**FEASIBILTY REPORT**

# The Group Members:

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GitHub link: <https://github.com/Software-Engineering-IU/Store-Management-System>

# The Client:

Dr. Mansoor Ebrahim, MS Ghazala Shafi, Iqra University.

# The Task to be Undertaken:

The project is to develop an interactive web-based application where the customer can buy the product and venders can easy sell them you don’t have to travel to market it can be bought online and will be delivered to your pinned destination with 5 to 7 working days.

The project consists of three main parts: determining a database solution to hold the metadata for the customer order details, developing an administrative interface that would allow for adding and changing metadata for products and its details, and developing a UI to expose this metadata to the end user.

# Benefits:

Better internal control, Economy in storage space and material handling. Single point delivery and single point inspection. Speedy communication with purchase department and various suppliers.

# A Preliminary Requirements Analysis:

The system needs to meet the following functional requirements:

1. Web Interface:

Allow admin to modify and add the information of customer and product in database of management system.

1. Database to store information regarding record of sales and customer identity.
2. Be easily extensible from both the administrator’s perspective and from future developers’ perspectives.

The system may have the following functional requirements:

*Undecided*

1. An interface to updating the database with a more current version.
2. The administrative interface may not need to be web-based.
3. The functionalities to search, add and modify data may need to be available.

*Optional*

# Technical Requirements – Feasibility:

1. *Server* – The system is going to be running on a server of MS access. The Group is currently working If nothing else, the Group could definitely test server in to test the development code on. Most of consists of MS access.
2. *Database* – The current store management system is hosted on an MS access database. The Group will have access to this database, and permission to add tables as needed for our system.
3. *login form* – The system will need to be integrated with the login form page, which uses java, netbeans.org.

# Suggested Deliverables:

* 1. *Requirements Analysis* – a document and a presentation to go over the formal requirements of the project. This deliverable ensures that the Group is working on a system that closely matches to the wishes of the Client. This deliverable gives the Client a chance to modify and correct items in the design.
  2. *Design Document* – a document and a presentation to go over the design of the system. This is the Group’s opportunity to go over how the project is to be implemented to the Client. This deliverable is done by the more technical and experienced in the Group, based on the understanding of the requirements established.
  3. *Source Code* – a document, presentation along with the source code of the project. This deliverable wraps up and concludes the project. In this deliverable, the Group delivers the implementation based on the requirements specified and the design developed. The system would have been tested thoroughly with unit tests and with a final acceptance test and would be ready for deployment to the client.

**Technical Deliverables**:

1. A *database* with the required tables to support the system—a database needs to be set up on the MS access servers with the tables needed in the system to store the inventory information, records, and other data.
2. An *administrative interface* to add, modify and search for inventory—a

webform designed to allow the administrator (i.e., the Client) of the system to add information to the system for every instance that is in our project.

# Software Development Process:

The project will undertake the *modified waterfall model* because there is a well-defined set of requirements. As the Client has very specific needs for the system which will take enough timeframe, and given that this is a proper store management system (not a research project), the modified waterfall model should be better suited and gives the Group the following benefits:

1. *Process visibility* – both the Client and the Group are certain which stage of the development process the project is in.
2. *Separation of tasks* – the Group may concentrate on one area at a time, especially since some members of the Group have less experience in coding and in large scale software projects.
3. *Quality control* – a modified waterfall model allows the Group to spend more time on the requirements, understanding the design, and on developing better code (a programmer with less experience may have a difficult time delivering in short iterations in an iterative refinement model).

# Outline Plan (Principal activities and Milestones):

* 1. Milestone 1 (August 10, 2020) – Requirements Analysis (draft). An initial draft of the requirements analysis and feasibility report should be done as Milestone 1. This should come after a formal requirement gathering meeting with the Client on zoom session.
  2. Milestone 2 (August 11, 2020) – Requirements Analysis (final). The final draft of the requirements analysis should be done for Milestone 2.
  3. Milestone 3 – Software Architecture and Design (draft). An initial draft of the software architecture and design should be done as Milestone 3.A zoom meeting with the Client should follow Milestone 3 to get feedback on the design of the system.
  4. Milestone 4 – Database. The database is the most important part of the system, as it is the center of all information. A database scheme needs to be fixed for Milestone 4 to provide a basis for the other components to be based on.
  5. Milestone 5 – Inventory management of store - As the menu of clothing store information needs to be published using information in the database, the next bottleneck is of source code. Milestone 5 will consist of this scheme.
  6. Milestone 6 – Testing, Debugging and Integration. The system needs to be well-tested, debugged at this milestone. Also, once the system has passed the acceptance test, it needs to be integrated to the actual system for this milestone.
  7. Milestone 7 – Project Deadline. The project source code should be handed over to the Client for the final milestone. A presentation is presented to the Client.

