

**Arab International University**

**Faculty of Informatics and Communication Engineering**

**Junior Project Report on**

**Freelancing and Employing Platform**

Submitted to

Department of Informatics Engineering

in partial fulfillment of the requirement for theDegree of Bachelor in

**Informatics Engineering**

Submitted by

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Under the Supervision of

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**Month\_name Year**

Faculty of Informatics & Communication Engineering

CERTIFICATE OF APPROVAL

The undersigned certify that they have read and recommended to the Department of Informatics Engineering for acceptance, a project report entitled Freelancing and employing platform Submitted by: Tayma Abd Rubou, Hala Merie, Ghina Algaseer, Sarah Akkasha in partial fulfilment for the degree of Bachelor of Engineering in Informatics.

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**Arab International University**

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**The university works to achieve the following goals:**

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* Contributing to theoretical and applied scientific research that serves the purposes of national development. Work is being done to urge professors and academic staff to scientific research and participate in conferences and seminars that organize research.
* Achieving partnership with prestigious Arab and foreign universities with the aim of continuous development and modernization of academic work and conducting joint scientific research.
* Attracting distinguished academic and research competencies by providing the appropriate environment for their work.

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* Physical and moral incentives for students.
* Application of interactive teaching methods.
* Academic and educational guidance and counseling.
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* Multiple agreements and memoranda of understanding with many civil society organizations.
* A proper campus with all the facilities of science, sports and entertainment, which we encourage you to visit and learn about their features.
* Student activities and clubs of all kinds: athletic, cultural, scientific and social.

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Students could invest time, mind and spirit in our university in order to reap the benefits of works and the time devoted in the coming years. We will be by our students in every step of their way.

*To my father …..*

*My mother ….*

*My brothers …*

*…………………*

*Student1 name*

*To my father …..*

*My mother ….*

*My brothers …*

*…………………*

*Student2 name*

**………………………..**

**…………………………..**

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**Abstract**

This study aims to present an application that provides a platform that brings together service providers, course providers, and employers. The application features an easy-to-use user interface that allows users to register and create accounts to showcase their services, courses, or job opportunities. The methodology for this research includes analyzing users' needs and designing and developing the application based on these needs. Through pilot tests, it was found that the application provides an effective platform for communication between users and facilitates the process of searching for services, courses, or job opportunities. The conclusion points out the importance of developing innovative applications that meet the needs of users in the modern labor market

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**Abbreviations**

AIU Arab International University

RT Report Template

……………………………………………….

……………………………………………….

**Keywords**

Recruitment platform , Jobs services application , Providing services and training , Digital labor market , Education and employment platform , Intermediary application between employers and trainees , Job finding and training platform , Freelancing and training application , Employment and education platform , Application for searching for jobs and courses

# Introduction

In a world where connectivity and communication are key, there is a growing need for a platform that allows individuals to easily subscribe to services, enroll in courses, share their CVs, and connect with others to offer or receive services. Introducing a revolutionary application that brings all of these features together in one seamless and user-friendly interface.

Imagine being able to not only showcase your skills and experiences through your CV, but also connect with others who are looking for someone with your expertise. Whether you are a professional offering services or a job seeker looking to enhance your career, this application provides the perfect platform for you to connect with like-minded individuals.

The benefits of this application extend beyond just convenience and ease of use. For a country like Syria, where traditional job search methods may be limited, this application provides a valuable opportunity for individuals to showcase their skills and connect with potential employers or clients. It opens up a world of possibilities for those who may not have access to traditional job search methods, ultimately empowering individuals to take control of their own career paths.

In a world where innovation and connectivity are key, this application stands out as a game-changer. It offers a new way for individuals to connect, share, and grow, ultimately creating a community of like-minded individuals who are eager to learn, grow, and succeed.

# Chapter 1: Project Description

## 1.1 Background

The project focuses on developing a platform that will help people in many ways. There are many daily tasks in our days that are time consuming but are important to get done before the ending of the day, it would be very helpful to find someone that can save is time and make them in a professional way.

Finding a job is very important but can be hard sometimes because many people don’t know how to write a professional CV or they are not looking in the right place to find the job that fits them. Our platform helps the user to write a CV having the most important points that people reading the CV may want or it can attract them in the owner of the CV. Also using the platform people don’t have to run around and try to find people who they would like to work with you simply share you CV and people seeing it and taking an interest in it can contact you via your E-mail or phone number from your profile.

The need of learning and increasing the amount of knowledge or perfecting a skill is nowadays very important. But, many people don’t have the time in their day to go in a training center to improve some skill or take a course. In addition, someone can have great ability to teach something but he can’t find or afford a place or not have enough time to repeat the same lesson again and again. That is what our platform can help people in it allows them to either share or enroll in a course anytime and anywhere they like.

## 1.2 Problem Statement

In today's fast-paced world, individuals face numerous challenges in managing their daily tasks and professional development efficiently. Completing essential tasks in a professional manner can be time-consuming and detracts from other valuable activities. Furthermore, job seekers often struggle with creating effective CVs and finding suitable job opportunities, while those looking to improve their skills face difficulties in accessing training due to time constraints and the lack of flexible learning options.

