Kingdom of Saudi Arabia

Ministry of Education

Umm Al-Qura University

College of Engineering and Computers

(Department of Computer Science)

[Blackboard]

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Overview

With the rapid development of information technology, Learning Management Systems (LMS) have become an essential part of enhancing the educational process. Among these systems, the Blackboard application is one of the most prominent educational tools widely used in universities and educational institutions around the world. This application allows students and faculty members to access educational content, submit assignments, participate in discussions, and manage various aspects of the academic process smoothly and effectively.

In this report, we will review the various types of key features and characteristics of the Blackboard application, and how it contributes to improving the teaching and learning experience, focusing on the benefits it provides to both teachers and students.

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[Chapter 1]

Blackboard Learn provides an easy way to interact with different types of features, depending on your role, either as an instructor or a student.

1.1   Introduction:

Blackboard is one of the modern educational applications in the modern era, as it provides a comprehensive platform for e-learning and manages educational content online. This program is used in many educational institutions around the world, ranging from multi-access educational institutions to higher education institutions.

1.2   Purpose:

The primary purpose of Blackboard is to facilitate content management, delivery, and assessment, featuring a variety of educational tools for seamless access to course materials, assignments, discussions, and assessments.

1.3   Stakeholders:

- User (Student -Teacher)
- Distance learning team

1.4   Main tasks of Blackboard:

- Blackboard allows instructors to create and manage courses. This includes organizing and uploading course materials such as syllabi, lecture notes, and multimedia content.

- Blackboard provides a variety of communication tools. This includes discussion boards, messaging systems, and announcements.

- Blackboard supports a range of assessment types, including quizzes, tests, and assignments. also provides automatic grading for certain assessments and provides tools for manual grading and feedback.

1.5   FUNCTIONAL REQUIRMENTS

1.5.1   USER REQUERMENTS:

- The system must allow the user to log in using the username and password and manage his profile

- The system must support sending notifications and alerts to the user to inform him of status updates

- The user's system must be accessible via multiple devices

- The system must provide the user with the ability to access files and courses

1.5.2 SYSTEM REQUERMENTS:

- The user shall log in to the system with the user's name and password.

 - The system must support sending notifications and alerts to users to inform them of status updates.

- The system must be accessible via multiple devices, ensuring cross-platform compatibility.

- The system must provide users with the ability to access files and courses easily.

1.6   NON-FUNCTIONAL REQUERMENTS
-    The system shall be easy to use and understandable for users regardless of their technological experience
-    User data must be well protected and secured
-    The system shall be Quick response
-    The system shall be available 24 hours

1.7   Conclusion

    In conclusion, the requirements and purpose of Blackboard have been outlined. The Blackboard application is an essential tool that enhances the effectiveness of modern education by combining flexibility and ease of use. Its many features make adopting this technology a step towards achieving an integrated and distinguished educational experience.

[Chapter 2]

Blackboard is the leading learning management system (LMS), providing a powerful platform for institutions to create, manage, and deliver online courses that foster an interactive and engaging learning experience. This assignment will show you why Blackboard exists, and introduce some of the features and problems it solves.

2.1   The reason for the existence of blackboard

Blackboards creation was driven by the need for a more efficient and effective way to deliver education. Traditional classroom settings were often limited by geographical constraints, time constraints, and the availability of resources. Blackboard aimed to address these limitations by providing a flexible and scalable platform for online learning.

2.2   Problems Resolved by Blackboard

- Accessibility: Blackboard has made education more

   accessible students who live in remote areas or have disabilities

- Flexibility: It offers students the flexibility to learn at their own pace and on

   their own schedule

- Cost-Effectiveness: By reducing the need for physical classrooms and

   materials Blackboard can help institutions save costs

- Collaboration: Blackboard fosters collaboration among students and

   instructors, promoting a more interactive and engaging learning experience

2.3   Questionnaire

conducted a survey to collect opinions about the blackboard application:

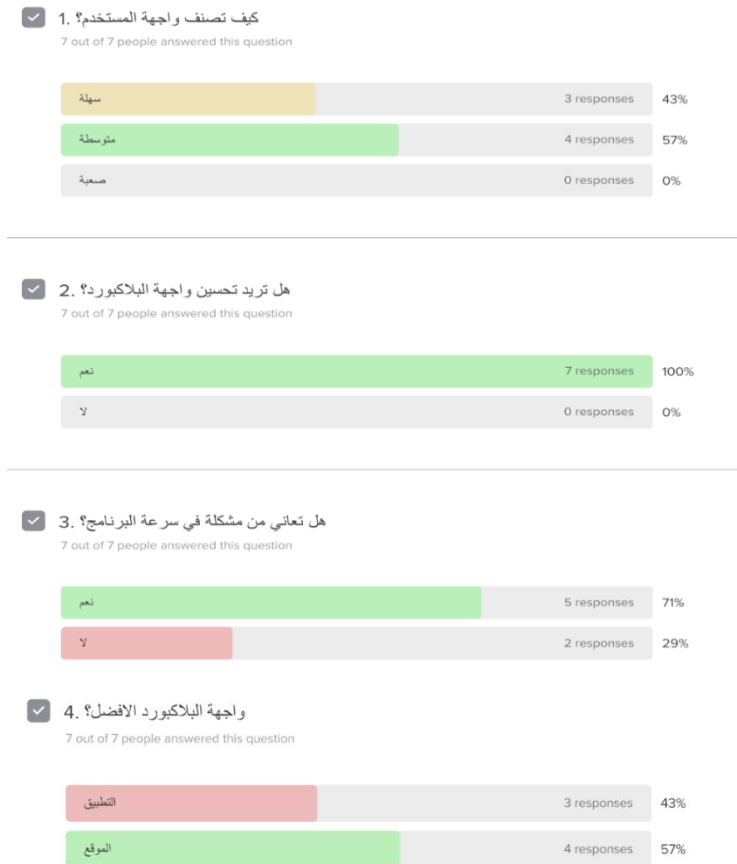Figure 1 . Shows details to describe the interface used and the speed of this system.

Figure 2 . Shows the difficulty level of entering the lecture and
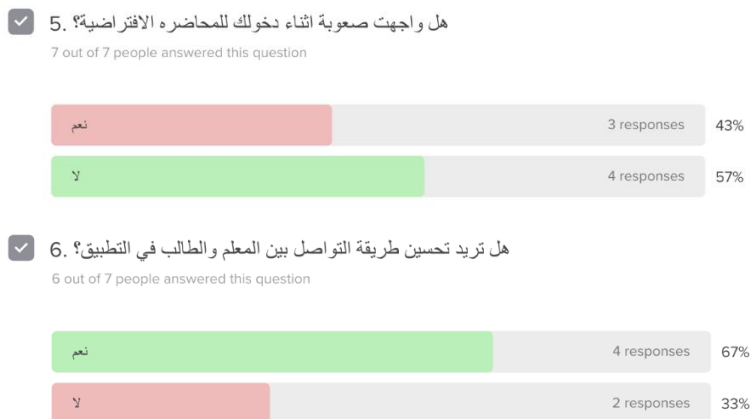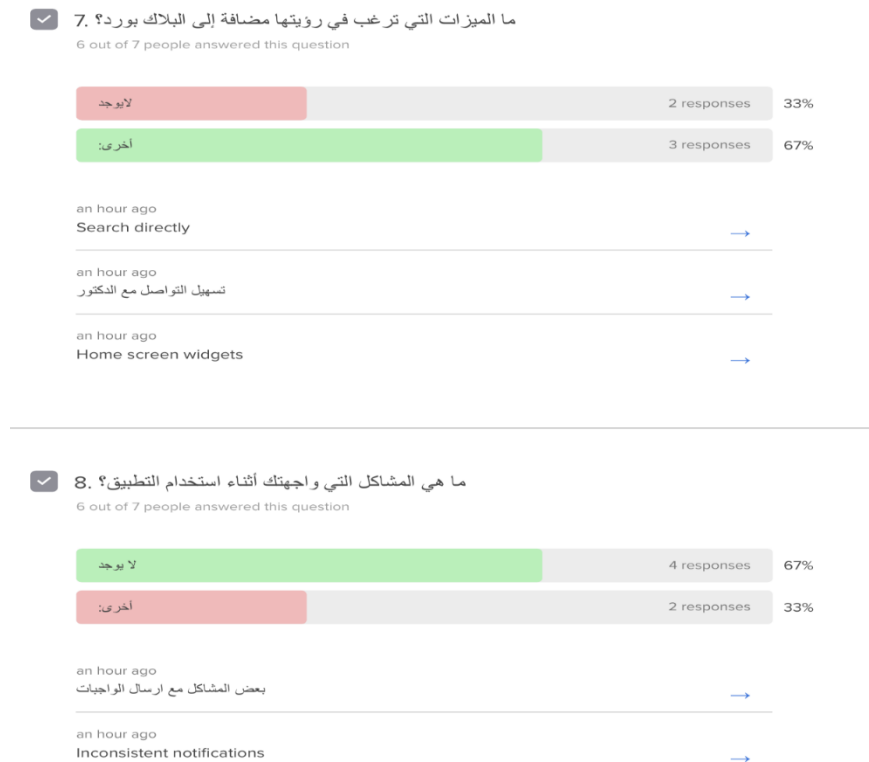
communicating with teachers.

