Al Imam Mohammad Ibn Saud Islamic University
College of Computer and Information Sciences

Information Technology Department

Course Title:	HCI
Course Code:	IT 300
Course Instructor:	Mohammed Alhatem ,Shatha Alkhaldi, Dhuha Alqahtani
Assessment:	Project
Semester:	3ed - 2024
Due Date:	25/5/2024
Marks:	20

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Instructions:

1. This is a teamwork project.
2. Submission date Saturday 25/5/2024.
3. You should submit two versions docx – (Microsoft word file) and PDF via blackboard.
4. Only one member of the group must submit this assignment.
5. Your submitted document must be well written and formatted.
6. There will be consequences if you don't follow the submission instructions.
7. There will be no extension in the submission deadline.
8. No late submission will be accepted.

Official Use Only			
Part	Student Marks	Question Marks	CLO
1		12	2.3
2		8	3.1
Total		20	

Criteria	Mark	Student Mark	CLO
Title and problem description.	**2**		**2.3**
User Analysis: - Personas.	**2**		**2.3**
Task Analysis: - Scenarios.	**2**		**2.3**
Requirements: - Studied documents.	**2**		**2.3**
Design sketches: - Storyboard.	**2**		**2.3**
Prototyping.	**2**		**2.3**
Evaluation. - redesign	**3**		**3.1**
Presentation.	**5**		**3.1**
Total	**20**		

How to make student learning much more effective? in this application we will provide students with right tools to help them study in efficient ways and bridge the gab between them and the knowledge. This application aims to help students in particle with all the component they need to complete their journey in the most efficient ways.

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LEARNIVERSE

1.1 problem description

The modern educational landscape faces diverse learning styles and limited access to comprehensive resources. Learninverse is designed as an educational platform to address these challenges by providing a centralized platform that offers a wide range of interactive lessons, courses, and the ability to complete assignments.

The educational platform aims to achieve the highest level of general education for students through a team of teachers, professors, and platform developers.

The program offers free courses, along with a smooth and easy-to-use learning experience.

1.2 User Analysis

User Characteristics:

The core user base of Learninverse consists of students from diverse backgrounds, ranging from primary education to higher education. The platform targets the needs of students of all genders, as well as teachers looking to improve their teaching methods and provide their students with additional educational resources.

- **Students:** The primary users of the Learninverse platform, ranging from primary education to higher education. They seek a comprehensive and interactive learning experience that can help them understand their academic subjects better and excel in them.

- **Teachers:** A crucial stakeholder group in Learninverse, as they can utilize the platform to enhance their teaching methods and provide their students with additional educational resources. They need tools that enable them to assign interactive exercises to students, monitor their progress, and provide timely feedback. By using Learninverse, teachers can supplement their classroom teaching and help their students understand complex topics better.

- **Platform Developers:** The team responsible for developing and maintaining the Learninverse platform, who are key stakeholders. They need to ensure that the platform is user-friendly, secure, and scalable to meet the growing demand from the user base. Continuous improvements and updates to the platform's functionalities and features are essential to maintain its relevance and competitiveness in the EdTech market.

Personas:

A) Student Persona:

Sarah, a 15-year-old high school student, faces difficulties in some subjects and wants access to a wide range of educational materials, including video lessons, interactive simulations, and the ability to receive immediate feedback on her assignments.

B) Teacher Persona:

Mr. Ahmed, a middle school math teacher, assigns tests and seeks a way to supplement his classroom teaching with additional resources and tools that can help his students understand complex materials better. He wants to assign interactive exercises to students and monitor their progress in real-time.

1.3 Task analysis

One of the main tasks to the project is to help student to do the following

1. View courses

the task aims to let the student view the courses available and provide him with knowledge required

the user must first have an account to view course

But issues like no video available if the course do not have associated video might happen.

Sub task: view videos

Students typically perform this task at the beginning to explore available courses

feature of this task is to present the courses in simple way that keep the fun factor in the learning process

2. View grade

allow students to view their grade

But student must take the exam first and the user must be enrolled for one course at least

And technical issues might be happening so the user won't get the right score or any score at all ,no subtask ,student check their grade during or after assessment periods

the point of this task is let to students know about their grades in simple form and without any complexation

3. subscribe to the newsletter

allow users to get the latest news and update

But the user must enter the email probably and have an account in Learniverse application

And issues like user may have written their email wrong might happen

Users may choose to receive newsletters daily, weekly, or monthly.

Before all those task that you can perform you must first create an account log in and then do the task you had chosen and after that you can easily logout of your account.

1.4 Task scenarios:

Omar is new student first he will do is to create an account and he will enter student id and email and password; Omar inserts the id and user password in the login page, Omar enters information throw the keyboard, Omar will see the home page presented with 6 options.

1. Get started.
2. Log out.
3. Edit account information.
4. Learniverse feature
5. Why Learniverse
6. News and events

Omar presses Get started buttons to meet view courses page and will present his available courses and start learning, Omar logs out from the application.