**Key Problems:**

1. **Time-Consuming Daily Tasks**: Essential tasks that need to be completed professionally consume significant amounts of time, reducing the time available for other important activities.
2. **Job Seeking Challenges**: Many individuals find it difficult to write professional CVs that attract employers and do not know where to search for jobs that match their skills and interests.
3. **Limited Access to Learning and Skill Enhancement**: Continuous learning and skill improvement are crucial, but many people cannot attend traditional training centers due to time constraints. Additionally, potential educators may struggle to find suitable venues and time to conduct repeated lessons.

## 1.3 Project Objective

The objective of this project is to develop a comprehensive platform that enhances the efficiency of daily task management, supports job seekers in creating professional CVs and finding suitable employment opportunities, and facilitates continuous learning and skill enhancement through flexible, accessible courses. This platform aims to save users time, improve their professional prospects, and provide convenient access to educational resources, thereby contributing to their overall personal and professional development.

**Specific Objectives:**

1. **Streamline Daily Tasks**: Provide users with access to professional services that handle time-consuming daily tasks efficiently, freeing up their time for other important activities.
2. **Enhance Job Seeking**: Offer tools and templates for creating compelling CVs and provide a platform for sharing CVs, making them accessible to potential employers and recruiters.
3. **Facilitate Learning and Skill Enhancement**: Create a flexible environment where users can enroll in or share courses anytime and anywhere, allowing for continuous learning and teaching without the constraints of traditional training centers.

## 1.4 Project Scope

 **Service Providers**:

* **Registration and Profile Creation**: Easy registration process and profile creation for service providers to list their offerings.
* **Service Listings**: Features for providers to detail and categorize their services.
* **User Interaction**: Messaging and booking systems to facilitate communication between service providers and users.

 **Course Providers**:

* **Course Creation and Upload**: Tools for educators to create and upload courses, including multimedia content.
* **Course Listings**: Organized listings for various courses with search and filter options.
* **User Enrollment**: Simple enrollment process for users to join courses and track their progress.
* **Feedback and Ratings**: System for users to rate and provide feedback on courses.

 **Employers**:

* **Job Posting**: Easy-to-use interface for employers to post job opportunities.
* **CV Database**: Access to a database of user CVs, searchable by skills and qualifications.
* **Direct Contact**: Mechanism for employers to contact potential candidates directly through the platform.

## 1.5 Project Features

### 1. User Registration and Profiles

* **User Accounts**: Simple and secure registration process allowing users to create and manage their profiles.
* **Profile Customization**: Options for users to showcase their skills, services, courses, or job opportunities.

### 2. Service Providers

* **Service Listings**: Service providers can list and categorize their services with detailed descriptions and pricing.
* **Ratings and Reviews**: Users can rate and review services, providing feedback for continuous improvement.

### 3. Course Providers

* **Course Creation**: Tools for educators to create and upload courses.
* **Enrollment Management**: Users can easily enroll in courses and track their progress through a personalized dashboard.
* **Feedback and Ratings**: Mechanisms for users to rate courses and provide feedback to instructors.

### 4. Employers and Job Providers

* **Job Posting**: Employers can post job opportunities with detailed descriptions, requirements, and application instructions.
* **CV Database**: Employers can search and filter a database of CVs based on skills, experience, and other criteria.
* **Direct Contact**: Employers can contact potential candidates directly through the platform’s messaging system.

### 5. Communication Tools

**Messaging System**: Secure messaging system for users to communicate with service providers, course instructors, and employers.

### 6. Search and Filter Functions

**Advanced Search**: Comprehensive search functionality allowing users to find services, courses, and job opportunities quickly.

### 7. Notification System

Make users aware of the additions to the application of services, courses and works published by their owners

## 1.6 Project Feasibility

project feasibility for the development of an application that provides a platform bringing together service providers, course providers, and employers. The proposed application features an easy-to-use user interface that allows users to register and create accounts to showcase their services, courses, or job opportunities. The methodology for this research includes analyzing users' needs and designing and developing the application based on these needs.

**Market Analysis:**

The market for online platforms connecting service providers, course providers, and employers is growing rapidly. There is a demand for efficient and user-friendly platforms that facilitate communication and collaboration between these stakeholders. The target market for this application includes individuals seeking services, courses, or job opportunities, as well as service providers, course providers, and employers looking to connect with potential clients or employees.

**Financial Analysis**:

The financial feasibility of the project will be determined by analyzing the costs associated with developing and maintaining the application, as well as the potential revenue streams from user subscriptions, advertising, or premium features. A detailed financial projection will be conducted to assess the profitability and sustainability of the project.

**Technical Analysis**:

The technical feasibility of the project will be evaluated by assessing the resources and technology required to develop and launch the application. Considerations will include the scalability, security, and compatibility of the platform with different devices and operating systems.

**Environmental and Social Impact:**

The development of an integrated platform for service providers, course providers, and employers can have a positive environmental impact by reducing the need for physical resources and travel. Socially, the application can contribute to creating opportunities for individuals to access services, courses, or job opportunities more easily and efficiently..

## 1.7 System Requirements

Functional Requirements

1. **User Registration and Authentication**

* User Registration: Users must be able to register using email
* Authentication: Secure login using email/username and password

1. **User Profiles**

* Profile Creation: Users can create and update profiles with personal information, professional background
* Profile Types: Different profiles for service providers, course providers, and employers, each with specific fields relevant to their roles.
* Portfolio/Resume Upload: Ability to upload documents such as resumes, certificates, or portfolios.

