Development of an android-based visual implementation of student project allocation system

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ABSTRACT

Technology is everyplace we go in moment's life. So, scholars of seminaries or sodalities, or universities bear an operation that supports smartphones to get all types of information related to examination, lecture notes, placement, systems regarding announcement, events, transportation, etc. Rather of calling systems because nearly all mobile druggies have smartphones currently. This being system takes a pupil list and allocates administrators to scholars. Using a manual system in the management and allocation of projects to students is characterized by many problems, including the Inability of the project Guide to know that a title has been approved already for a student. Difficulty and inappropriate documentation of allocated project topics. Ineffective in entering, updating, and retrieving records of allocated projects. Difficulty in accessing the project Guide for approval of the topic. Duplication in project topics approved for students. We designed an operation to attain the demand of scholars. The main ideal of the pupil design allocation system is to make a system that will give information for each pupil. Projects can efficiently be allocated to students without delay, and topic conflict between students in the same department will not arise here. Pupil updates can be fluently penetrated if the database system is enhanced. This design will give a fruitful way to manage data at a low cost. The Student Project Allocation contains colorful options similar as login/ logout, viewing and streamlining data, etc. It'll be secure. Data can be used by only those with an id and word while maintaining the data.

Keywords: *Android studio, Java*

1. INTRODUCTION

Mobile app development involves jotting software for small wireless computing bias, similar as smartphones. It frequently takes advantage of the unique features of a particular mobile device. Mobile app development is fleetly growing from retail, telecommunications, healthcare, and government associations across diligence. Educational Institutes give systems for a better understanding of the practical knowledge towards the subject in the real world, which involves a lot of tasks like abstract, thesis correction, and streamlining the proposed module with assigned administrators. Scholars elect a design in a given field of interest. Generally, a design is suitable for further than one pupil. Scholars' systems can efficiently be allocated to each or group of scholars without the problem of delayed design allocation from the companion or conflict of content between two individualities or groups of scholars in the same department. Scholar's updates can be fluently penetrated if the database system is enhanced. Pupil design allocation is more secure, movable, fluently installed, and used on any mobile supporting android Zilches. Provides an interface that's easy to understand by the druggies and dramatically helps acclimatize to this operation's use. This application consists of Student login, staff login, and subject coordinator login and contains the details of the student project allocated, giving users an interactive experience. It will be secure that the data can be used by only those who have a username and password.

2. EXISTING SYSTEM

Vial, Peter James et al. proposed the software to help the subject coordinator quickly allocate students into optimal or suboptimal teams based on predetermined criteria. The actual use of team allocation software shows that it can find, in a short time, the solutions highly compliant to the team allocation criteria selected using a simple algorithm. The software reduces the time needed for allocation. On estimation, the software saves at least 8 hours of the coordinator's time. The disadvantage of this work is that the software must be installed to allocate and carry the system wherever we go.[1] Hasan, M. H. et al. proposed a system that uses an algorithm to allocate titles to students based on students' submissions of their ten most preferred titles in order of preference. Three algorithms were developed for this allocation, and they were evaluated by calculating and comparing the costs of their selection.

The algorithm assured that each pupil got one of their ten preferred titles, and utmost of the scholars got largely ranked titles. The disadvantage of this system is several perpetration issues also need to be cleared out, particularly the ideal number of titles to be ranked by every pupil during the selection process. [4]. The deduplicate data conserve disc space. An essential notion among them is source-based Deduplication. [26].

Amadi et al. proposed a software system for students' projects allocation system. It will enable final year students to apply for projects and upload completed projects. Model View Controller (MVC) methodology used in designing the system. MySQL is used for the Backend, Used PHP for the front end. It develops a project allocation system that successfully allows students to apply for projects online. The system allocates a project title to the student based on the supervisor's highest score on the student's proposals. The disadvantage is they need to carry a system or laptop everywhere Animesh Tayal et al. work on SPAM (Student Project Allocation and Management) is a Web Application that automates the whole project management system through which we can view the documentation related to the project tasks. This system has overcome all the traditional processes of manually submitting the project abstracts, synopsis, or other documents. Also, it provides a platform where the guide can allot tasks to their respective group, and students can choose his group and choose his project guide. The project guide can allot Project-related tasks, and other faculties can only give reviews over it. Students can directly upload their proposed work and the documentation on this system to evaluate it. [24]

