

# **Student Project Allocation for Monitoring Duplication**

A report for the Evaluation 3 of Project 2

*Submitted by*

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**GALGOTIAS**  
UNIVERSITY

**SCHOOL OF COMPUTER SCIENCE AND  
ENGINEERING**

**BONAFIDE CERTIFICATE**

Certified that this project report “STUDENT PROJECT ALLOCATION  
FOR MONITORING DUPLICATION” is the bonafide work of “VIPUL  
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## **ABSTRACT**

This project involves the development of a web application student project allocation system for use in an academic institution. It is based on an existing program which was recently developed at the University for Development studies for project allocation at the department of Computer Science. This existing system takes students list and allocates supervisors to students. The new system uses the same optimization procedures in a more general setting, allowing academic administrators to manage supervisor and project allocation. Thus, the focus of this project is not on the optimization of algorithms, but rather on generalizing, re-designing and re-engineering the existing system which will result in a flexible and easily re-configurable system for use in a variety of university settings. The application is secured so only the people responsible are allowed to perform the allocation and to view the sensitive data. The front-end enables the administrators to configure the system in response to changing project regulations and assignment desiderata. The system can also be used as a reporting tool regarding project and allocation details. The system is able to check duplications by disregarding repeated data but allows different students from different supervisors take the same project topic at a time. The system was tested using data that simulate actual real-time use after its completion.

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## **INTRODUCTION**

Colleges, Universities or any Educational Institutes conduct projects for the better understanding of the practical approach towards the subject in the real world which involves a lot of tasks like abstract or synopsis evaluation, thesis correction and updating the proposed module with assigned supervisors. In many tertiary institutions in the country, students seek a project in a given field of specialty as part of the upper level of their degree program. Usually, a project can be filled by at most one student, though in some cases a project is suitable for more than one student to work on simultaneously. To give students something of a choice, there should be as wide a range of available projects as possible, and in any case the total number of project places should not be less than the total number of students. Typically, a lecturer will also order a number of projects but does not necessarily expect that all will be taken up by students. Each student has preferences over the available projects that they find acceptable, whilst a lecturer will normally have preferences over the students that he or she is willing to supervise. There may also be upper bounds on the number of students that can be assigned to a particular project, and the number of students that a given lecturer is willing to supervise. With the advancement in file saving and file retrieval system, an institution cannot afford to be ignorant of the basic tool, which is the driving force behind technological oriented administration. A lot can be achieved if an institution should have a well-organized management system. Students project can easily be allocated to each or group of students without the problem of delayed project allocation from the supervisor or conflict of topic between two individuals or group of students in the same department. Students update can be easily accessed if the database system is enhanced. This project considers the ways of allocating student project in the university.

## **EXISTING SYSTEM**

The traditional way of allocating project to students in our higher institution need to be reconsidered since project or research writing is sensitive aspect of student education in the higher institution. At the beginning of graduating semester, the students are required to write project on their field of study as part of a requirement to complete the academic studies. Each student is allocated to a supervisor who will supervise the academic project to enhance correctness and academic acceptability of the project work. Normally in some institution, the allocation of students to the supervisor is done by the head of the academic department or the

project coordinator. Before now, students have to go out and get project topics themselves for approval by their respective supervisors. This system made project writing look more or less like a class assignment which does not require an extra effort to complete rather an issue of copying.

## **PROPOSED SYSTEM**

A Project is a temporary endeavor undertaken to create a unique product or service. Projects provide a flexible framework for engaging students in exploring curricular topics and developing important 21st century skills, such as communication, teamwork, and technology skills. In addition, students are motivated by the fun and creative format and the opportunity to make new friends around the world. For example, teachers use a school portal for easy and quick management of student accounts and review of project work.

The research centers on the design and implementation of Student Project Allocation for monitoring duplication in the department of computer science at the University for Development Studies for use in the computer science department.

## **IMPLEMENTATION**

### *METHODOLOGY USED*

The design of a system starts with incorporating all of the data and procedures into functional program design. The researcher adopted a developmental research approach that considers design, development, evaluation and implementation. In connection with this, the throwaway prototyping software development methodology was used and some of their schemes are discussed below.

1. **Planning:** This is the fundamental phase that considers why a student project allocation system should be built and how the developers are going to tackle the various tasks in terms of project initiation and/or management.
2. **System Design:** The goal of the design phase is to transform the requirements specified into a structure most suitable for the implementation in a particular programming language. The inputs from users and information gathered in requirement gathering phase are the inputs of this stage. The output of this stage comes in the form of the logical design and/or physical design.

3. Coding: This step is also known as programming phase. The purpose of coding is to transform the software design into source code using a suitable programming language and developing error-free executable programs efficiently.
4. Testing: An estimate says that 50% of whole software development process should be tested. Errors may ruin the software from critical level to its own removal. Software testing is done while coding by the developer and thorough testing is conducted by testing experts at various levels of code such as module testing.

