**A community forum to provide covid 19 support**

**1.0 Introduction**

Covid 19 has left no body in its destructive path the same again especially impacting on the way we socialize with one another. The way we used to interact has changed and it’s for the good of our health. However as we seem to be fighting one disease other concerns have crept up due to our laser focused attention on covid 19, which has left the average citizen vulnerable to various threats to their well being. This is where my study seeks to provide a solution, a solution that is developing a community forum for my community where they would socialize virtually for the sake of supporting each other through covid 19 period.

**1.1 Background**

The outbreak of covid 19 has had an unprecedented global impact, with almost no country left untouched. While covid 19 is a health pandemic, the impact on the economy and society’s well being. This is in part because of efforts to limit and contain the spread of covid 19 has led to a slowdown in economic activity and people’s ability to make ends meet. For example, many in Uganda who rely on daily wages are unable to go out and work and many business owners have seen supply chains disrupted and demand dry up.

As a result of the stringent measures on movement of people, those living in the urban centers are at a high risk of starving due to the fact that they depend on daily wages which have been difficult to earn during the pandemic. According to (Godfrey Olukya et al., 2021), Thousands of Ugandans are facing food shortage in cities and towns due to restrictions announced by President Yoweri Kaguta Museveni on June 6. He banned movement from one district to another, as well as movement to city and town centers, leaving all those in suburbs stranded. Nearly 90% of the city and town dwellers in Uganda live in suburbs and slums

Starvation isn’t the only worry people may have to face as accessing medical services has also been negatively impacted by the lockdown measures in place. For example, According to (uganda.unfpa.org) In the 55 districts that are supported by UNFPA, maternal deaths increased by 41.1% in the period January-June 2020 compared to the same period January-June 2019. With the national lockdown entering into force in April 2020, most maternal deaths increments were registered across the first six months of 2020, which coincides with the onset of the COVID-19 crisis

People have come up with various solutions to the problems brought on by covid 19 like: the government and individuals providing food to neighborhoods, the government providing cash reliefs to people and so much more. But within my ability all I can offer is developing a community forum where community members can interact for the purpose of providing covid 19 relief.

**1.2 Problem Statement**

Physical interactions between people need to be limited to virtual platforms as of the current situation and it is through these platforms that people in communities should be able to have their needs addressed especially those brought about by the impact of covid 19.

**1.3 Main Objective**

To develop a community forum where community members shall interact to provide each other covid 19 relief.

**1.4 Objectives**

* Collect data requirements from house hold members and neighbors in the community
* To make designs of the proposed system based on the requirements collected
* To implement the proposed system based on the designs
* Test the system to assess performance
* Deploy the system

**1.5 Scope**

The community members are the population of interest

**1.6 Significance**

**1.6.1 Individuals**

They will have at their disposal a good platform where they can solicit for covid 19 relief among community members and get assistance close to home hence building relationships among community member.

**1.6.2 Community**

By encouraging virtual interaction among community members while limiting physical ones, the spread of covid 19 among people is greatly decreased hence keeping the community healthy and safe. On top of that it will be a good medium for disseminating crucial information to the community members.

**LITERATURE REVIEW**

**2.1 Introduction**

This section presents a critical analysis of community forums plus an evaluation of existing solutions that are in existence to facilitate community members interact over virtual platforms.

According to (TaskUs), a community forum is an online "meeting place" that is used to engage with others to debate share knowledge and communicate with others about a wide range of topics participants are interested in discussing.

These meeting places are increasingly taking place virtually with the increase in the adoption of smart phones and suitable data plans provided by telecom companies in the country. These meeting places are what people call social media. Therefore in this research (MAYA DOLLARHIDE, et al., 2021), Social media is a computer-based technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities

Ugandans have a preference for many social media platforms among them being Twitter, Instagram, WhatsApp, Facebook etc and according to (startcounter, 2021), Twitter and Facebook have been the two most popular social media platforms in Uganda over the past one year. Therefore, these two will be systems we shall review. Not forgetting WhatsApp which is seldom absent on a Smartphone

These three social media platforms are going to be the basis for literature review in the subsequent sections.