1. **Service, cycle and function lists**

* List creation: Users can create, update, and delete listings of services, courses, or job opportunities.
* Classification: Business, services and courses should be classified according to the evaluations
* Search and filter: Advanced search and filtering options to help users find specific services, courses, or jobs.
* View details: Detailed view of each listing with descriptions and requirements

1. **Communication tools**

* Messaging system: Built-in messages for direct communication between users.
* Notifications: Real-time notifications in new in-app additions
* Reviews and ratings: Users can leave comments and ratings for services, courses, or job experiences.

1. **Administrative functions**

* Admin dashboard: A comprehensive administrator dashboard for managing users, lists, and site content.
* User Management: Tools for managing user accounts,
* Content moderation: Tools for reviewing and moderating user-generated content and lists.
* Analytics: Access analytics and reports on user activity, list performance, and other key metrics.

Non-Functional Requirements

1. Usability
2. Security
3. Performance
4. Transparency
5. Availability
6. Speed

# Chapter 2: Theoretical Study

## 2.1 E-Commerce

E-Commerce is the process whereby consumers directly buy goods or services from a seller in real-time over the Internet.

## 2.2 Online Shopping

Online shopping is ……………...

### 2.2.1 B2C E-Commerce

## ………….

## ………………

# Chapter 3: Literature Review

## 3.1 Related Works

### 3.1.1 LinkedIn

The world's largest professional network on the internet.It is used to find the right job or internship, connect and strengthen professional relationships and learn the skills you need to success in your career. It could be accessed from a desktop, LinkedIn mobile app or mobile web experience.

It could be used to organize offline events, join groups, write articles, post photos ,videos and more.It is a platform for anyone who is looking to advance their career,it offers a free, basic membership to anyone who wants to create and maintain a professional profile online,the premium subscription gives access to LinkedIn’s products and features include marketing, recruitment, sales and learning products. [1]

LinkedIn is currently available in 28 languages. [2]

### 3.1.2 Endeed

The number one job site in the worldand a global job matching and hiring platform. More people get hired on Indeed than any other site because they put job seekers first, giving them access to search for jobs, post resumes,  research companies and more. With AI-powered technology, indeed is transforming job matching and hiring, more than 350 million   
unique monthly visitors and more than 3.5 million employers use Indeed to hire and reaching more than 60 countries. [3]

### 3.1.3 Skillshare

Skillshare is an online learning community with thousands of classes for creative and curious people, on topics including illustration, design, photography, video, freelancing, and more. On Skillshare, members come together to find inspiration and take the next step in their creative journey. [4] Anyone can join Skillshare to start watching online classes, create projects, and even become a teacher.   
Students are able to engage with teachers and other students through project-based classes, where they'll go through the process of creating something. Skillshare classes are perfect for anyone who wants to learn new skills or explore their passions. Classes range from beginner to expert, with opportunities for novices to follow their curiosity and experts to hone their craft. [5]

### 3.1.4 Khamsat

Khamsat is the first Arab market for buying and selling microservices, Khamsat brings together Arab youth ready to provide services with the category of buyers willing to buy these services, thus providing a suitable income for Arab youth and distinctive services at an economic price for individuals and startups. [6]

### 3.1.5 Forsa

Fosra is an Innovative Online Recruitment Solutions for enterprises and organizations. It trys to serve all job seekers in all levels and give companies the opportunities to expand by hiring fast and the best. [7]

It help in getting the best talent hassle-free in 3 ways recruitment ad on the platform ,head hunting and filtered database of qualified candidates [8]

## 3.2 Comparison

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | mobile/website | Arabic/English | offers | | | social media |
| services | courses | jobs |
| linkedin | both | both | false | false | **true** | **true** |
| endeed | both | both | false | false | **true** | false |
| skills share | both | arabic | false | **true** | false | false |
| khamsat | website | arabic | **true** | false | false | false |
| forsa | both | arabic | false | false | **true** | false |
| our app | mobile | arabic | **true** | **true** | **true** | false |

# Chapter 4: System Analysis

## 4.1 Requirements Specification

1)

|  |  |
| --- | --- |
| Add service | use case name : |
| Logged in as service owner | Pre conditions : |
| New service added to DB | Post conditions : |
| Service owner | Actors : |

|  |  |
| --- | --- |
| System | **Flow of activites :**  Actor |
|  | 1) Choose "add service |
| 2) show add form |  |
|  | 3) fill in the fields ( service title , service price , description , delivery period , instruction to the buyer , add a photo or video) |
|  | 4) click add service |
| 5) save service in DB |  |
| 6) show confirmation |  |
| 7) clear fields |  |

|  |  |
| --- | --- |
| System | **Exception of conditions :**  Actor |
| 1) highlight missing fields | 1) Do not fill in the fields |

2)

|  |  |
| --- | --- |
| Buy a service | use case name : |
| Logged in as customer | Pre conditions : |
| Purchase a service | Post conditions : |
| Customer | Actors : |

|  |  |
| --- | --- |
| System | **Flow of activites :**  Actor |
|  | 1) Click search |
| 2) get search result |  |
|  | 3) Choose service |
| 4) view the contents of the service |  |
|  | 5) Click buy a service |
|  | 6) Enter the purchase card number |
| 7) save service in DB |  |

|  |  |
| --- | --- |
| System | **Exception of conditions :**  Actor |
| 1) " Not found" | 1) Write the name of the service that does not exist |