Khalid, a student who already has an account, Khalid then inserted the id and user password, Khalid entered information throw the keyboard, Khalid will see the home page presented with 6 options.

1. Get started.
2. Log out.
3. Edit account information.
4. Learniverse feature.
5. Why Learniverse.
6. News and events.

Khalid pressed Learniverse feature to view his grade, Khalid logged out from the application with all the information he needed.

Sara is student in particular course she already has her own account, Sara inserts the id and user password, Sara enters information throw the keyboard, Sara will see the home page then it presents 6 options.

1. Get started.
2. Log out.
3. Edit account information.
4. Learniverse feature

5. Why Learniverse
6. News and events

Sara presses news and events and enters her Emile to get the latest news, she logs out from the application.

1.5 Requirements:

- **Studied Documents**

The designer studied the applications of "Blackboard" and "Coursera" as they closely align with the Learniverse app idea.

Blackboard:

- Course Management: Allows instructors to create/manage courses, upload materials, and interact with students.

- Assessment Tools: Provides tools for quizzes, exams, assignments, and automated grading.

- Communication Channels: Supports announcements, emails, and group collaborations.

- Accessibility:

-Designed for accessibility with support for screen readers and assistive technologies.

- Multi-language Support: Supports multiple languages.

- Cross-Platform Compatibility:

-Accessible on Windows, macOS, iOS, and Android.

Coursera:

- Wide Range of Courses: Offers courses in various fields, including specializations and degrees.

- Flexible Learning:

-Users can enroll and learn at their own pace.

- Interactive Learning: Includes video lectures, quizzes, peer-graded assignments, and community forums.

- Certificates and Accreditation: Provides certificates upon completion.

- Multi-language Support: Supports multiple languages.

- Secure Payment Methods: Offers various payment options.

- Cross-Platform Accessibility:Available on web browsers and mobile apps.

The insights from these studies helped derive the functional and non-functional requirements for Learniverse, ensuring it offers comprehensive, flexible, and accessible educational solutions.

- ## Application Requirements

Functional Requirements:

1. **Log Out**

- The system shall allow users to securely log out of their accounts at any time.
- The system shall automatically log out users after a period of inactivity for security purposes.

2. **Edit Account Information**

- The system shall allow users to view and update their personal and account information.
- The system shall provide options to change passwords and update contact details.

3. **Learniverse Feature**

- The system shall offer a core feature set named Learniverse, providing access to courses, learning materials, and interactive tools.
- The system shall allow users to enroll in courses, track their progress, and access course materials.
- The system shall enable instructors to create and manage courses, upload materials, and interact with students.

4. **Why Learniverse**

- The system shall present an informative section explaining the benefits and unique features of Learniverse.
- The system shall include testimonials, success stories, and a detailed comparison with other educational platforms.

5. **News and Events**

- The system shall provide a news feed to keep users informed about the latest updates, events, and announcements.

- The system shall allow users to subscribe to notifications about specific events or news categories.

Non-Functional Requirements:

1. **Availability**

- The system must be available 24/7 to ensure users can access educational materials and resources at any time.

2. **Performance**

- The system must deliver fast and responsive performance, ensuring quick load times for pages and smooth navigation.

3. **Scalability**

- The system must be scalable to support a growing number of users and a large volume of educational content without performance degradation.

4. **Reliability**

- The system must operate continuously and reliably, minimizing downtime and ensuring consistent access to educational resources.

5. **User-friendliness**

- The system must feature an intuitive and user-friendly interface, enabling users to easily navigate, find courses, and manage their learning activities.

1.6 Design sketches:

Figure 1-1 Preliminary interface design for log in page and create an account page