A. Adamu proposed a system developed using PHP ASP.NET to develop GUI and XAMPP for the database. The system is designed to run on Windows operating systems. The system can be used in any higher institution to replace the manual supervising final year students. It will reduce the challenges, energy, and time required to monitor and manage final-year student projects. The system can be used in any higher institution to replace the manual supervising final year students. It will reduce the challenges, energy, and time required to monitor and manage final-year student projects [2]. Srinivasan et al. proposed a student project allocation system as an effective fuzzy evolutionary algorithm is used for working the pupil design allocation problem. It presents a result frame for the pupil design allocation (Gym) problem grounded on evolutionary algorithms (EAs). Project is an engineering course that's conducted in universities. A list of projects must be selected in their final year of study. The EA-based project allocation system was implemented in a large university department to automate this process and enhance scholars' matching to their desired projects. [23].

Cheung, Yeung, et al. Proposed an "A dynamic project allocation algorithm for a distributed expert system. The manual processing sequence was very time-consuming and inconvenient to the parties involved in this system. A student had to do a lot of manual searches to find projects that were difficult to modify after submission. It was tough to assign FYPs to students manually. Each student will have a unique number used in the allocating process. Thus, a project best matches the student's personal preference with their ranking. [7].Dimitar Kazakov et al. proposed " Collaboration of Student Project Allocation," The system not only performs design allocation but also allows academics to rate systems, observers to examine, scholars to propose their systems, scholars to submit the design, administrators to follow systems more nearly and allows systems fellow to have a view of the whole system. The system captures the preferences of observers as well as scholars. It allocates systems to them to maximize the number of scholars who get their choice in their preference list and keep administrators and observers' cargo within a reasonable range. The chance of scholars who attained their first choice is 82 on 30 systems proposed by 15 administrators for 11 brigades [9]. We could apply a location-based system to the advancement of numerous sciences, businesses, and vocations, among other things, to increase individual human needs. Markets, and even their components and placement, could be the causes of rescuing economically distressed countries as we analyze location-based system discussions. [28].

Tsvetelina Mladenova works on "A design operation system for time planning and coffers allocation" When it comes to the effective operation and planning of a company's design coffers and workload, numerous ultramodern businesses face a severe problem, which can be the cause for their failure. Lack of planning will affect dearth, reduced effectiveness, and detainments. A web-grounded result is proposed and is viewed through the prism of the whole business process and not just as an independent unit. However, the presented operation can be either a standalone system or a module of an ERP system, with the design operation being an operative module. Experimentally the design operation system is enforced in the surveyed company replacing a being PMS systems, the results of a fresh check are presented and anatomized [19]. H.Y. Chiang and B.M.T. Lin proposed a Decision Model for Human Resource Allocation in Project Management of Software Development," mortal resource allocation is critical not only for design success, including timely delivery and product quality, but also for cost estimation to a software company to decide to contract systems or not. Considering both the cost and the effectiveness, the performance is maximized to verge on the guests' prospects in software development design operation grounded on a real case. Before forming a platoon for a named design with well- defined ages and individualities with different places, the values of critical factors within the frame are calculated with an individual foundation of calculation. The proposed model helps the choice- making process of software companies for platoon conformation [8]. The security features of protocols suggested in LTE and LTE-A, such as EC-AKA2 and GR-AKA, were evaluated and confirmed using the ProVerif program in this study. Because of the encryption technique employed in GR-AKA, the results show that the protocol has better security qualities than the EC-AKA2 protocol. However, both protocols have achieved the requisite levels of security. The security analysis can also be expanded to include other protocols. [27].