3)

|  |  |
| --- | --- |
| Process requests to add services | use case name : |
| Adding services by their owners | Pre conditions : |
| Accept or reject requests | Post conditions : |
| Admin | Actors : |

|  |  |
| --- | --- |
| System | **Flow of activites :**  Actor |
|  | 1) The admin receives a request to add a new service |
|  | 2) He reviews the details of the requested service |
|  | 3) verifies the feasibility of adding the service |
|  | 4) He approves the request to add the service |
| 5) It update the list of a vailable services with the new addition |  |
| 6) save in DB |  |

|  |  |
| --- | --- |
| System | **Exception of conditions :**  Actor |
| 1) It updates the list of available services according | 1) There are conflicts with current service |

4)

|  |  |
| --- | --- |
| processing requests add the service | use case name : |
| The admin is logged into the system | Pre conditions : |
| The new service is added to the system and is available for users to select and use | Post conditions : |
| Admin | Actors : |

|  |  |
| --- | --- |
| System | **Flow of activites :**  Actor |
|  | 1)The admin clicks the process services button |
|  | 2) the administrator is shown a list of services that the administrator is considering for approval |
|  | 3) click on service |
|  | 4)service information appears |
|  | 5)click accept service |
| 6) if the information is valid , the system adds the new service to the system |  |
| 7) the system confirms the success of adding the service and informs the service provider of the addition by sending a notification |  |

|  |  |
| --- | --- |
| System | **Exception of conditions :**  Actor |
| 1) the request cannot be processed | 1) if the administrator cancels adding the service |

## 4.2 Functional Requirements

The Admin should be able to do the following:

1. The customer accepts or rejects adding a service
2. The customer accepts or rejects adding a course
3. The customer accepts or rejects adding a job
4. The customer accepts or rejects adding a training courses
5. See full user details
6. See comlaints
7. See reviews
8. Delete a user account
9. Delete a service ,course , or work
10. Monitoring services profits .
11. Switch account
12. Login
13. Register
14. Delete account
15. View the unserved requests page
16. Sign out
17. Search
18. View the electronic wallet
19. Display common question page
20. Modify personal information

The Service owner should be able to do the following:

1. Add service
2. View service history
3. Search in services
4. Browse the task gallery
5. Monitor reviews
6. Offers a discount
7. Editing the business gallery
8. Add completed work
9. Monitor profits
10. Chatting
11. Submit a complaint
12. Switch account
13. Login
14. Register
15. View the unserved requests page
16. Sign out
17. Search
18. View the electronic wallet
19. Display common question page
20. Modify personal information
21. Delete account

the course owner should be able to do the following:

1. Add course
2. View courses history
3. Search in courses
4. Browse the task gallery
5. Monitor reviews
6. Offers a discount
7. Editing the business gallery
8. Add training courses
9. Monitor profits
10. Chatting
11. Submit a complaint
12. Switch account
13. Login
14. Register
15. View the unserved requests page
16. Sign out
17. Search
18. View the electronic wallet
19. Display common question page
20. Modify personal information
21. Delete account

The job owner should be able to do the following:

1. Add job
2. Offer applicants the opportunity
3. Selecting people seeking the opportunity
4. Chatting
5. Monitor profits
6. Submit a complaint
7. Switch account
8. Login
9. Register
10. View the unserved requests page
11. Sign out
12. Search
13. View the electronic wallet
14. Display common question page
15. Modify personal information
16. Delete account

The customer should be able to do the following:

1. Submit a job application
2. Buy a service
3. Buy a course
4. Browse purched services (view progress , drop , rating )
5. Chatting
6. Submit a complaint
7. Switch account
8. Login
9. Register
10. View the unserved requests page
11. Sign out
12. Search
13. View the electronic wallet
14. Display common question page
15. Modify personal information
16. Delete account

## 4.3 Non-Functional Requirements:

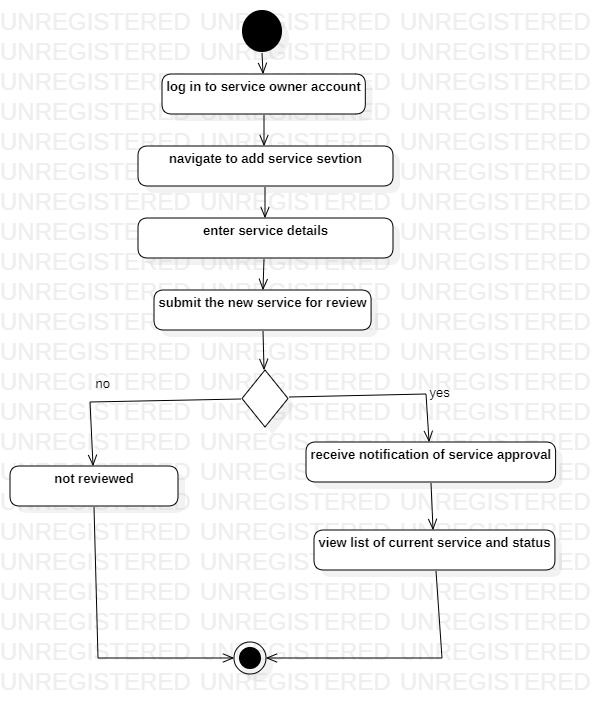
1. Usability
2. Security
3. Performance
4. Transparency
5. Availability
6. Speed