The prototyping model involves building a prototype before building the actual software. The prototype displays the functions of the product but may not actually hold the logic of the original software.

It provides scope for understanding customer requirements at early stage and then proceeding accordingly. Also, errors can be detected much earlier. This model is used for applications which tend to have a lot of user interactions.

### *TOOLS AND TECHNIQUES*

The programming languages used in the development of this system (as mentioned in the coding phase above) include;

1. **BOOTSTRAPS:** is a sleek, intuitive, and powerful mobile first front-end framework for faster and easier web development. It uses HTML, CSS and JavaScript (jQuery and Ajax).
  - a. JavaScript was used to enable scripting access to all the elements of the HTML document. In other words, it provided a means for dynamic user interaction such as checking input forms, and displaying prompts such as “Did you really mean that?” (although it cannot be relied upon for security, which should always be performed on the web server).
  - b. jQuery and AJAX: Powerful and flexible as JavaScript , with a set of built-in functions, providing additional layers of code for simple things that cannot be achieved natively or with CSS, such as event handling, animations, page submission without whole document refresh etc.
2. **PHP and MySQL:** PHP is the language used to make the server generate dynamic output, output that is potentially different each time a browser requests a page making it easy to connect to and manipulate databases. MySQL however is the most popular database



system used with PHP. A free, open source and cross-platform web server solution stack developed by Apache Friends, that has interpreters for scripts written in the aforementioned languages hence made it extremely easy for the researcher to create a local web server for testing and implementation purposes.