# Visibility Plan:

External – The Group will conduct regular biweekly meetings with the Client on zoom session. If situations arise or if a problem needs to be addressed between the meetings, the Group will conduct any further necessary communication via email. Because a modified waterfall model will be used, a report will be issued to the Client at the end of every step to ensure that both parties are in contact and to minimize any miscommunication in the requirements.

Internal – The Group will meet weekly on Zoom meetings to discuss progress and problems. Meeting minutes will be kept track of and sent to all members of the Group for reference. Any additional communication will be done via email or through other collaboration tools such as document sharing. In

addition, the source code will be stored at GitHub repository for the project. All source code will be documented carefully before being submitted to the repository. The progress of the principal activities and major milestones will be closely monitored and compared with the schedule.

# Business Considerations:

As Iqra University students, the Group owns the copyright in the software that we create in this project. The Group agrees to transfer the copyright to the Client and to provide the Client with unrestricted license to use the system.

It is just possible that a project may develop concepts that could be patented. If such a situation arises, the Group collectively owns the rights to all patents associated with the System.

# Risk Analysis:

1. Changing Requirements:

*Risk:* The Client may have different ideas about the system during the course of the project. Depending on the situation, the changes that the Client wishes to have implemented may require little or major changes to the architecture.

*Solution:* To reduce the possibility of this occurring, the Group needs to establish a clear visibility plan with the Client which has been made in visibility plan.

1. Incomplete Requirements:

*Risk:* It is possible that requirements may be implied but not discussed or misunderstood. This frequently occurs after meetings.

*Solution:* The Group’s interpretation of the Client’s requirements will be presented back to the Client to get a confirmation on whether the Group has understood the Client, client updates and a high level of visibility will also help call attention to any misunderstandings.

1. Lack of Resources, Tools:

*Risk:* For the project to meet one of the functional requirements

*Solution*: To ensure that our project will meet the functional requirement our team will collaborate at any risk.

1. System Integration:

*Risk:* Depending on the level of access to the servers that the Group receives, the Group may need to work on the system offline and eventually integrate with our system when it is ready and thoroughly tested. Due to different software configuration, there may be unpredictable obstacles.

*Solution:* To ensure a smooth system integration, the Group needs to be aware of as much about the configuration as early as possible.

1. Technical Requirements:

*Risk:* The server environment is not perfectly certain at this point. The client is not aware of the technical aspects of the project. The technical server configuration may have an effect on system architecture and design.

*Solution:* To resolve this problem, the Group has requested the client to refer the technical staff for further inquiries.

1. Non-functional Requirements:

*Risk:* Similar to incomplete requirements, non-functional requirements is something that has not been brought up in the initial meeting with the Client. These include requirements on the number of users that the system expects to support concurrently, and the response time of the database lookup.

*Solution:* A follow up meeting is needed to specify the non-functional requirements.

1. Human resources:

*Risk:* The Group is relatively small consisting of only 5 members, some members are not technically oriented and almost all members have limited knowledge of relevant field.

*Solution:* For these reason the Group acknowledges that a slow design and implementation phase may be inevitable, and are planning accordingly.

# Conclusion:

Based on the analysis of this feasibility study, the Group has collectively agreed that

this project is feasibleand the group is willingto take on the above-mentioned project. The benefits are significant enough to justify the development effort required. Currently, the costs of the project are believed to only involve the labor costs of the group.

**SURVEY:(client and developer)**

## Q1. What are the Most Common Mistakes?

Ans: the failure to effectively manage all of the elements of the software creation project is the top mistake made in custom software creation. Some of the other common mistakes to be avoided include the following:

* The requirements of the program are not accurately defined by the involved parties.
* Potential threats that could impact the success of the software project are not clearly identified before the start of the project. As a result, contingency planning is insufficient.
* The process of analysing the critical path of the software is either executed in an extremely poor fashion or completely omitted from the project.
* There is no tracking procedure put in place to gauge the success of the project.
* The data obtained is not enough for the development of the program, or is not appropriately understood.
* There is no quality assurance team to ensure that all of steps of the software development program are carried out successfully from start to end.