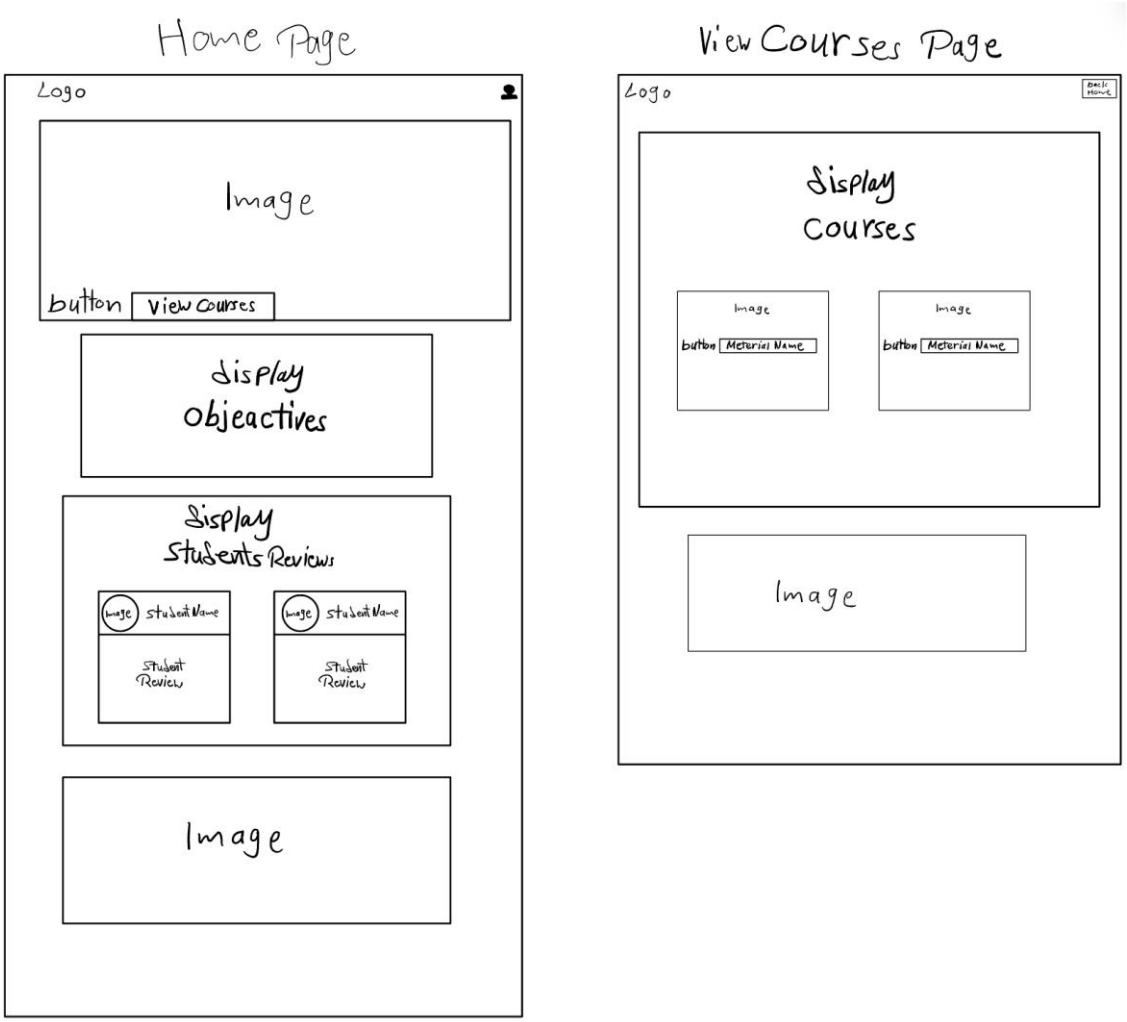

Figure 1--2 Preliminary interface design for Homepage and View courses page

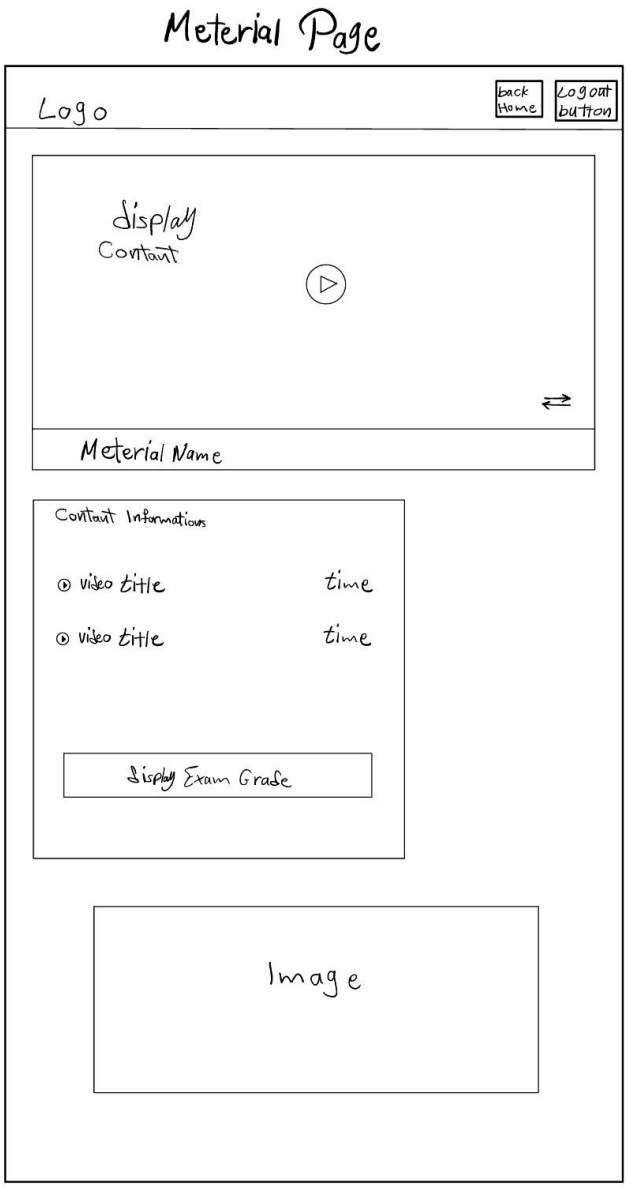

Figure 1-3 Preliminary interface design for Meterial and display Contant and Contant information page