P. J. Vial et al., work on "A Java Program for Automatic Team Allocation in Project-Based work," Universities around the world need project-based subjects and effective team allocation. Team allocation could be a long task in complicated project-based work subjects. This offers rise to the necessity of an automatic team allocation software system, which might facilitate the topic organizer quickly assigning students into optimum or sub-optimal groups supporting a collection of planned criteria. This paper details our team allocation software system developed in Java in 2012 for project-based engineering and was indeed enforced in 2 annual project-based subjects within the University of Wollongong within the years 2013 through 2017. the particular use of our developed team allocation software system shows that this software system is in a position to search out. During an exceedingly short time,

the solutions extremely compliant to the team allocation criteria elect to employ a straightforward algorithmic rule. Compared to manual allocation, our developed software system considerably reduces the time needed to create student groups [25]. V. Arumugam et al. proposed "Academic Project Information Management System," Academic projects are essential for any Engineering undergraduate course. It gives students a chance to illustrate all they have learned. This paper describes an automated system for conducting the final time systems process. Presently, numerous sodalities manage final time design- related data in an offline manner spreadsheet entries of all the groups, homemade group conformation, and administrator assignment, maintaining a hard dupe of the documents submitted by the scholars. The paper presents how a web- grounded automated system will amend all the issues and crimes being while maintaining them offline. The main ideal is to propose a system for managing groups, automated companion allocation, document sharing, smoothen the process of communication between attendants and scholars, maintaining a log of all the conditioning, and supervising scholars' design progress [3]. Hussain, S, et al. proposed "A Methodical Review of Project Allocation Styles in Undergraduate International Engineering Education". The final time design is one of the most critical factors of any undergraduate engineering program. Fair and effective design allocation procedures can be vital in icing a great pupil experience and exceptional literacy out of these systems, which could also shape scholars' unborn prospects. This paper reviews design allocation strategies used in colorful universities at undergraduate situations. We also concentrate on the design allocations in international education (TNE) surrounds, which inherit fresh allocation challenges. We punctuate these challenges and give recommendations to break them. We present and compare design allocation strategies espoused at two of China's most extensive TNE programs. We also present the factors impacting the design allocations, particularly TNE vittles. Eventually, we describe the challenges associated with the design allocations in the TNE script, along with proposing some possible results to address these challenges [14].

3. PROPOSED SYSTEM

We developed an application that can be used for project allocation and maintenance. In this student login to the system, they can enter project details and mention their team members. And it enables the student to view their marks for their projects, and they can also view the announcements given by the coordinator. Updation is also enabled to update their project details and team members. In the staff login, the staff can view the details of the students' project, review panel, and dates and enter the marks while reviewing their projects. And in the subject coordinator login, they can assign a guide to the team, enter announcements for review and view the marks details of students and the details of team members and the respective guide staff for the following student projects. This system aims to overcome the time required to search the student's project details and marks. And they need not depend upon any other platform to manage the student's project details and marks. First of all, the admin enters the student list and staff and gives them a Login password to enter the application and assign a coordinator. The student should enter the project details, such as the project title and domain. The coordinator will allot a guide for teams and prepare the review schedule.
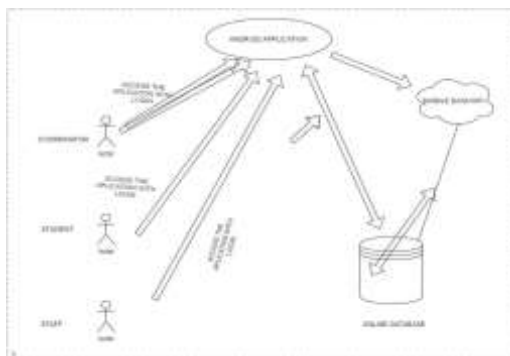

