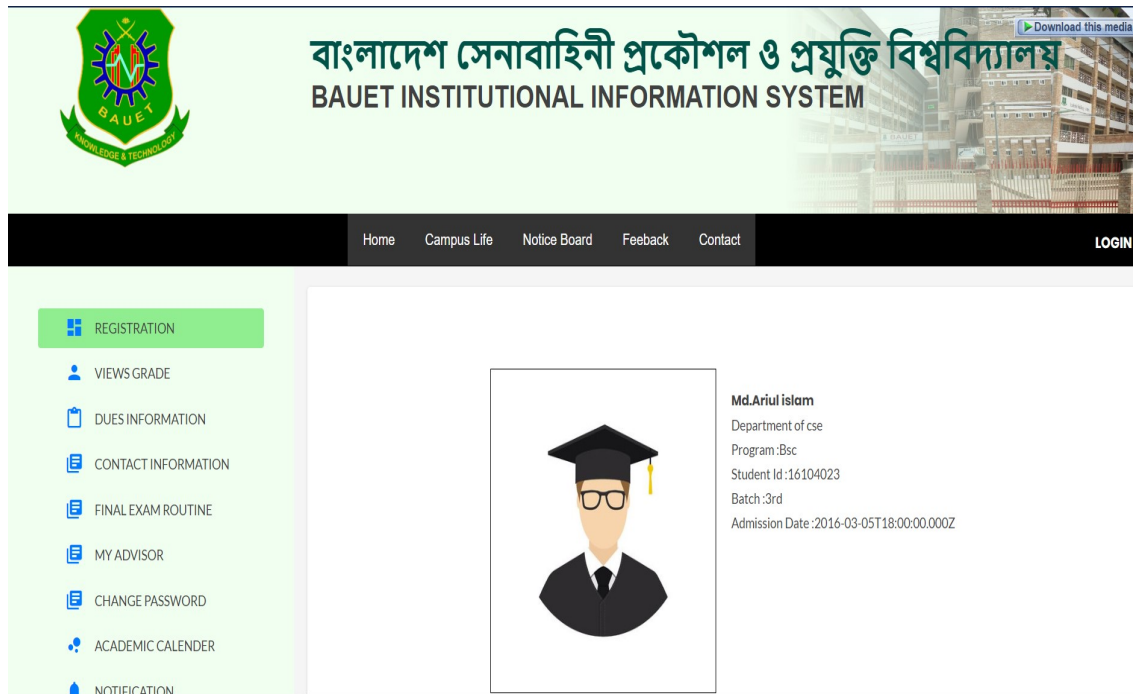


Figure 6: Student Dashboard

### VIEW GRADES

SHOW

3rd Batch || Session 2015-16  
Department of Computer Science and Engineering

Student Name : **MD Ariful Islam**

Student Id : **16104023**

Course No	Course Title	Credit Hours	Grade	Grade Point
CSE 3101	Database Management Systems	3.00	A+	4.00
CSE 3101	Database Management Systems Sessional	1.50	A+	4.00
CSE 3101	Compiler	3.00	A+	4.00
CSE 3101	Compiler Sessional	3.00	A+	4.00
CSE 3101	Database Management Systems	3.00	A+	4.00
CSE 3101	Database Management Systems	3.00	A+	4.00
CSE 3101	Database Management Systems	3.00	A+	4.00

**GPA: 4.00**

Figure 7: Student result view of a particular semester

Future Scope: Due to shortage of time we have to finish our project here. But there can be some extended of our project. They are:

- ❖ Admit card generation and download.
- ❖ Payment through online.
- ❖ Exam seat allocation.

Conclusions: “Result Processing and Student Management System” is an important issue of every institute. If these can be done through a modern procedure then it can be benefited all related with it. Though there is some complexity and lacking in our existing system, we can remove this complexity through our proposed system. We can provide the clarity of result by using our software and to manage students in a systematic way for their betterment. So we can ensure that, our proposed system will reduce complexity, manpower, paper work, time consuming, costs, besides both the admin, teachers and students can be benefited.