## WORKFLOW DIAGRAMS

### FLOW CHART

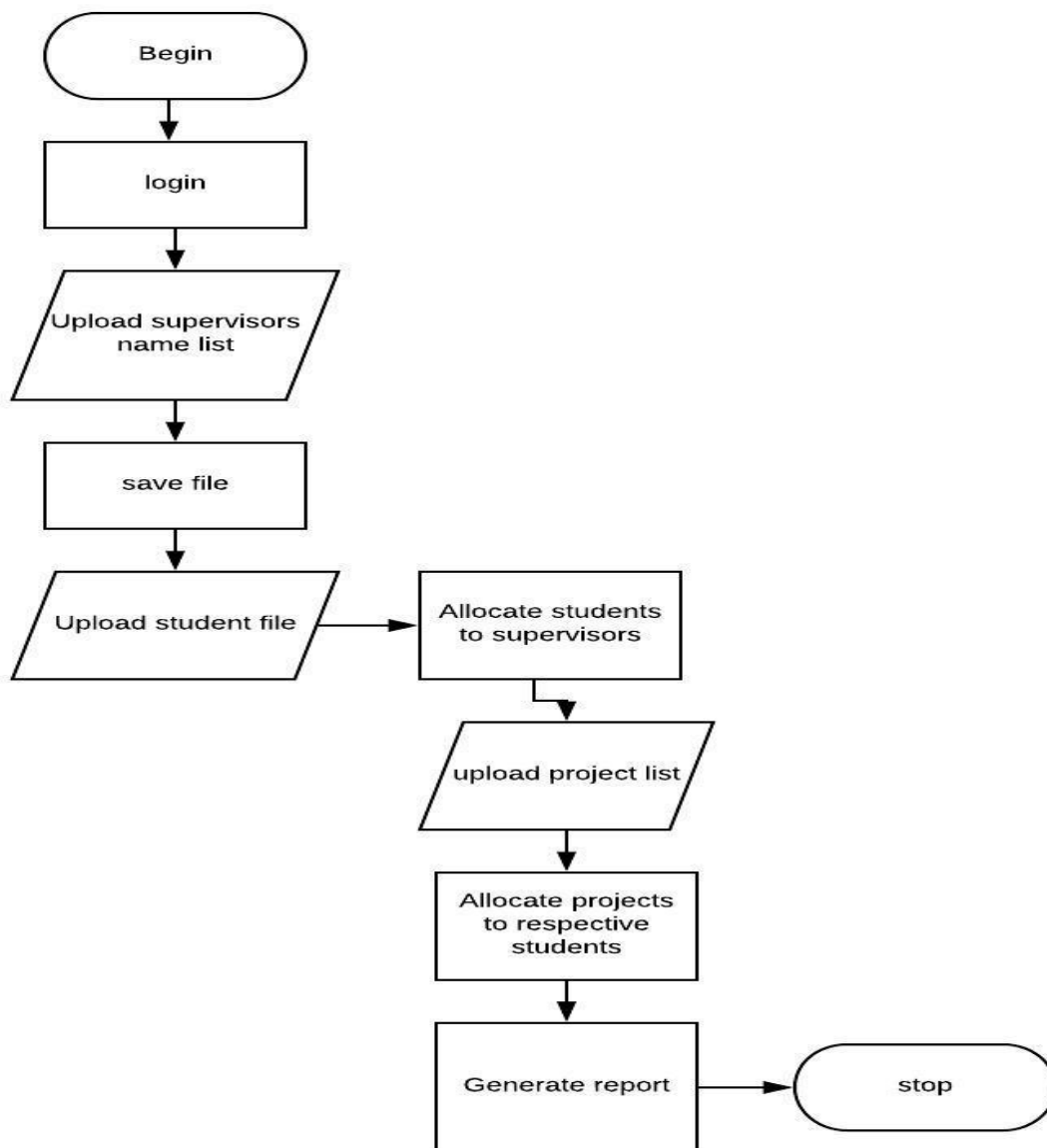


Figure 1 : Workflow Diagram

## USE-CASE DIAGRAM

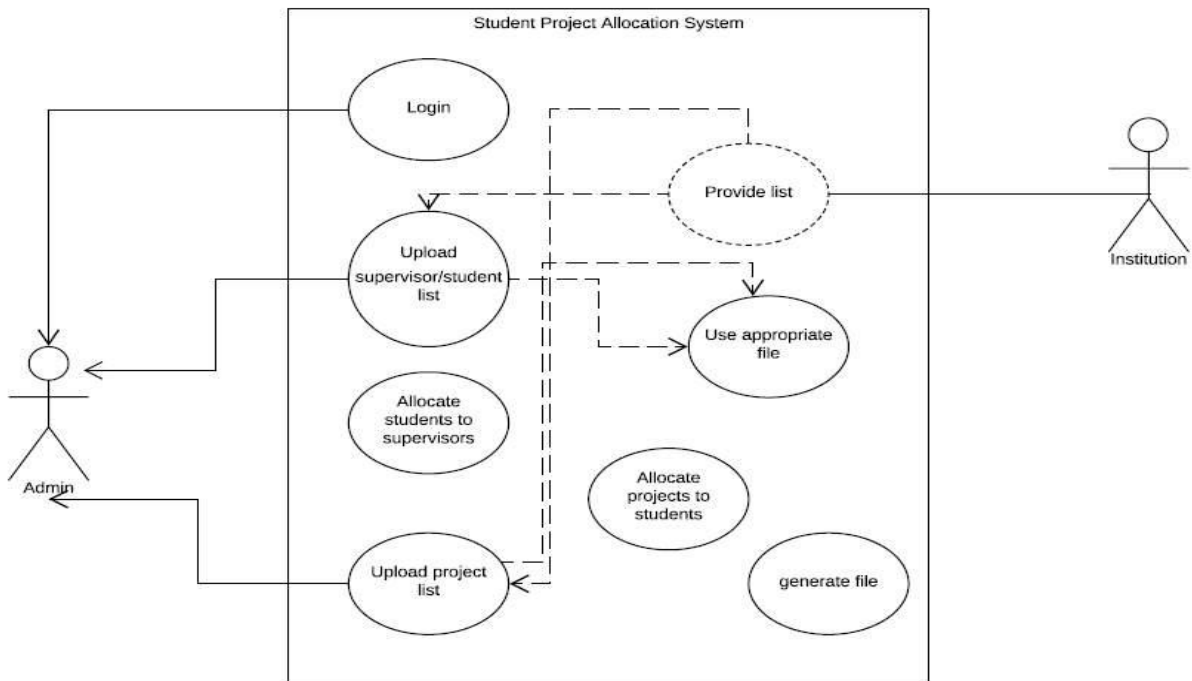


Figure 2 : Use-Case Diagram

## DATABASE DESIGN

Table	Action	Rows	Type	Collation	Size	Overhead
auth	Browse Structure Search Insert Empty Drop	3	MyISAM	utf8_bin	2.1 KiB	-
lecturer	Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	4.1 KiB	-
mergestick	Browse Structure Search Insert Empty Drop	5	MyISAM	latin1_swedish_ci	2.3 KiB	-
project	Browse Structure Search Insert Empty Drop	10	MyISAM	utf8_bin	2.4 KiB	-
student	Browse Structure Search Insert Empty Drop	5	MyISAM	utf8_bin	2.3 KiB	-
5 tables	Sum	27	MyISAM	latin1_swedish_ci	13.1 KiB	0 B

Figure 3 : Database Design

# OUTPUT

## HOME PAGE

Student Project Allocation & Management System [Dashboard](#) [Upload Project](#) [Upload Supervisor](#) [Student](#) [Manage](#) [Logout\[admin\]](#)

### Recent Project and Supervisor Allocations

Show  entries Search:

ID	Student Name	Project Title	Supervisor	Level	Programme	Student ID
1	WATARA ALI MUSTSPHA	NA	DR EDEM BANKAS	400	IT	FMS/2100/14
2	K. A. RANSFORD	Residential permit award system	MR PETER	400	IT	FMS/1268/13
3	DARKO OBENG HAYFORD	NA	MR DANNTE	400	IT	FMS/2099/14
4	BABANOWO SEYRAM PRINCE	NA	MR MOSES	400	IT	FMS/1841/14
5	MAHAMA SADIA ABIGAIL	NA	MR OPHELIUS	400	IT	FMS/1963/14
6	MOHAMMED ABIBA	NA	DR DABO	400	IT	FMS/1979/14
7	EKWO BAIDOO MENSAH	NA	MR DANNTE	400	IT	FMS/1843/14
8	AMEGAZO HUMFREY	NA	MR MOSES	400	IT	FMS/1777/14
9	FRIMPONG B SAMUEL	Mathematical Instructional material	MR PETER	400	IT	FMS/2101/14

Showing 1 to 9 of 9 entries [Previous](#) [1](#) [Next](#)

[RESET](#)

[Print](#)

Figure 4 : Output 1

## STUDENT UPLOAD PAGE

Student Project Allocation & Management System [Dashboard](#) [Upload Project](#) [Upload Supervisor](#) [Student](#) [Manage](#) [Logout\[admin\]](#)

### Add Student

Choose file

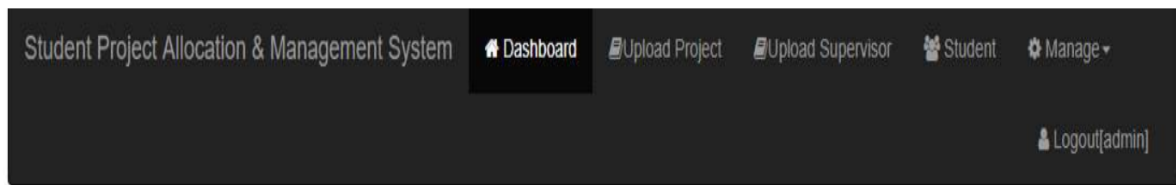
Show  entries Search:

Student Name	Student ID	Level	Programme	Date Added	Option
AMEGAZO HUMFREY	FMS/1777/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
BABANOWO SEYRAM PRINCE	FMS/1841/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
DARKO OBENG HAYFORD	FMS/2099/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
EKWO BAIDOO MENSAH	FMS/1843/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
FRIMPONG B SAMUEL	FMS/2101/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
K. A. RANSFORD	FMS/1268/13	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
MAHAMA SADIA ABIGAIL	FMS/1963/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
MOHAMMED ABIBA	FMS/1979/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>
WATARA ALI MUSTSPHA	FMS/2100/14	400	IT	2018-07-09	<a href="#">✎</a> <a href="#">✖</a>

Showing 1 to 9 of 9 entries [Previous](#) [1](#) [Next](#)

Figure 5 : Output 2

## UPLOAD PROJECTS



### Add Project

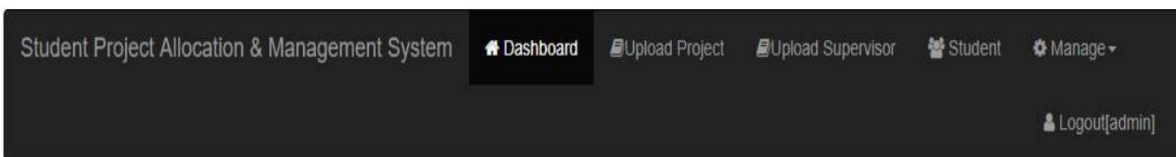
Choose supervisor

Choose file

 No file chosen

Figure 6 : Output 3

## UPLOAD SUPERVISOR PAGE



### Upload Lecturers

Choose file

 No file chosen

Show 10 entries

Search:

Sn	ID	Name
1	P114	MR MOSES
2	P113	DR DABO
3	P112	DR EDEM BANKAS
4	P115	MR PETER
5	P116	MR OPHELIUS
6	P117	MR DANNTE

Showing 1 to 6 of 6 entries

Previous 1 Next

Figure 7 : Output 4

## **CONCLUSION**

Projects contain extremely valuable information since they report the results of first-hand research information conducted by students within any specific department. It is therefore important for a system to be developed and implemented in order to allow other researchers, students and academic staff, easy and prompt access to this information. The allocation of projects is part of a degree course for many tertiary institutions and before the allocation of projects to students is done, a series of steps need to be followed. Many constraints need to be taken into consideration to achieve a fair allocation. The allocation of project causes many problems as same constraints may not be satisfied. These problems emerge mainly due to the increasing number of students which leads to an increase in the complexity in the allocation of the projects. The aim of this project is to save time by producing reports on the assignment of project topics and project supervisors and also develop a better system which solves these problems or reduce them significantly

## REFERENCES

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