**Feasibility Report**

**SURVEY**

1. What does your company do?
2. Who is your target audience?
3. What’s the underlying goal of your website?
4. Do you have the content ready for your site?
5. What is the purpose of clients visiting your website?
6. What would your website need to contain to become successful?
7. What are the keywords you want to focus on?
8. What elements do you consider important on a website?
9. Where exactly did you first hear about us?
10. Did you find the information you were looking for on this page?
11. If you could no longer use this website, what is the ONE thing you’d miss most?
12. How easy was it to complete your purchase?
13. What was the main concern or fear you had before purchasing?
14. What was the main thing that persuaded you to purchase?
15. Where you looking for anything today that you could not find?
16. What could we have done better?
17. Was there anything specifically that made you cancel?
18. What nearly stopped you from becoming a customer?
19. What’s the main reason you are downgrading/canceling?
20. How likely are you to recommend our product...?
21. What should we do to WOW you?

**Feasibility Study**

***Group***

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***The Client***

Muhammad Waseem (Owner of Ar Bakers) muhammadwaseem651@outlook.com

***The Task To Be Undertaken***

The project is to develop an interactive web based application to market the complete range of bakery and dairy products made up of pure and hygienic raw material. The interactive web application would allow user to search and order online through our website.

This feasibility study is for a Web-based application to share assessment results, resources, and methodologies on academic credential assessments. This study aims to paint a clear enough image of the potential challenges and benefits of the project so stakeholders are able to make a decision about the next steps.

***Deliverables***

1. Requirements Analysis – a document and a presentation to go over the formal requirements of the project, both functional and non-functional. 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 that were mis-communicated or missed out before allowing the Group to proceed further 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 in the previous deliverable.

3. Source Code – a document, presentation along with the source code of the final completed project. This final deliverable wraps up and concludes the project. In this deliverable, the Group delivers the final implementation based on the requirements specified and the design developed in previous stages. The system would have been tested thoroughly with unit tests and with a final acceptance test and would be ready for deployment to the production system.

4. A database with the required tables to support the inventory system—a database needs to be set up on the bakery servers with the tables needed in the system to store the inventory information.

5. An administrative interface to add, modify, delete and search for inventory—a webpage designed to allow the administrator of the system to add information to the inventory system for every product that is found in the bakery and to build up an electronic record of the resources that are found in the bakery.

***Process to be Followed***

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 not likely change in a short timeframe, and given that this is a production 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***

# **Milestone 1 (17 August, 2020)**

**Requirements Analysis (draft).** An initial draft of the requirements analysis should be done as Milestone 1. This should come after a formal requirements gathering meeting with the Client

# **Milestone 2 (24 August, 2020)**

**Requirements Analysis (final).** The final draft of the requirements analysis should be done for Milestone 2. In addition, a presentation will be prepared as a part of this milestone.

# **Milestone 3 (8 September, 2020)**

**Software Architecture and Design (draft).** An initial draft of the software architecture and design should be done as Milestone 3. A meeting with the Client should follow Milestone 3 to get feedback on the design of the system.

# **Milestone 4 (21 September, 2020)**

**Software Architecture and Design (final).** A final draft of the software architecture and design document should be done for Milestone 4. A presentation should be prepared for the Client.

# **Milestone 5 (28 September, 2020)**

**Database.** The database is the most important part of the system, as it is the center of all information. All subsequent system components depends on this deliverable. A database schema needs to be fixed for Milestone 5 to provide a basis for the other components to be based on.

# **Milestone 6 (5 October, 2020)**

**Inventory Control.** As the menu of cartographic information needs to be published using information in the database, the next bottleneck is the inventory control, which is a graphical interface to allow the administrator to enter, modify, and delete data.

# **Milestone 7 (12 October, 2020)**

**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 production system for this milestone.

# **Milestone 8 (20 October, 2020)**

**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 . 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-sync and to minimize any miscommunication in the requirements.

Internal – The Group will meet weekly on Wednesday evenings from 7:30 pm to 9:00 pm 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. 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***

The business considerations include such items as:

• Stakeholder openness to sharing proprietary information;

• Legislative concerns, including privacy, validity of data from outside jurisdictions, and liability issues;

• Financial considerations;

• Development of an oversight model for the system;

• finding an equitable business model that encourages those organizations with significant information to benefit from sharing it;

•Developing a quality assurance process to ensure that the portal remains current, accurate, and viable into the future.

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. We understand that the use of open-source solutions IS a viable option and that there are not any serious licensing issues to this extent.

***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.

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. Frequent 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 (clicking an area of a map within the boundaries of a country should select that country), a geo-decoding tool is needed. However, at the time of writing of this document, no public/free tools can be found that can do this longitude-latitude pair and country conversion.

Solution: A workaround is proposed that would meet the minimal level of this requirement by defining the borders of the selection area to be a rectangle defined by the maximum and minimum longitude and latitude pairs.

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 the production 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 software and hardware server environment are 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 affect on system architecture and design.

Solution: To resolve this problem, the Group has requested the client to refer the Group to the technical staff working at the library 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 web-technologies.

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

***Technical Requirements***

1. **Server** – The system is going to be running on a server in Olin Library. The Group is currently working on a contact to find out exactly who would be in charge of this server. If nothing else, the Group could definitely be given a test server in Mann to test the development code on. Most of the libraries servers are Linux servers.
2. **Database** – The current library catalog system is hosted on an Oracle database. The Group will have access to this database, and permission to add tables as needed for the inventory control system.
3. **Web** – The system will need to be integrated with the current library web page, which uses common web technologies. The library staff is flexible about loading on new technologies if needed.