## 4.4 Use cases

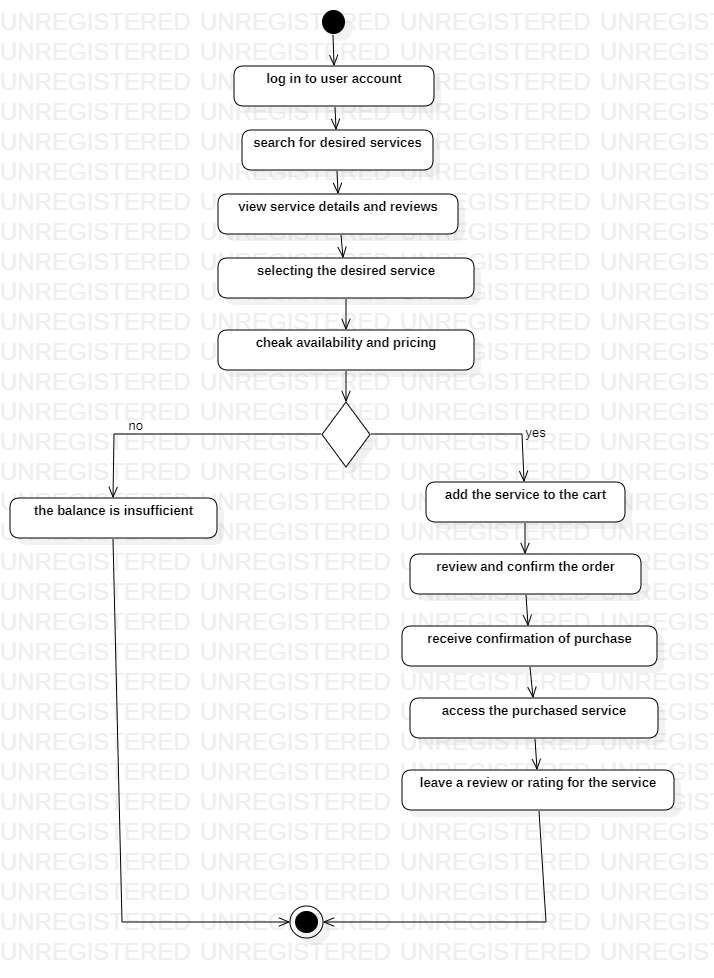


## 4.5 Activity diagram

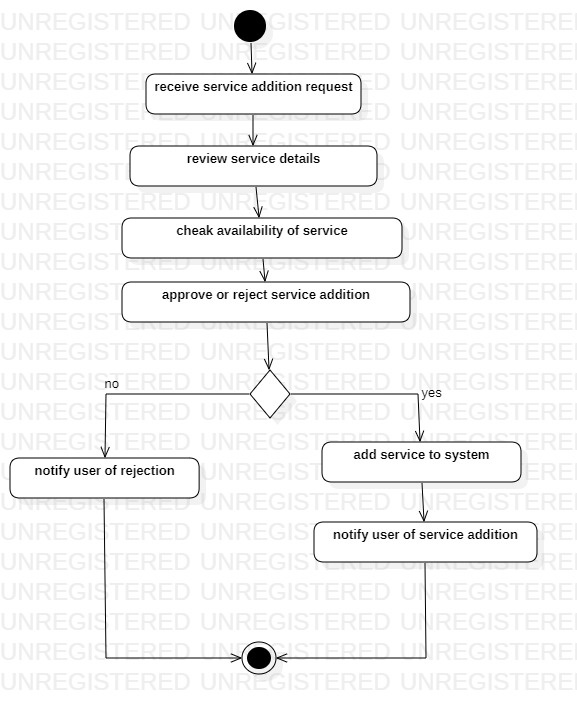
1) add service

****

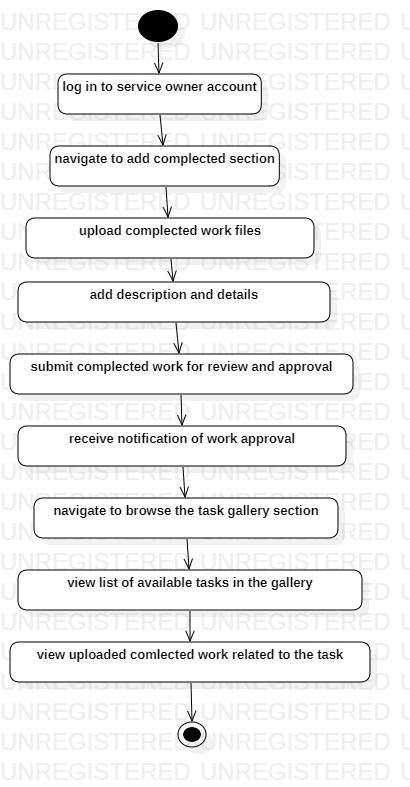
2) buy service



3) processing request add the service



4) add comlected work



# Chapter 5: System Design

## 5.1 System Components Diagram

## ………………

## 5.2 Entity Relationship Diagram

## ………………

## 5.3 Data Flow Diagram

## ………………

## 5.4 Web Pages Design

## ………………

## 5.5 Algorithms

The system provides a facility to accept the requests from traders after they register. The admin will see the requests from the trader and check if it's a real information like the credit card or passport id, after that the admin will approve or reject the uncompleted requests, the trader can create stores after admin approval and add their categories and products.