1.7 Prototype:

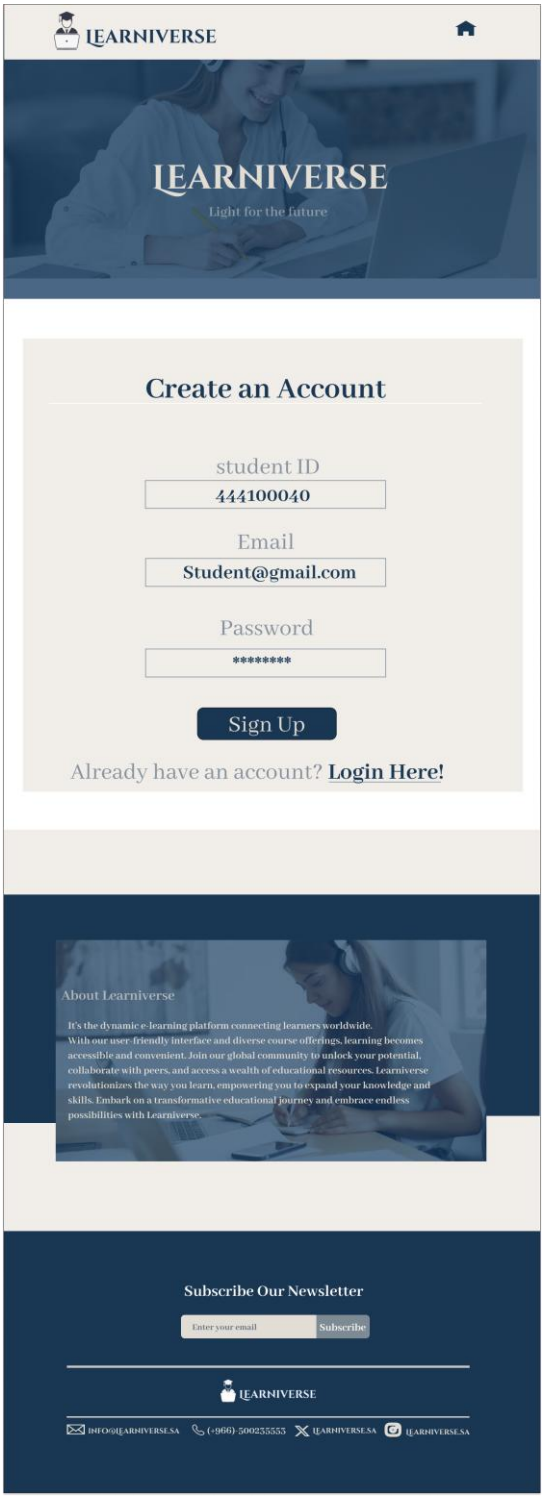

Figure 2-1 Prototype Create an account page.