Figure 3 . Illustrates the additional features and problems of using Blackboard.

A survey was conducted to collect opinions about Blackboard and some problems were identified such as difficulty in dealing with the system and some technical problems such as difficulty in submitting assignments, which we examined through the survey and which most students suffer from. Among the solutions to this problem is making improvements in building the application, which will improve the strength of the application's performance and increase the speed of receiving assignments. Also, the difficulty of communication methods between teachers and students due to the lack of realistic conversations to communicate between them. Therefore, we decided to improve communication by creating a chat interface that allows communication between teachers and students in the application.

2.4 Comparison between Blackboard and Madrasty

Blackboard and Madrasty are both popular educational platforms designed to enhance teaching and learning experiences. However, they offer distinct features and cater to different needs. Lets compare their advantages and disadvantages:

Blackboard

- **Advantages:**
  - Widely used and established: Blackboard has been a staple in many educational institutions for years, making it a familiar platform for both students and faculty.
  - It offers a comprehensive suite of tools, including course management, online testing, discussion forums, and collaboration features.
  - Blackboard can integrate with other educational tools and systems, such as learning management systems (LMS) and student information systems (SIS).
- **Disadvantages:**
  - The interface can be complex for new users due to its extensive features.
  - Like any large-scale platform, Blackboard can encounter technical issues.

Madrasty

- **Advantages:**
  - Madrasty has a user-friendly interface, designed to be intuitive and easy to navigate, making it accessible to users of all ages.
  - The app is optimized for mobile devices, allowing students to access their courses and assignments on the go.

- Madrasty is specifically tailored for Arabic-speaking users, providing features and content relevant to their needs.

- **Disadvantages:**

  - It may not offer the same breadth of features like Blackboard.

  - Madrasty might have a smaller user community and fewer resources available.

The following table is a comparison between Blackboard and madrasty in terms of security, platform, and management.

	Blackboard	Madrasty
Security	-Both employ security measures to protect user data -Use secure login and authentication processes -Regularly update systems to address vulnerabilities -Comply with relevant data protection regulations	
Platform	Web-based, mobile apps, integrates with third-party tools, comprehensive LMS	Primarily mobile app, web version available, focuses on Middle East and North Africa
Management	-Both provide centralized systems for managing courses, users, content, and assessments -Allow administrators to manage user roles and access control -Offer tools for tracking student progress and performance	

