**1.0 INTRODUCTION**

**1.1 PREAMBLE**

With the rapid advancements in information technology, we are witnessing a significant increase in the number of students who are interested in learning and specializing in this field.

However, many face challenges, such as not knowing where to begin, lacking reliable, interconnected resources, and being unfamiliar with the demands of the job market.

At ZeroToCoder, we are committed to solving these challenges by offering detailed roadmaps for a wide range of specializations, providing high-quality educational courses to prepare the students for the industry, and guiding them to companies based on their chosen fields of expertise.

**1.2 PROJECT MOTIVATION**

The main motivation for doing this was the struggle that we, along with many other students, faced when trying to enter this industry. We were completely lost and had no idea where to start. Everyone kept giving us different advice—one person would say to do this, and the next person would say, "No, do that," and so on.

The second motivation was the amount of fraud we fell victim to. Some people and organizations promised to teach us programming and sold us their courses, but the courses were terrible. We ended up wasting our time and money without learning anything. We don’t want others to go through what we experienced.

**1.3 PROBLEM STATEMENT**

The main problem is that there are so many people who want to enter the field of information technology, but they don’t know how to start. As a result, they fall victim to fraud from various organizations. We want to put an end to that by providing a reliable platform for all aspiring programmers.

**1.4 PROJECT AIM AND OBJECTIVES**

1- Create a website to guide students who want to enter the programming field and teach them in the best way possible.

2- We aim to stop fraud from various organizations offering programming education by providing a reliable platform for all aspiring programmers.

**1.5 PROJECT SCOPE**

**Boundaries**: Our initial focus will be on students in Jordan, but in the future, we aim to expand our reach to the entire world.

**1.6 PROJECT SOFTWARE AND HARDWARE REQUIREMENTS**

**1.6.1 Hardware Requirements:**

* 1. 1- Processor: Intel i5 or equivalent, with at least 4 cores.
  2. 2- RAM: Minimum of 8 GB (16 GB recommended for better performance).
  3. 3- Storage: SSD with at least 20 GB of free space for the development environment, source code and builds.
  4. 4- Internet Connection
  5. **1.6.2 SOFTWARE REQUIREMENTS:**
  6. **Development Environment**
  7. IDE: Visual Studio Code (latest version recommended), with support for HTML, CSS, and JavaScript for frontend and Visual Studio (latest version recommended), with support for C# for backend
  8. SQL server management studio: to create the database and handle it
  9. Figma: for design and prototype purposes
  10. Operating System: Windows 10 or higher
  11. **1.7 PROJECT LIMITATIONS**

1- The initial web-based application must be ready by May 2025.

2- Our web-based application requires internet connection.

3- The web-based application can be accessed only by students in Jordan.

4- Our website is in English; an Arabic version is not available yet.

5- Logging in is required to access the courses.

**1.8 PROJECT EXPECTED OUTPUT**

The expected outcome of our project is the ZeroToCoder website, a user-friendly web-based application designed to guide students in entering the IT field. We aim to help them choose their career path, provide high-quality courses, and assist them in finding companies in their field within the job market.

**1.9 PROJECT SCHEDULE**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| T | Task Name | Dur. | Start | Finish | Dep. | T |
| 1 | Planning / Brainstorming | 4 | 21/10/2024 | 24/10/2024 | - | 1 |
| 2 | Feasibility study | 3 | 25/10/2024 | 27/10/2024 | - | 2 |
| 3 | Functional & non-functional requirements | 6 | 28/10/2024 | 3/11/2024 | T1 | 3 |
| 4 | Functional Requirements Specifications | 4 | 4/11/2024 | 7/11/2024 | T3 | 4 |
| 5 | Context Diagram | 7 | 8/11/2024 | 15/11/2024 | T3, T4 | 5 |
| 6 | Data flow diagram | 4 | 16/11/2024 | 19/11/2024 | T5 | 6 |
| 7 | Use-case diagram | 15 | 20/11/2024 | 3/12/2024 | T4 | 7 |
| 8 | Sequence diagrams | 20 | 4/12/2024 | 23/12/2024 | T7 | 8 |
| 9 | UML class diagram | 10 | 24/12/2024 | 2/1/2025 | T6 | 9 |
| 10 | GUI design | 30 | 3/1/2025 | 1/2/2025 | T8 | 10 |
| 11 | Database Design and Development | 30 | 2/2/2025 | 3/3/2025 | T6, T9 | 11 |
| 12 | Implementation | 75 | 4/3/2025 | 16/5/2025 | T10 | 12 |
| 13 | Testing | 6 | 17/5/2025 | 22/5/2025 | T12 | **13** |
| 14 | Documentation | 207 | 21/10/2024 | 22/5/2025 | All Tasks | **14** |

**1.10 REPORT OUTLINE**

**Chapter One:** Presents the preamble and the motivation behind the project, it also states the problem, the aims and objective, and the scope of the project. Additionally, it includes the software and hardware requirements, the limitations, and the expected output of it. Finally, it shows the schedule and the outline of the report.

**Chapter Two:** presents an overview of the existing systems/products, their problems/weaknesses, and the proposed solutions that should appear in the proposed system/product.

**Chapter Three:** presents the feasibility study, the requirements gathering techniques, the targeted users, the functional requirements definition and specification, the non-functional requirements, and the usability and user experience goals.

**Chapter Four:** presents aspects of the system design including a context diagram, data flow diagram, entity relationship diagram, UML use case diagram, UML sequence diagram, UML class diagram, graphical user interface design/medium fidelity prototype, and database design.

**Chapter Five:** presents all aspects of the system implementation including the database implementation, graphical user interface implementation/high fidelity prototype, and any details about the implementation tools used.

**Chapter Six:** presents the system testing and installation aspects including the heuristic evaluation, cooperative evaluation, system installation, and user manual.

**Chapter Seven:** presents the project conclusions and future work including the overall weaknesses and strengths, and future directions.