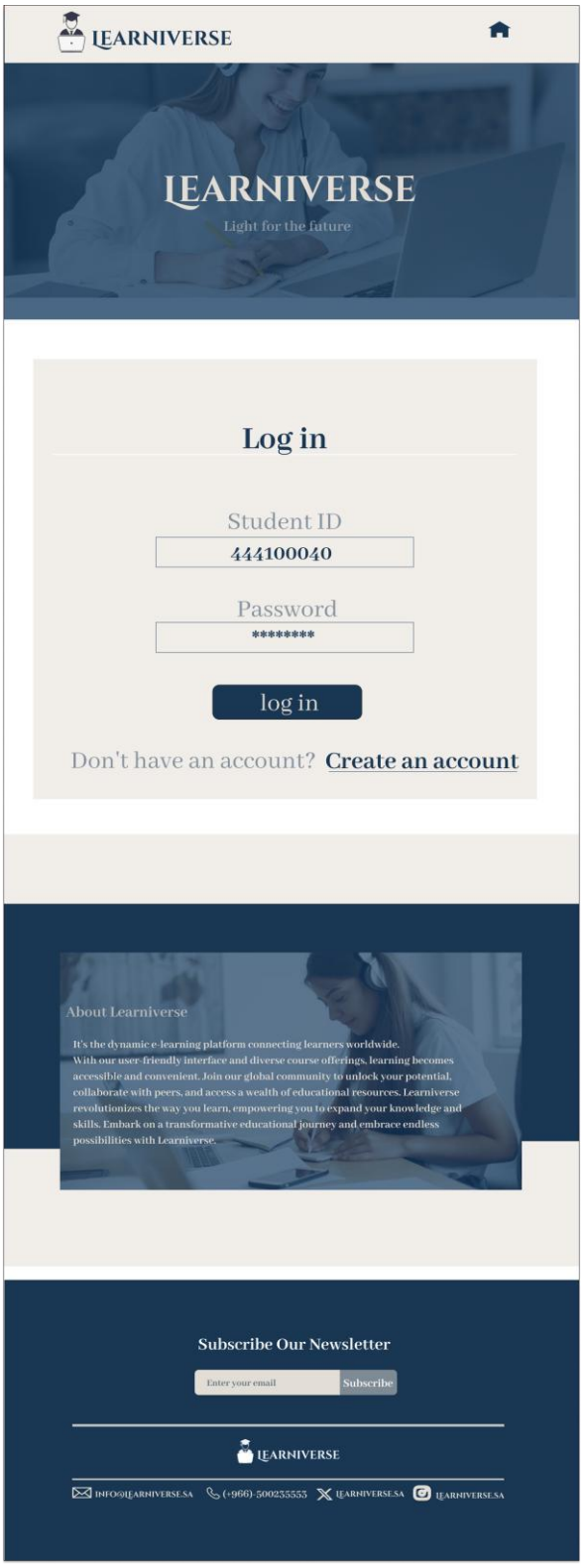

Figure 2-2 Prototype log in page

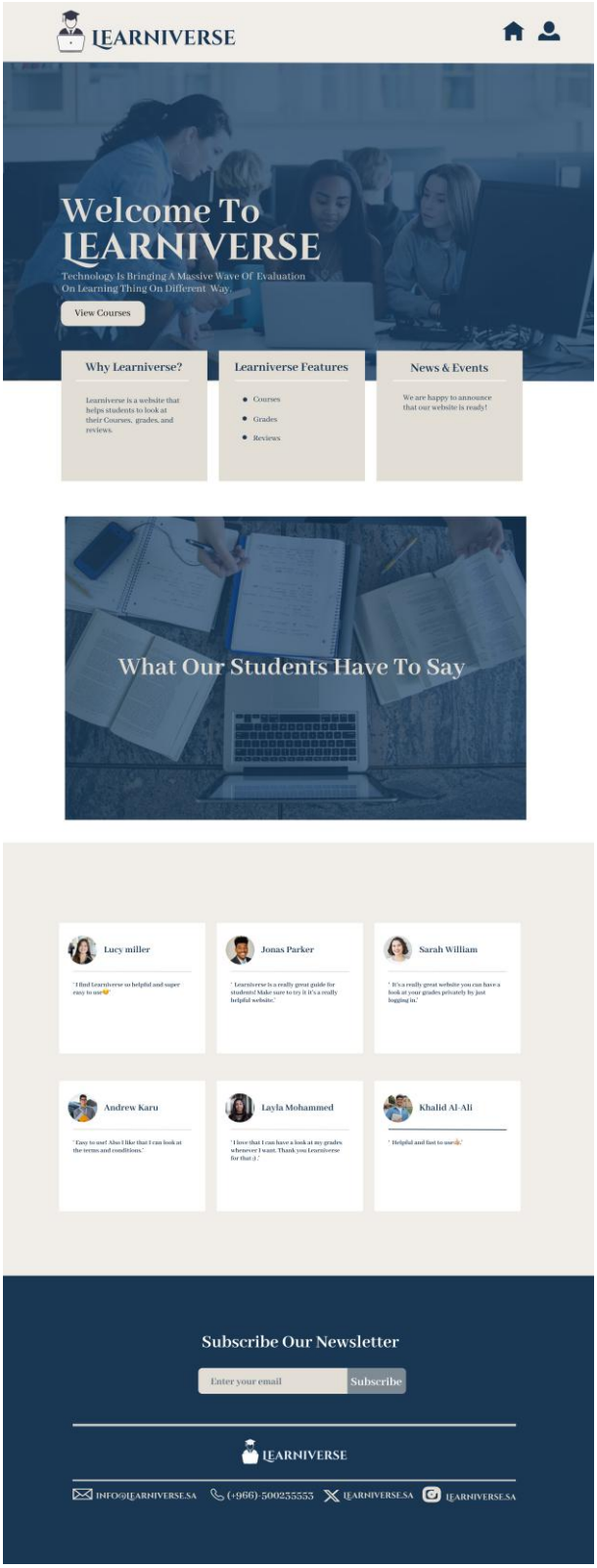

Figure 2-3 -Prototype Homepage

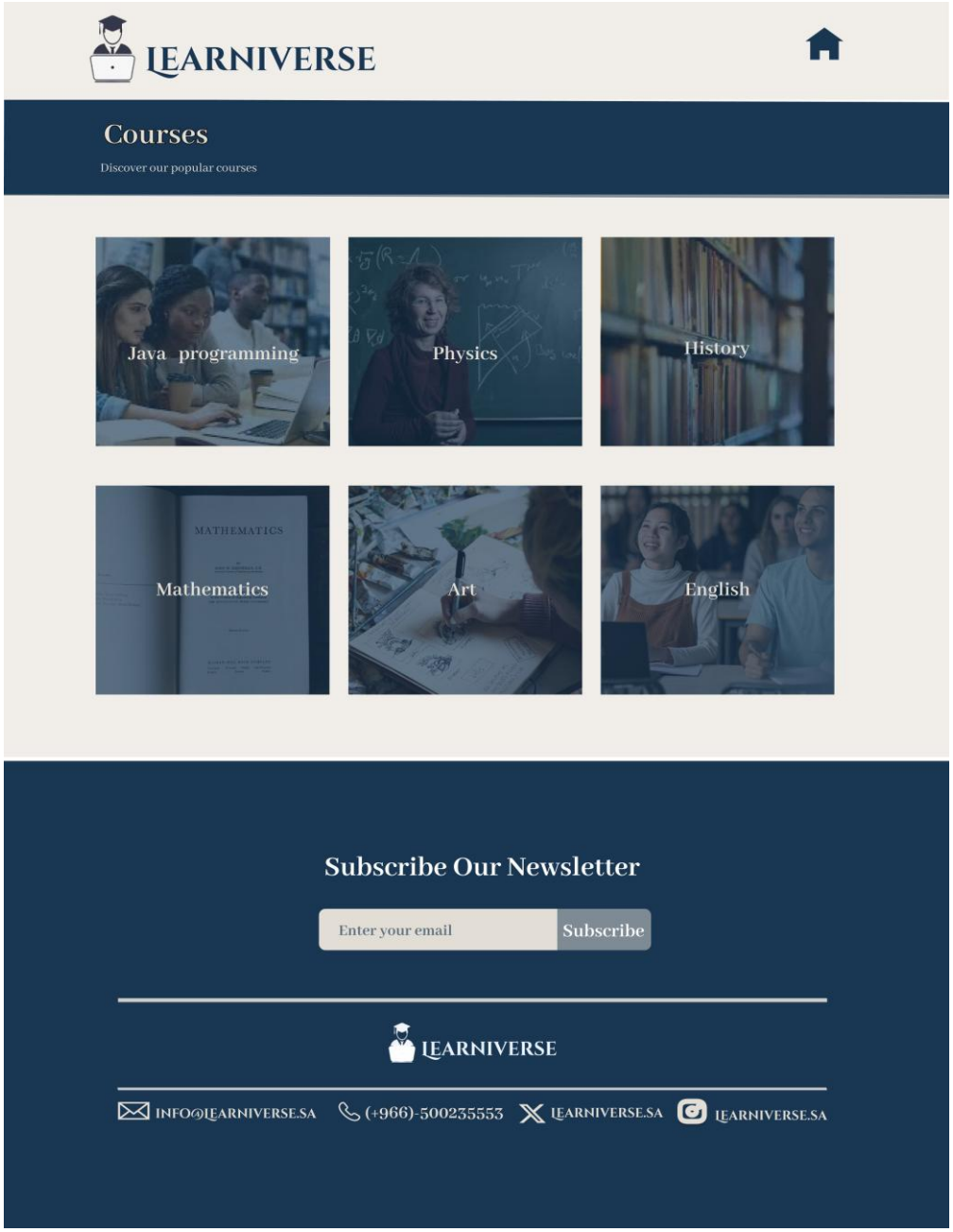

Figure 2-4 -Prototype View courses page

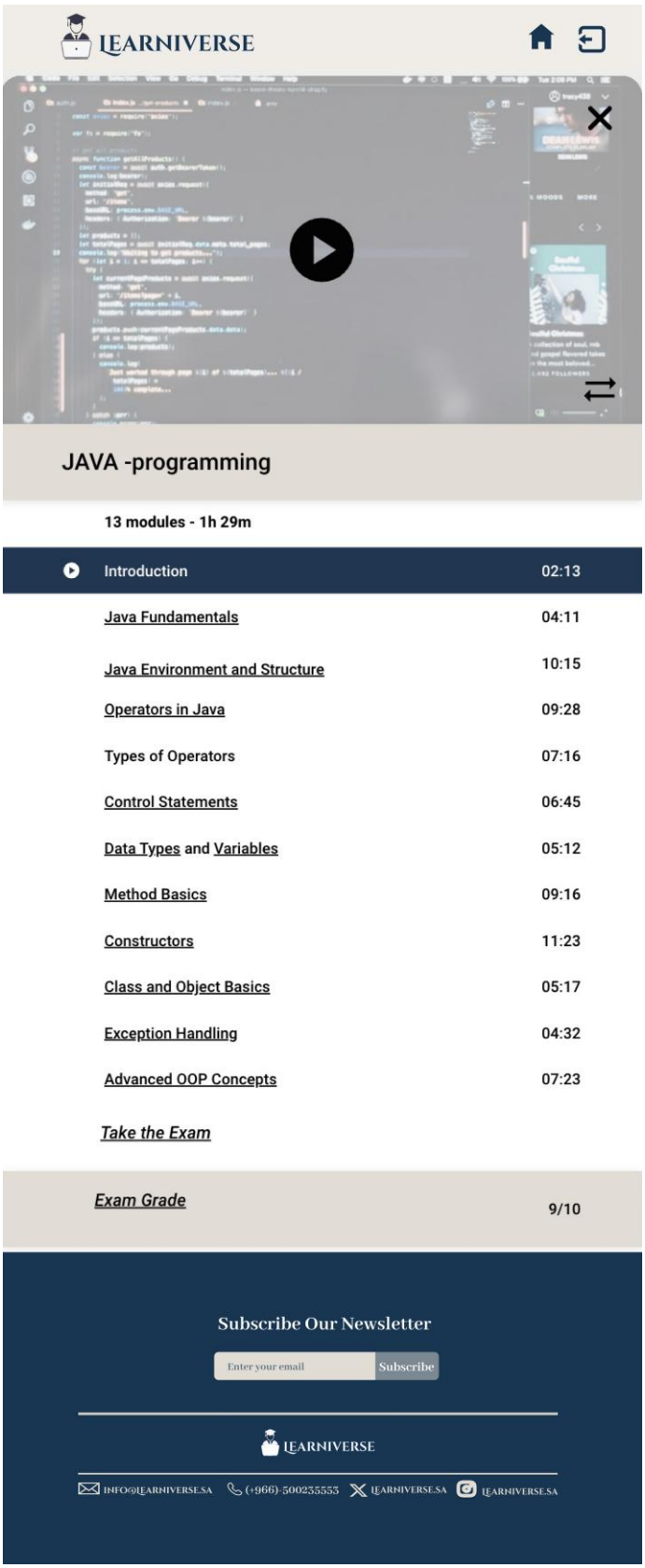
LEARNIVERSE
JAVA -programming
13 modules - 1h 29m
Introduction 02:13
Java Fundamentals 04:11
Java Environment and Structure 10:15
Operators in Java 09:28
Types of Operators 07:16
Control Statements 06:45
Data Types and Variables 05:12
Method Basics 09:16
Constructors 11:23
Class and Object Basics 05:17
Exception Handling 04:32
Advanced OOP Concepts 07:23
Take the Exam
Exam Grade 9/10
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Figure 2-5 Prototype View java course, Content, and Grade

1.8 Evaluation

Heuristic evaluation is ideal for assessing our LearnInverse application, as it allows us to quickly and cost-effectively identify usability issues without needing direct user interaction. This method enables rapid improvements, ensuring the site remains user-friendly and efficient for students across various subjects.

Table 1 criteria table

No.	criteria	Evaluation
1	Visibility of system status	3 severe
2	Match between system, and the real world	0 good
3	Use your control and freedom	0 good
4	Consistency and standards	1 good
5	error prevention	3 severe
6	Recognition, rather than recall	2 medium
7	Flexibility, and efficiency of Hughes	0 good
8	Aesthetic and minimalist design	0 good
9	Help users recognize, diagnose and recover from errors	2 medium
10	Help and documentation	1 good