## 5.6 Solutions

The system provides a facility to accept the requests from traders after they register. The admin will see the requests from the trader and check if it's a real information like the credit card or passport id, after that the admin will approve or reject the uncompleted requests, the trader can create stores after admin approval and add their categories and products.

# Chapter 6: Implementaion

## 6.1 Technologies

### 6.1.1 Front-End

#### 6.1.1.1 Flutter

Flutter is an [open-source](https://en.wikipedia.org/wiki/Open-source_software) [UI](https://en.wikipedia.org/wiki/User_interface) [software development kit](https://en.wikipedia.org/wiki/Software_development_kit) created by [Google](https://en.wikipedia.org/wiki/Google). It can be used to develop [cross platform applications](https://en.wikipedia.org/wiki/Cross-platform_software) from a single [codebase](https://en.wikipedia.org/wiki/Codebase) for the [web](https://en.wikipedia.org/wiki/Web_platform), [Fuchsia](https://en.wikipedia.org/wiki/Google_Fuchsia), [Android](https://en.wikipedia.org/wiki/Android_(operating_system)), [iOS](https://en.wikipedia.org/wiki/IOS), [Linux](https://en.wikipedia.org/wiki/Linux), [mac OS](https://en.wikipedia.org/wiki/MacOS), and [Windows](https://en.wikipedia.org/wiki/Microsoft_Windows). Flutter was released in May 2017. It is used internally by Google in apps such as [Google Pay](https://en.wikipedia.org/wiki/Google_Pay_(mobile_app)) and [Google Earth](https://en.wikipedia.org/wiki/Google_Earth) as well as by other software developers including ByteDance and [Alibaba](https://en.wikipedia.org/wiki/Alibaba_Group). [9]

Flutter offers a set of features that make it a good choice.First of all, flutter employs the dart programming language, which is simple to learn and enables you to create high-quality apps .Secondly, Flutter’s hot reload option enables quick and simple app modifications without requiring a restart.Additionaly, Flutter apps are compiled into native code to provide the most incredible possible performance on both iOS and android. Furthermore, Flutter’s UI elements are built using the same principles as Google’s Material Design guidelines, providing a versatile and expressive approach to designing a beautiful app. Lastly, Flutter is an open-source project. You can use it for free and help shape the development of the platform. Considering all of these factors, flutter is a good choice that help you create high-quality apps that meet your requirements and exceed expectations. [10]

#### 6.1.1.2 ReactJS

It is also known as **React**, is a popular JavaScript library for building user interfaces. It is also referred to as a front-end JavaScript library. It was developed by Facebook and is widely used for creating dynamic and interactive web applications.React is a declarative, component based library that allows developers to build reusable UI components and It follows the [Virtual DOM](https://www.geeksforgeeks.org/reactjs-virtual-dom/) (Document Object Model) approach, which optimizes rendering performance by minimizing DOM updates.

It is one of the most demanding JavaScript libraries because it is equipped with a ton of features which makes it faster and production-ready. Firstly, React provides a feature to break down the UI into smaller, self-contained components. Each component can have its own **state and** properties. Secondly, JSX is a syntax extension for JavaScript that allows developers to write HTML-like code within their JavaScript files. It makes React components more readable and expressive. Another key feature, it maintains a lightweight representation of the actual DOM in memory. When changes occur, React efficiently updates only the necessary parts of the DOM.Moreover, React is recommended in creating SPAs, allowing smooth content updates without page reloads. Its focus on reusable components makes it ideal for real-time applications. Ultimately, React is **fast** and works well with other tools and libraries and gives a good performance which make it a good choice. [11]

### 6.1.2 Back-End

#### 6.1.2.1 Laravel

Laravel is a free and open-source PHP framework that provides a set of tools and resources to build modern PHP applications. With a complete ecosystem leveraging its built-in features, and a variety of compatible packages and extensions.

Laravel provides powerful database tools including an ORM (Object Relational Mapper) called [Eloquent](https://www.digitalocean.com/community/tutorials/how-to-create-database-models-in-laravel-with-eloquent), and built-in mechanisms for creating [database migrations and seeders](https://www.digitalocean.com/community/tutorials/how-to-use-database-migrations-and-seeders-to-abstract-database-setup-in-laravel). With the command-line tool Artisan, developers can bootstrap new models, controllers, and other application components, which speeds up the overall application development. This has made its popularity grow rapidly in the past few years, with many developers adopting it as their framework of choice for a streamlined development process. [12]

#### 6.1.2.2 Python

Python is a programming language that is interpreted, object-oriented, and considered to be high-level too. Python is one of the easiest yet most useful programming languages which is widely used in the software industry. People use Python for Competitive Programming, Web Development, and creating software. Due to its easiest syntax. Its demand is growing at a very rapid pace due to its vast use cases in Modern Technological fields like Data Science, Machine learning, and Automation Tasks. For many years now, it has been ranked among the top Programming languages.

Python has plenty of features that make it the most demanding and popular .Firstly, Easy to read and understand .Secondly, it is an interpreted and object-oriented programming language, free and open-source, versatile, extensible, multi-platform, hundreds of libraries and frameworks and has a huge and active community.

These state the reasons why you should choose Python. [13]

### 6.1.3 Database

#### 6.1.3.1 Mysql

**MySQL** is an**open-source, Relational Database Management System** that stores data in a structured format using **rows** and **columns**. It’s software that enables users to **create**, **manage**, and manipulate databases. Developed by **MySQL AB**, which is now owned by **Oracle** Corporation, MySQL is renowned for its reliability, scalability, and ease of use.