2.5   Conclusion

Blackboard is proven to be an effective tool that enhances the learning experience and provides a flexible and interactive learning environment. The system improves communication between students and teachers, and provides easy access to educational resources. The reasons for Blackboard's existence, the problems it solves, and some of its advantages and disadvantages are explained. A questionnaire was also prepared to identify the problems some people face, and to suggest ways to improve them. Despite the challenges that some users may face, the many benefits it offers make it an excellent choice for modern education.
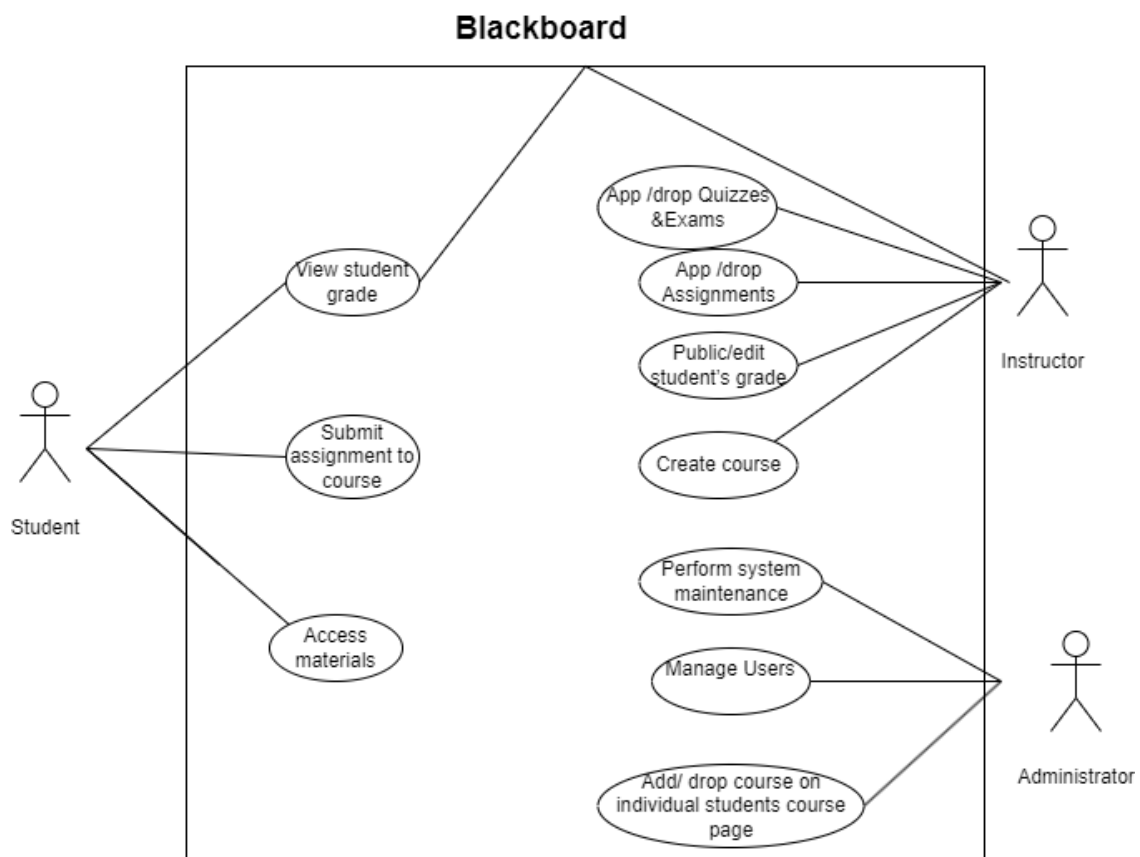
[Chapter 3]