Figure 3-1 prototype after evaluation

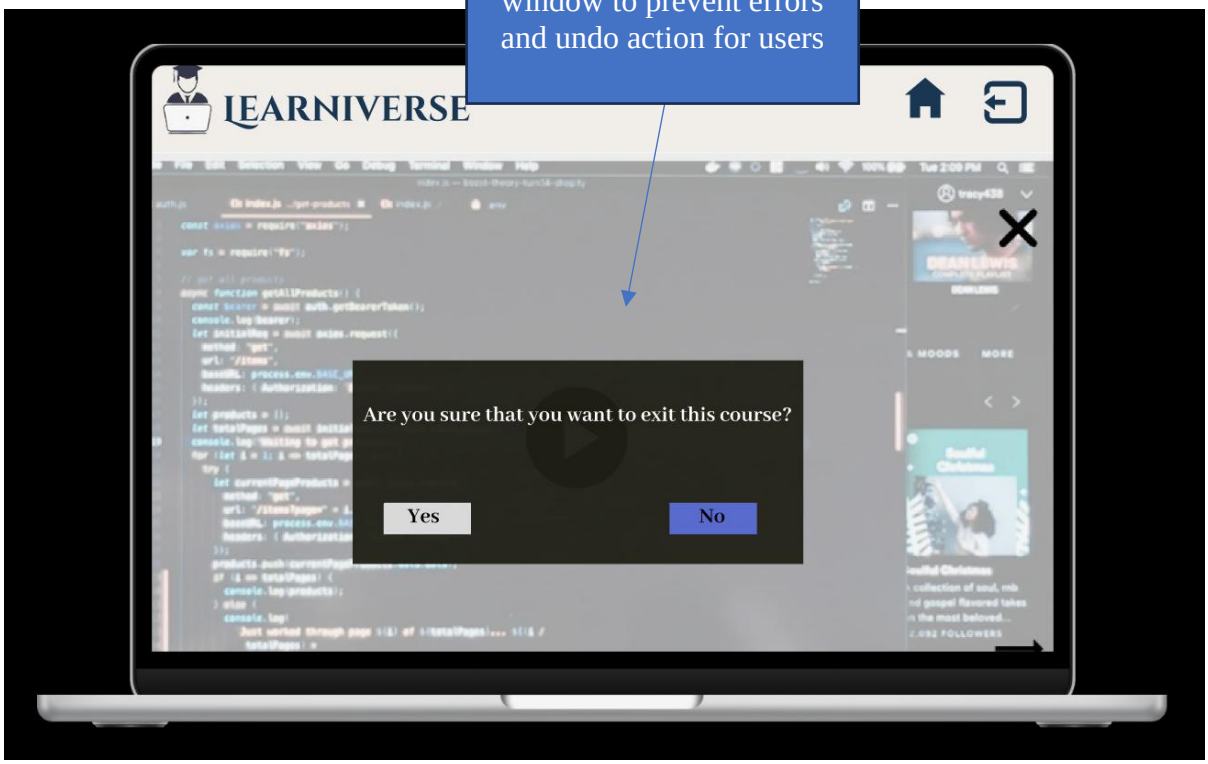

Figure 3-2 prototype after evaluation

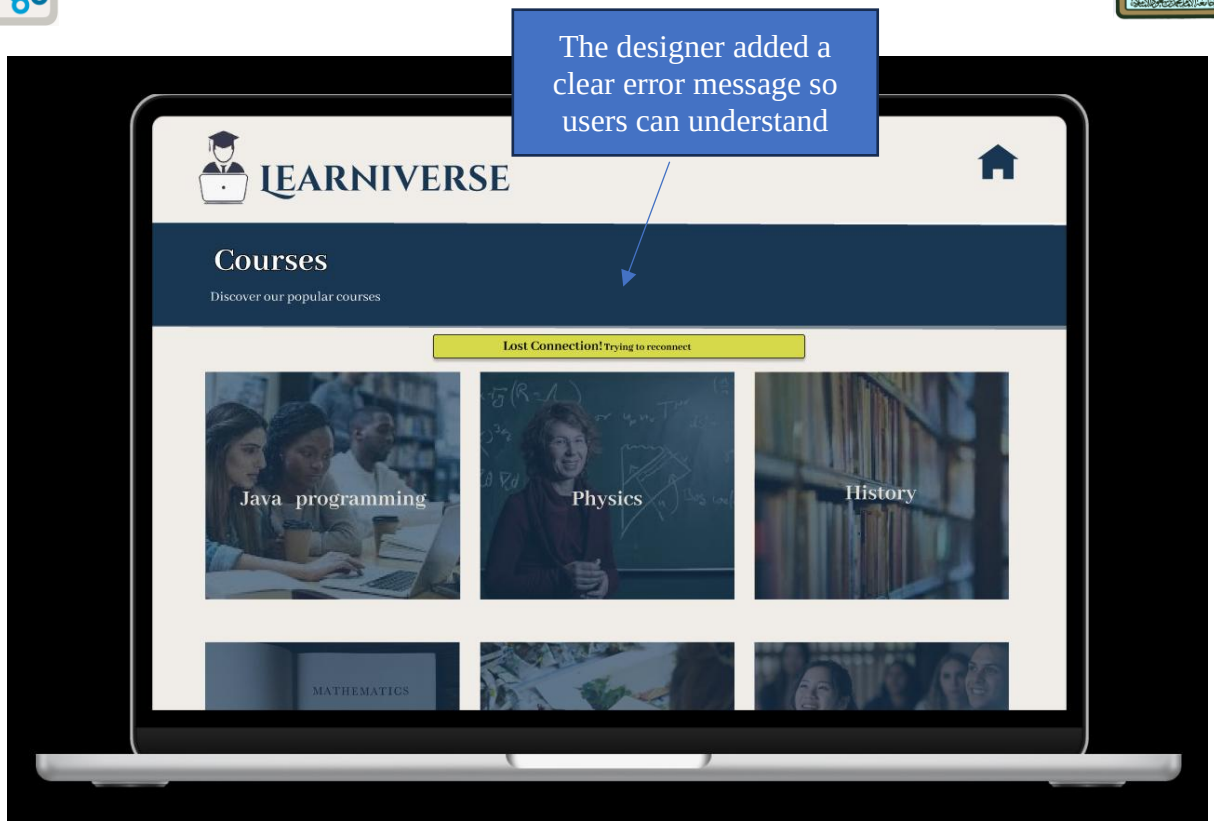

Figure 3-3 prototype after evaluation

Results:

LearnInverse, our course application, successfully passed the evaluation. It features an intuitive and user-friendly interface, providing students with a seamless and engaging learning experience.

Reference table:

Table 2Reference table

Ch 6 The process of interaction design
Ch 5 Interaction design basics