MySQL is [open-source](https://www.geeksforgeeks.org/introduction-to-open-source-and-its-benefits/) software, optimized for performance, making it capable of handling **high-volume transactions** and large datasets efficiently.  MySQL can scale both **vertically** and **horizontally** to accommodate growing data and user loads. You can add more resources to a single server or distribute the workload across multiple servers using techniques like [sharding](https://www.geeksforgeeks.org/what-is-sharding/) or [replication](https://www.geeksforgeeks.org/data-replication-in-dbms/). MySQL provides robust **security features** to protect your data, including access controls, encryption, and auditing capabilities. With proper configuration, you can ensure that only authorized users have access to sensitive information. These several reasons make MySQL a popular choice for managing **relational databases** [14]

## 6.2 Tools

### 6.2.1 VS Code

Visual Studio Code combines the simplicity of a source code editor with powerful developer tooling, like IntelliSense code completion and debugging.

First and foremost, it is an editor that gets out of your way. The delightfully frictionless edit-build-debug cycle means less time fiddling with your environment, and more time executing on your ideas.

Visual Studio Code supports macOS, Linux, and Windows. It features a lightning fast source code editor, perfect for day-to-day use. With support for hundreds of languages, VS Code helps you be instantly productive with syntax highlighting, bracket-matching, auto-indentation, box-selection, snippets, and more. Intuitive keyboard shortcuts, easy customization and community-contributed keyboard shortcut mappings let you navigate your code with ease. For serious coding, you'll often benefit from tools with more code understanding than just blocks of text. VS Code also integrates with build and scripting tools to perform common tasks making everyday workflows faster. VS Code has support for Git so you can work with source control without leaving the editor including viewing pending changes differences. [15]

### 6.2.2 Postman

Postman is an [API platform](https://www.postman.com/api-platform/) for building and using APIs. Postman simplifies each step of the API lifecycle and streamlines collaboration so you can create better APIs faster.

Postman can store and manage API specifications, documentation, workflow recipes, test cases and results, metrics, and everything else related to APIs .Also postman platform includes a comprehensive set of tools that help accelerate the API lifecycle from design, testing, documentation, and mocking to the sharing and discoverability of your APIs .Moreover postman workspaces help you organize your API work and collaborate across your organization or across the world. There are four different kinds of Postman workspaces for your different needs: personal, team, partner, and public workspaces. [16]

### 6.2.3 Xampp

XAMPP is a cross-platform web server that is free and open-source. XAMPP is a short form for Cross-Platform, Apache, MySQL, PHP, and Perl. XAMPP is a popular cross-platform web server that allows programmers to write and test their code on a local webserver. It was created by Apache Friends, and the public can revise or modify its native source code. It includes MariaDB, Apache HTTP Server, and interpreters for PHP and Perl, among other computer languages . It can also use to create and manipulate databases in MariaDB and SQLite, among other databases. [17]

## 6.3 sample of codes

# Chapter 7: Testing & Discussion

## 6.1 Data Sets

## ………………

## ………………

## 6.2 Testing

## ………………

## ………………

## 6.3 Results

## ………….

## ………………

## ………….

## ………………

……………………………………..

……………………………………………………………..

# Conclusion and Future Works

The project objective was to deliver the e-commerce system into cross-platform. In this project ….

# Appendix 1: Method Specification

Appendices are provided to give supplementary information, which is if included in the main text may cause a distraction and cloud the central theme. Appendices should be numbered using Arabic numerals, e.g. Appendix 1, Appendix 2

# …………………….

# References

|  |  |
| --- | --- |
| [1] | 2023. [Online]. Available: https://www.linkedin.com/help/linkedin/answer/a548441/what-is-linkedin-and-how-can-i-use-it-?lang=en. |
| [2] | [Online]. Available: https://news.linkedin.com/about-us#Statistics. |
| [3] | [Online]. Available: https://www.indeed.com/about?hl=en. |
| [4] | [Online]. Available: https://www.skillshare.com/en/about. |
| [5] | [Online]. Available: https://help.skillshare.com/hc/en-us/articles/205199937-What-is-Skillshare. |
| [6] | [Online]. Available: https://khamsat.com/about. |
| [7] | [Online]. Available: https://forsa.sy/. |
| [8] | [Online]. Available: https://www.linkedin.com/company/forsa-syria/about/. |
| [9] | [Online]. Available: https://en.wikipedia.org/wiki/Flutter\_(software). |
| [10] | [Online]. Available: https://medium.com/@copperchips/what-is-flutter-and-what-are-its-uses-90ae2ff29e71. |
| [11] | [Online]. Available: https://www.geeksforgeeks.org/reactjs-introduction/. |
| [12] | [Online]. Available: https://www.digitalocean.com/community/tutorials/what-is-laravel. |
| [13] | [Online]. Available: https://www.geeksforgeeks.org/what-is-python/#features-of-python. |
| [14] | [Online]. Available: https://www.geeksforgeeks.org/what-is-mysql/. |
| [15] | [Online]. Available: https://code.visualstudio.com/Docs/editor/whyvscode#\_available-for-macos-linux-and-windows. |
| [16] | [Online]. Available: https://www.postman.com/product/what-is-postman/. |
| [17] | [Online]. Available: https://www.educba.com/what-is-xampp/. |

**ملخص**

نحاول في هذا العمل وضع قالب لتقارير مشاريع ما قبل التخرج في كلية الهندسة المعلوماتية والاتصالات في الجامعة العربية الدولية. تركت بعض الصفحات فارغة قصداً بهدف البدء في الفصول والأقسام الرئيسية في صفحات مفردة لأن الطباعة النهائية ستكون على الوجهين.