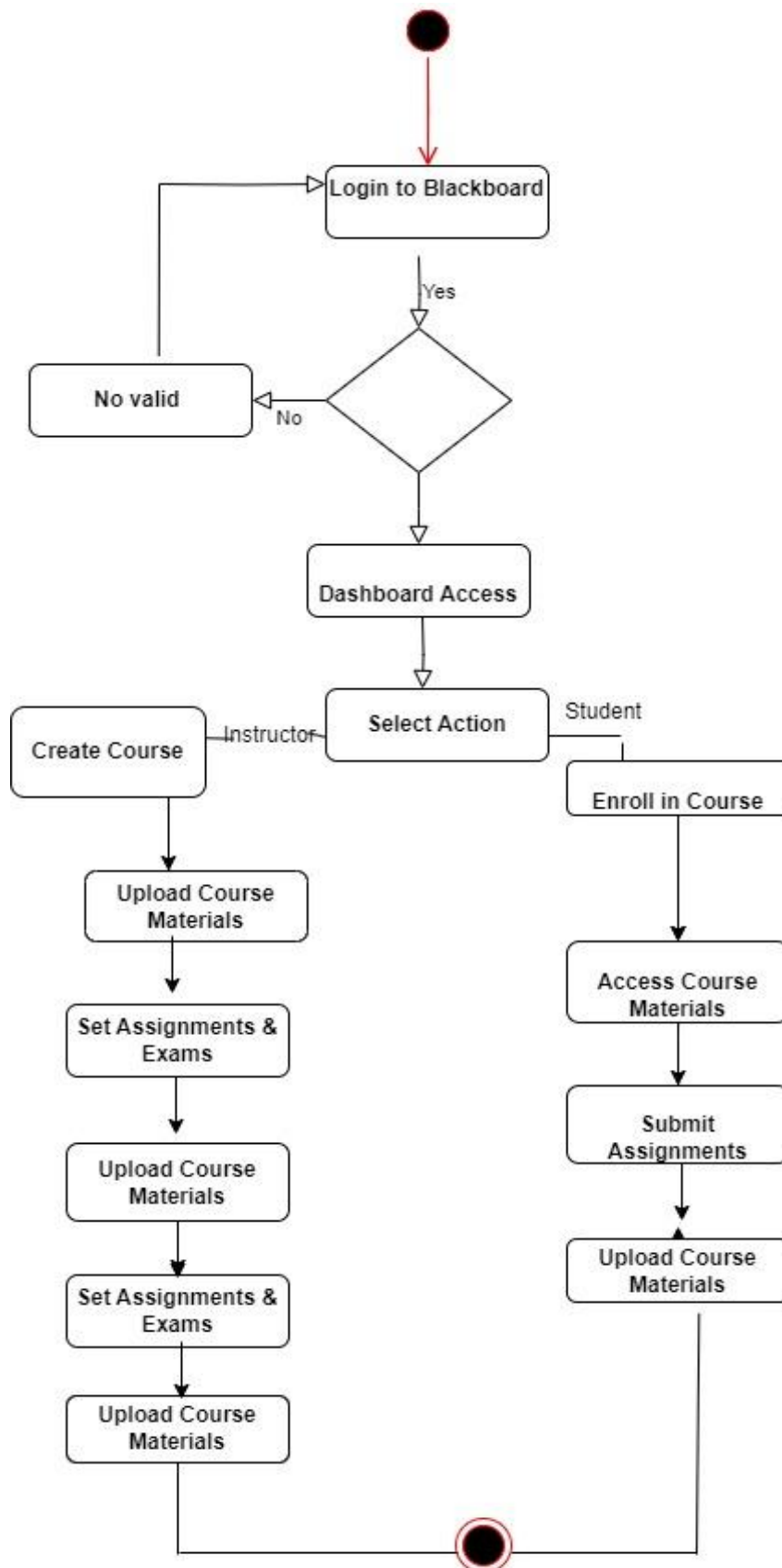The blackboard application database includes all users.

The database is selected according to the needs of the educational institution, the volume of data and the required. It includes more than one million searches voluntarily submitted by blackboard client organizations to work on preventing plagiarism between organizations. It uses relational data to manage and store data related to information for students, teachers, assessments, lectures and tests .The database is separate from the internal database of each organization

It also includes the data models used (such as Microsoft SQL Server, My SQL)

3.1 Use case

3.2 Activity digram

Database systems often used in the application include:

- Microsoft SQL Server: A popular database in educational systems, providing good performance and scalability.
- MySQL: An open source database used in many educational applications for its flexibility and ease of management.

The Blackboard application relies on a variety of programming languages to develop the platform, including the most prominent programming languages used (such as Java script, PHP, and SQL).

The languages and technologies often used in the application include the following:

- JavaScript: It is used in the front-end to interact with users and develop dynamic interfaces. Libraries and frameworks such as React or Angular are also used to improve the user experience.
- PHP: It may be used in some legacy applications or in specific cases such as systems that need compatibility with certain applications or services.
- SQL: It is used to query and interact with databases, whether relational such as MySQL or Oracle.

4. Final Conclusion

Blackboard has emerged as a powerful tool for education, transforming the way knowledge is shared and acquired. By providing a comprehensive suite of features, Blackboard has addressed many of the challenges faced by traditional education systems. As technology continues to evolve, Blackboard is likely to play an even more significant role in shaping the future of education.

5. References

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