Fig 3.1 Architecture Diagram

The architecture diagram explains the accessibility of the application along with databases over the internet. Information can be fed and can also be retrieved from databases.
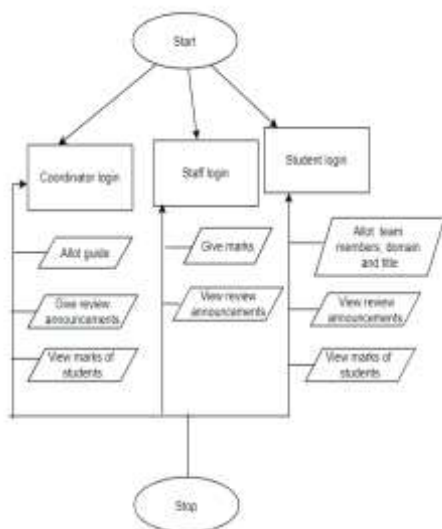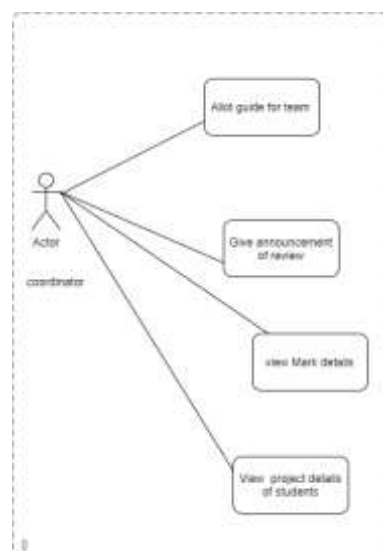

Fig 3.2Dataflow Diagram

Fig 3.3 Coordinator Module

The diagram explains all the four modules present in our system: coordinator login, staff login, student login. The coordinator will make the team with the leader and allot a guide for the students and give announcements for the review like the review date and the panel members. And the coordinator can view the marks given by the staff members for the students. In the staff login, the staff can accept or reject the team's title under their guidance, can also give marks for the particular panel students, and the staff can view the announcements given by the coordinator. And the student login, the student can enter the project details like the title of the project and the domain of their project and request a guide for the approval of the title, and the team leader can enter the team members of their project. The student can view the announcements given by the coordinator, and they can view the marks for the review given by the Reviewers. These are the modules and the features included in our project so that the students, staff, and coordinators can easily access the details of the project through this application. Fig 3.3 Depicts coordinator allot guide to the team of students and make review announcement of allotting review panel for the teams for reviewing their project work. The coordinator can view details of marks and view the project details of the students. Fig 3.4 describes that staff can view the announcement given by the coordinator. Accordingly, staff review the team about their project work and enter marks for the team. Staff can also view the project details of the students.
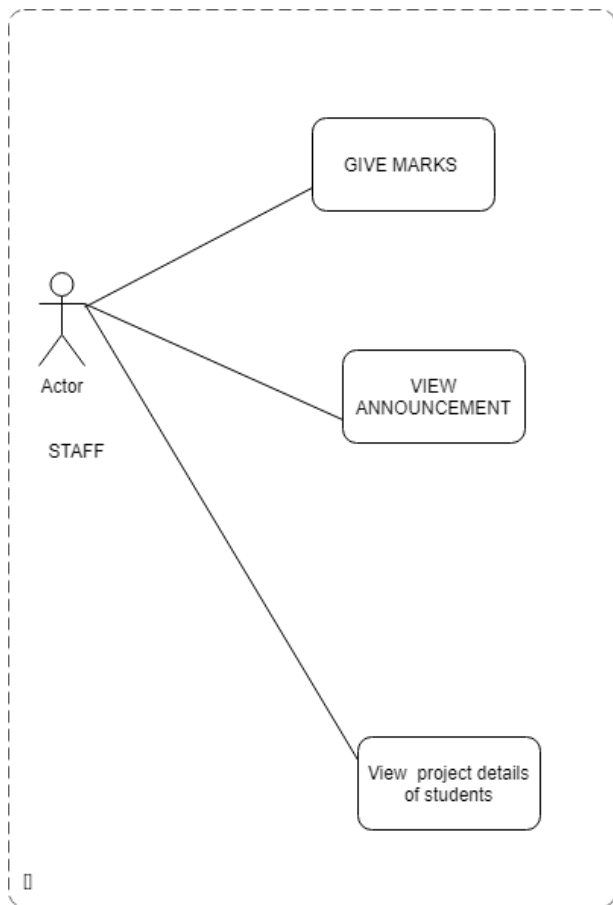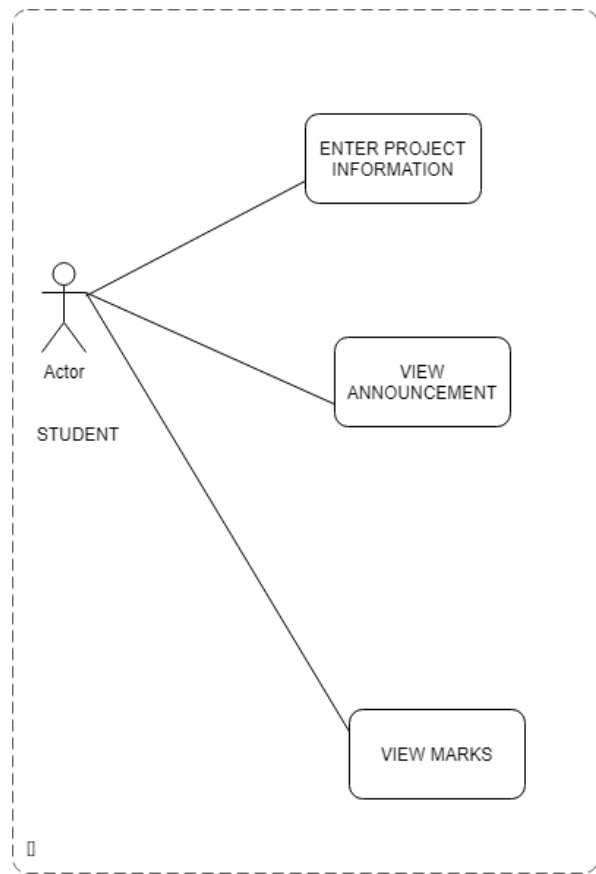