يجب أن يعطي الملخص وهو جوهر المشروع فكرة عامة عن العمل ضمن صفحة واحدة.

يجب أن يتضمن الفهرس فقط قائمة الفصول التي تليه.

تتعلق عناوين الفصول والفقرات والفقرات الفرعية بطبيعة المشروع وموضوعه، والعناوين الموجودة في هذا القالب هي مجرد أمثلة.

يرجى محاذاة النص من الطرفين للحصول على شكل واضح له.

يرجى الاهتمام باللغة والصياغة الصحيحة، وعدم استعمال صيغة المتكلم (أنا، نحن) واستعمال عبارات هذه الدراسة أو هذا المشروع.

يمكن استعمال الملحقات لإضافة معلومات في نهاية التقرير دون تشتيت القارئ عن الموضوع الرئيسي.

يجب أن تتضمن المراجع العناوين وأسماء المؤلفين والتواريخ.

يجب أن تكون الصفحات الأخيرة المكتوبة باللغة العربية في صفحات زوجية لتكون في الطرف الآخر من التقرير عند الطباعة على الوجهين.

**الجامعة العربية الدولية**

الجامعة العربية الدولية AIU جامعة سورية خاصة أُحدثت عام 2005، خططها الدراسية والوثائق الصادرة عنها معتمدة ومصدقة من قبل وزارة التعليم العالي في الجمهورية العربية السورية.

تعمل الجامعة على تحقيق الأهداف الآتية:

* إعداد جيل متميز من الخريجين الجامعيين القادرين على تلبية الحاجات النوعية للمجتمع والنهوض به.
* الإسهام في البحوث العلمية النظرية والتطبيقية التي تخدم أغراض التنمية الوطنية، ويتم العمل على حث الأساتذة والعاملين الأكاديميين على البحث العلمي والمشاركة في المؤتمرات والندوات التي تنظم الأبحاث.
* تحقيق الشراكة مع الجامعات العربية والأجنبية المرموقة بهدف التطوير والتحديث المستمرين للعمل الأكاديمي والقيام ببحوث علمية مشتركة.
* استقطاب الكفاءات الأكاديمية والبحثية المتميزة عن طريق توفير البيئة المناسبة لعملها.

**الجامعة العربية الدولية** من الجامعات السورية الأولى التي جرى تأسيسها وافتتاحها، وقد تمكنت من اجتذاب الكفاءات التعليمية والبحثية والإدارية المتميزة، لإنشاء صرح متكامل من النواحي الأكاديمية والتنظيمية والإدارية. وتمكنت من تخريج كوادر من المبدعين والمتميزين من خلال توفير  بيئة تعليمية ترتكز إلى مقومات نوعية ومادية فريدة منها:

* الخطط الدراسية الحديثة والمتطورة المستندة إلى نظام الساعات المعتمدة.
* الأطر التعليمية المنتقاة بعناية كبيرة.
* المختبرات العلمية الحديثة، ومختبر للمكتبات الإلكترونية.
* المحفزات المادية والمعنوية للطلبة.
* تطبيق طرائق التدريس التفاعلي.
* التوجيه والإرشاد الأكاديمي والتربوي.
* مجموعة كبيرة من اتفاقيات التعاون العلمي مع جامعات محلية وإقليمية ودولية ذات سمعة مرموقة.
* اتفاقيات ومذكرات تفاهم متعددة مع العديد من مؤسسات المجتمع المدني.
* الحرم الجامعي اللائق والمزود بكافة المرافق العلمية والرياضية والترفيهية، والذي نشجعك على زيارته والتعرف على مزاياه.
* الأنشطة والأندية الطلابية بمختلف أنواعها: الرياضية والثقافية والعلمية والاجتماعية.

**في الجامعة العربية الدولية** سنوات الحياة الجامعية هي وقت للاستثمار في مستقبل الطالب. فالمعارف والخبرات التي يحصلها في قاعة المحاضرات والمختبرات ستساعده في تطوير ذاته، وستمنحه أسباب النجاح في التخصص الذي اختاره، والنشاط الطلابي الذي يمارسه سيساعده في توسيع أفقه، وفعاليات التدريب والأندية والرياضة ستمكنه من تطوير مواهبه، ولربما تساعده في اكتشاف مواهب جديدة.

ليستثمر وقته وذهنه وروحه في جامعتنا كي يجني فوائد عمله والوقت الذي كرسه في السنين القادمة. ونحن سوف نكون بجانب طلبتنا في كل خطوة على دربهم.



**الجامعة العربية الدولية**

**كلية الهندسة المعلوماتية والاتصالات**

**مشروع ما قبل التخرج**

**منصة توظيف و عمل حر**

تم تقديمه إلى

قسم الهندسة المعلوماتية

تقديم

**حلا مرعي تيمه عبد ربه   
غنى القصير سارة عكاشة**

بإشراف

**المهندس اسراء القاسمة الدكتور طلال شهابي  
  
تموز 2024**