## Q2. What is the Goal Associated with the End Product?

Ans: The first step to achieving success in this endeavor is to outline a goal for your end product. Once your product has a purpose, you’ll be able to look at every step of the process with that goal in mind. Do you and your team perhaps have a desire to test a very basic prototype? Do you want to provide basic features to your clients? Are you interested in expanding your user base? Do you simply want to build your brand? Define the purpose of your project. Once you’ve done this, you’ll be able to move forward in the creation process.

## Q3. What Problem will be solved by the Software?

Ans: When developing custom software, its good practice to think about what problem your software program aims to solve. While this can seem rather basic, it’s a question and consideration that’s often overlooked by product development team until inconsistencies are encountered. By identifying the problem that’s being solved, you’ll be able to stay on task and get a better picture of the clients that will be using your product. To successfully implement any idea, it’s essential to first understand the reasoning behind that idea.

## Q4. What Features Are Most Important to the Target Audience?

Ans: Once you’ve established what problem you’re hoping to solve for your target audience, it’s critical to determine which features would be most important to that audience. To deliver a viable custom software program to your clients, you must gain an understanding of the end users’ unique objectives when they use your program. You should also consider their reactions to features that you are considering adding to the program. This may require you to engage in user modelling, which is a type of testing that will allow you to understand of your target audience as well as their wants and needs. This will provide a strong driving force and a clear roadmap to govern your software development journey.

## Q5. What Are the Phases of Custom Software Development?

Ans:  it’s imperative to be familiar with the phases associated with the project. This will help you in guiding your team to successful completion. The following outlines the most typical of all phases:

1. The identification of software that is needed/required by a target audience
2. The analysis of the requirements associated with the software
3. The specifications of the software
4. The design of the actual program
5. The programming involved to create the custom software
6. Test and quality assurance associated with the completed product
7. Standard maintenance required to keep the software up-to-date

## Q6. What do I Need to Know about the Software Development Method?

Ans: When creating custom software, you should learn as much as possible about the [software development method](https://toggl.com/developer-methods-infographic). Essentially, this method is the process model, the guidelines associated with development, and the development of the systems designed to run the software. Examples of steps that should be taken with this method include the interviewing of support personnel and the members of your target audience, proposals for improvement with the [software development process](https://en.wikipedia.org/wiki/Software_development_process), plans relating to the development, installation and utilization of the custom software

## Q7. What are the Life Cycle Models of Software Development?

Ans: There are numerous [life cycle models](https://en.wikipedia.org/wiki/Systems_development_life_cycle) that may be utilized during software development. These include the waterfall model, the rapid application development, joint application development, prototyping model, the synchronize and stabilize model, and the spiral model. It is critical that you learn about each of these models and utilize them during the creation process of your custom software.

## Q8. What is the Most Appropriate Programming Language for my Custom Software Project?

Ans: There are various programming languages that may be utilized in [software development](https://www.synotive.com/software-development). These include Perl, Visual Basic, Java, C++, Python, Tcl, and C. You must research all languages and their role as it pertains to the functionality and features of your software program. Depending on your software requirements and the recommendations of your software development partner, you may then elect to go for one programming language, or a combination of languages.

## Q9. What Types of Technologies will be Utilized?

Ans: Naturally, when creating custom software, you will use a variety of technologies. The most important factors to consider when opting for certain types of technologies are the types of code used to program the software, the maintenance that will be required to keep the program up-to-date, and the future development of the custom software.

## Q10. What Types of Professionals Will I Need on my Software Development Team?

Ans: Finally, you must consider the type of expertise that will be needed to successfully create your custom software. You should consider the experience of your developers, the code that will be used, and the capabilities of each member of your team.

Software development is a tedious and challenging project. You must know beforehand what you are creating, the tools you will need to create it, and the professionals that will be required to succeed in the process. By carefully considering each question that has been outlined in this comprehensive guide, you will be on the right track to successfully planning your project, executing your plans, and creating a great end product. Remember, custom software development is a means of providing users with tools and resources to address their needs and solve their problems.