**2.2 Related Systems**

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| **Type/name of system** | **Strengths** | **Weaknesses** |
| **Facebook**. It’s is a social networking website where users can post comments, share photographs, and post links to news or other interesting content on the web, chat live, and watch short-form video(Daniel Nation, et al.,2020). Facebook has a added feature called **Facebook groups** which according to (Christina Nixon, et al., 2020), Facebook Groups*are* becoming more and more popular for people with same interests and this is mainlybecause they are a new form of community where people can *‘*connect, share and even collaborate on a given topic or idea*‘* | According to (Christina Nixon, et al., 2020), strengths of Facebook groups include;   * Members can directly add friends to the group * Groups can be about many sensitive topics because of the Privacy Option * As a group admin you can set up a list of questions for the members to answer in order to join, if you want to be more selective with your audience.   In addition to these above;   * Verifies users even further by adding a check besides the username | According to (Christina Nixon, et al., 2020), weaknesses of Facebook groups include;   * They require someone to be active in checking membership requests, content and comment frequently * Once the group is reported and taken down by Facebook all its content disappears.   In addition to the above;   * The Government of Uganda currently has Facebook blocked |
| Lessons from **Facebook** that can be applied in this study:   * I will enable the system Administrators to easily monitor content shared on the platform * Enable users to be further verified and indicate that they are definitely the person they claim to be | | |
| **WhatsApp**. Launched in 2009, WhatsApp is one of the most popular text and voice [messaging apps](https://www.digitaltrends.com/mobile/the-best-encrypted-messaging-apps-for-ios-and-android/). It’s free to use, and you can send messages, make voice calls, and host video chats on both desktop and mobile devices.(Jackie Dove and Paula Beaton, et al., 2021 ) | According to (Riyaz, et al., 2020) these include;   * It shows that your message sent or not and the receiver has received or read the message. * Send to anyone Document files up to **100Mb** such as PDF, Slideshows, etc. * App interface of WhatsApp is very simple and user-friendly, that’s why it is very easy to use. | According to (Riyaz, et al., 2020) these include;   * You need to share your number in case you want to add someone and communicate. * It can be not very pleasant sometimes due to constant messages.   In addition to the above;   * Prone to devastating fake news. * Medium for sharing malicious links |
| Lessons from **WhatsApp** that can be applied in this study:   * Enable users to determine whether their messages were read or not. * Include a user friendly and attractive user interface | | |
| **Twitter.** According to (Paul Gil, et al., 2021), it’s an online news and social networking site where people communicate in short messages called tweets. Tweeting is posting short messages for anyone who follows you on Twitter, with the hope that your words are useful and interesting to someone in your audience. Another description of Twitter and tweeting might be [microblogging](https://www.lifewire.com/what-is-microblogging-3486200). | According to (Shea Laverty), these include;   * Massive Audience Potential * Widely Accessible * Customer Service and Advertisements   In addition to the above;   * Users can resend peoples posts which can expose them to more sets of eyes | According to (Shea Laverty), these include;   * Balancing Post Frequency * Limited Message Size   In addition to the above;   * Widely prone to fake news * Users content can easily not be responded to due not having a big social reach |
| Lessons from **Twitter** that can be applied in this study:   * Enable a feature where a user can repost another users post so it can be seen by more users. * Flag posts as being fake news as soon as possible. | | |

**Methodology**

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| **Specific Objectives of the study** | **Tools and techniques to use to achieve objective** |
| 1. Collect data requirements from house hold members and neighbors in the community | - **Interviews**. An interview is a conversation, usually between two people. But it’s a conversation where one person – interviewer – is seeking responses for a particular purpose from the other person: the interviewee according to (Bill Gillham, 2000, p.1)  -**Surveys.** According to (Fritz Scheruen, 2004, p.9), Today the word “survey” is used most often to describe a method of gathering information from a sample of individuals. |
| 1. To make designs of the proposed system based on the requirements collected | - **Process modeling.** Process modeling is the graphical representation of business processes or workflows. Like a flow chart, individual steps of the process are drawn out so there is an end-to-end overview of the tasks in the process within the context of the business environment. (Claire Vanner, et al., 2020)  - **Data modeling.** Data modeling is viewed as a way of perceiving, organizing and describing data. (H. K. Klein, R. A. Hirschheim, et al.,1987) |
| 1. To implement the proposed system based on the designs | * Use of HTML which is markup language for creating web pages, Laravel framework which supports PHP for designing the server,   MySQL for designing the database, JavaScript for an interactive interface and CSS for styling the web pages |
| 1. Test the system to assess performance | **According to (Navdeep Singh Gill, et al., 2018):**   * **Functionality Testing.** Also known as functional completeness testing. To ensure that the functionality of the product working as per the requirements defined, within the capabilities of the system. * **Usability Testing -** To make sure the user's ease to use the application, flexibility in handling controls and the ability of the system to meet its objectives. |
| 1. Deploy the system | -Deplloy system on heroku or a free web hosting site |

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| **Methodology Items** | **Description** |
| 1. Interviews | * Parents shall be selected for interviews since their senior members in the household |
| 1. Surveys | * Utilize Google surveys and distribute the link around to neighbors for them to fill in the survey. * Distribute survey questions on WhatsApp to people of interest in the community |
| 1. Architectural, logical and physical designs | * Utilize some software to draw designs based on the user requirements gathered. |
| 1. Implement the design | * This will achieved with the help of the following:   According to (Jennifer Niederst Robbins, 2012, p.12-13),   * **HTML**. This is the language used to create web pages. * **CSS**. WhileHTMLis used to describe the content in a web page, it is Cascading Sheet Styles (CSS) that describe how the content should look. * **JavaScript**. It’s a scripting language that is used to add interactivity and behaviors to web pages. * **XAMPP**. It’s one of if not the most popular PHP development framework. According to (apachefriends.org), it’s a completely free, easy to install Apache distribution containing MariaDB and PHP. Both of which we are going to use in the project. * **Laravel**. This is a framework built in PHP for providing Rapid Application Development (RAD) capabilities and according to (laravel.com), it’s a web application framework with expressive, elegant syntax. * **MariaDB**. It’s just like MySQL since they both use SQL to query the database and according to (mariadb.org), its one of the most popular open source relational databases. It’s made by the original developers of MySQL and guaranteed to stay open source. |
| 1. Deploy usability tests | -**Usability** **testing** is going to be conducted by giving the product to the potential users for a test drive in order to get feedback about the system.  - **Functionality testing** will be assessed by running through a checklist containing what the system ought to do and respond when a certain event is trigged. |

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