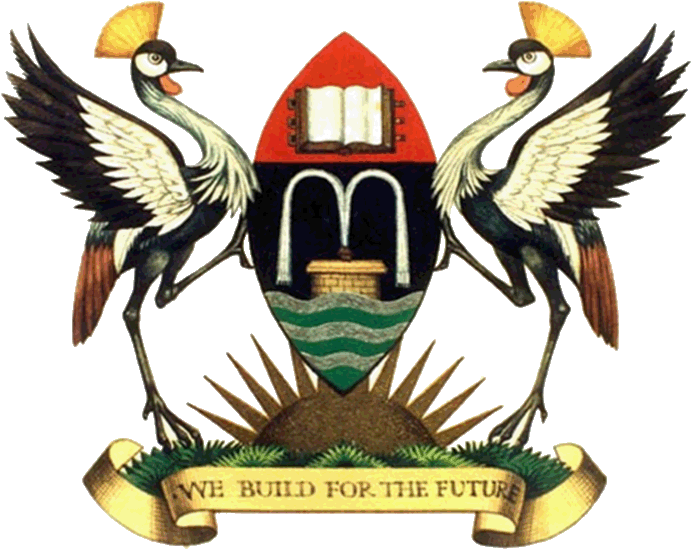
**MAKERERE**  **UNIVERSITY**

**COLLEGE OF COMPUTING AND INFORMATION SCIENCES**

**SCHOOL OF COMPUTING AND INFORMATICS TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE**

**BIT 2207 RESEARCH METHODOLOGY**

**LECTURER: MR. ERNEST MWEBAZE**

**GROUP 1**

|  |  |  |
| --- | --- | --- |
| **NAME** | **REG NO.** | **STUD NO.** |
| SSEBUUMA KIWANUKA DEOGRATIUS | 16/U/21107/PS | 216023047 |
| NYANZI ALLAN | 16/U/997 | 216001149 |

A PROPOSAL ON A WEB BASED APPLICATION “REPAIR MY ‘SHIP.”

* 1. **INTRODUCTION**

As the number of users on the World Wide Web increases every day, its use in different areas is also growing. This project proposal introduces, examines and studies the existence and impact of a web application known as “REPAIR MY ‘SHIP” meant for specifically university students in Uganda. A web application is a program that runs on a computer with a web server, while its users interact with it via a web browser or similar user agent. ’Repair My Ship’ short for ‘Repair My Relationship’ is a forum where users can post about their relationship issues, and others can chime in with advice on how to fix their problems. From the experience of getting help in a community then you know that there are plenty of people willing to donate a few minutes of time to help out. (David 2014)

* 1. **Background to the study**

Web application is an evolved form of a website. The functionality of the exchange of data between the server and browser is the main feature of a web application. This mechanism was implemented to make an online-based system for practical use in people’s lives.

The web application provides abundant information with the help of links it has for example, with intranet, extranet, libraries, database added to the system.

However, in Uganda, most web applications used by students in universities in places like Kampala, Wakiso, Mukono, Mbarara, Gulu, Jinja among others are mainly attached to Network tap that is social media, and basic education purpose. In most of these there is no accounting for one of life’s priorities which is Relationships. One thing that we all can agree on that keeps humanity going, be it romantic or just a friendship according to Sarah(2017). Every now and then a relationship is built and another one is broken and everybody just seem to go on about their lives like nothing has happened until they are in a similar situation. This is the current situation in most of the universities in Uganda where there is apparently lack of an online platform that enables staff members and students to easily provide proper counselling, guidance and advice while maintain anonymity. The ongoing scheme doesn’t give a platform for students to seek help while maintaining their privacy since one has to disclose their identity to get such help from a colleague(s). This has led to problems like enmities, stress coupled with depression which are affect students’ performance according to Shainna(2018).

Repair My ‘Ship is a web application that helps the students to capture, store and share information regarding their relationships as well give a feedback on the given advice from other users on the application.

* 1. **Problem Statement.**

Most students have to approach or consult their colleagues or parents for relationship advice. This system is erroneous and damn according to Mia(2010) because it involves disclosure of one’s identity and limits one to a few sources of advice. Therefore, this project aims at developing an online web application where users can post about their relationship issues, and others can chime in with advice on how to fix their problems. The users can then give feedback on the advice they have tried out, maintaining one’s anonymity at all times.