Fig 3.4 Staff Module

Fig 3.5 Student Module

Fig 3.5 depicts that students can enter the project details like the title of the project and the domain of their project, and the team leader can enter the team members of their project. The student can view the announcements given by the coordinator, and they can view the marks for the review given by the Reviewers.

4. RESULTS

The proposed framework aims to address the previously mentioned concerns. The suggested framework's primary goal is to provide data in a flash as and when needed. The objective is to improve the efficiency and power of the Hostel data points of interest. This system should keep track of numerous data records so that information may be recovered quickly and effectively. The structure is exceptionally well-thought-out. It should ensure that processes are coordinated to the desired level, and different reports should be generated as needed. This framework should also ensure that the captured data does not repeat itself. Table 4.1 shows the testing method and its results. This software development research project was a success where the software developed may be deployed online for improved management of student project allocation after supervisors have been assigned.

Table 4.1 Testing results

Module	Unit Testing	Integration Testing	System Testing	Acceptance Testing
Login Page		Successfully executed	All the types of system testing was executed and verified	The application was accepted by the end user
Student Login	Successfully executed and verified	Integrated with login page and executed successfully		

Team Member Creation		Integrated with student login page and executed successfully		
Title and domain choosing		Integrated with Team Member Creation and executed successfully		
Viewing Announcements		Integrated with Title and domain choosing and executed successfully		
Viewing Marks		Integrated with Viewing Announcements and executed successfully		
View Panel		Integrated with Viewing Marks and executed successfully		
Assigning Marks		Integrated with View Panel and executed successfully		
Assigning the panel members for review		Integrated with Assigning Marks and executed successfully		

Students can propose subjects and have their supervisors review and assess them, while the system assigns the student to the topic with the most significant point total. The student uploads the completed.pdf file at the end of the project. A supervisor can also offer students research subjects via the supervisor website, which they can use in their proposals. If this software solution is used, it will help students and supervisors communicate more effectively, resulting in better service delivery.

5. CONCLUSION
Our application assists in automating the existing manual system. It reduces the workforce required. Allows students, Coordinators, and staff easy and prompt access to data. Allocation of the project is essential in institutions for that many steps must be followed. Difficulties emerge due to the increasing number of students, increasing the complexity of allocating the projects. This project aims to save time by Allocating Guide and reducing the paperwork. The topic of the projects is too visible in this application to avoid the repetition of the same project by some other teams. This application is so secure that only the people responsible can allocate and view those data. And this application provides a well-organized platform to maintain all the project details.

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