* 1. **Objectives.**
     1. **Main Objective.**

To develop a web application that can manage students’ relationship issues while maintaining their anonymity.

* + 1. **Specific Objectives**

1. To create a post/comment system for the users.
2. To create an upvote system for both posts and comments.
3. To allow users to post what they actually tried with their significant other and what results ensued.
4. A user account system for those that want to comment or post.
   1. **Scope**

The system is to be used by various people in various places like for example a parent giving some advice to a student, a student asking for advice and commenting on the issue at hand.

* + 1. **Technical Scope**

The main focus is the development of a web application that will ease management of relationship issues specifically to students using the system.

* + 1. **Geographical Scope**

Geographically the proposal considers the development of a web application for all students in Uganda.

* 1. **Significance**

1. The Repair My ‘Ship app will enable users to post their relationship issues on the platform for advice.
2. The Repair My ‘Ship app will provide a Fast access in the process of keeping track of a user’s posts and the comments to aa specific post. It should provide secure record keeping on a secure server with daily data backup.
3. This app will also provide Real time SMS Notification on Customers GSM Mobile phones relating to their activity on the application.
4. **LITERATURE REVIEW**

This chapter mainly presents the literature review which includes types of relationships and their challenges, however also presents information gathered about other related applications, how they function, and the embracement needed to improve the application.

* 1. **Introduction**

In the world relationships have played an important role in humanity according to Mathew(2017). In fact one cannot do without relationships in their lives due to the various roles of maintaining good relationships. However, bad relationships can take a heavy toll on one’s life. Such bad relationships can lead to stress, depression, hatred and crime. Students are most likely to have relationship issues according to Romeo(2018) and if not helped out, this can lead trouble.

Students in Uganda find it hard to approach someone for help especially regarding matters about their personal lives. This often leads to self-confinement as they don’t want others to interfere with their personal space.

* 1. **Types of Relationships include;**

1. **Family Relationships**

**We first learn about loving and caring relationships from our families.** Family is defined as a domestic group of people with some degree of kinship – whether through blood, marriage, or adoption.

These are probably the people you are closest to and with whom you spend the most time. **Having healthy relationships with your family members is both important and difficult**.

1. **Friendships**

Everyone needs friends, and you probably have always had at least one. A friend is defined as a person you know well and regard with affection, trust and respect.

Chances are, one will also start to spend more time with your friends, and maybe talk on the phone more**. Changes in relationships are natural but not always easy.**

1. **Casual Relationships**

Casual relationships are formed with people you encounter every day. Anyone who is not a friend, romantic relationship, or family member. For example, one person maybe a teacher or some new guy or girl you don’t know yet.

All **relationships start with a casual relationship**. An unhealthy casual relationship without mutual respect will lead to a friendship or an intimate relationship **without respect**. The precedents that you set at the beginning of a casual relationship do not disappear.

**According to Bethany(2011**)

1. **Romantic Relationships**

An intimate relationshipalsoknown as a romantic relationship is an interpersonal relationship that involves physical and/or emotional **i**ntimac**y**. Physical intimacy is characterized by friendship, platonic love, romantic love, or sexual activity. ... Humans have a general desire to belong and to love, which is usually satisfied within an intima**te** relationship.

* 1. **Related applications**
     1. **Date ‘em or Dump ‘em:**

This application gives you advice from five different gurus; nerd, jock, cheerleader, theater boy, and cupid. Enter a few questions about your current crush or the couple of boys that are on your roster and you’ll get a fortune and some advice on your best next step. It’s just as reliable as shaking a magic 8 ball, but with better commentary.

**Weakness:**

* + At a price of $1 the application offers tool little.
  + One can get advice from only five people
  + Its limited to only romantic relationships.
    1. **Mindsail:**

Mindsail is a great app for those times you could use a mental pick-me-up. It offers a wide range of resources, from learning how to manage your emotions better to breaking old relationship patterns and habits. Whether you need help coping with anxiety or sleep issues, Mindsail can help! With the app, you'll get instant access to expert advice on the topic you're seeking. With Mindsail Programs, you can listen to mini coaching sessions and learn coping techniques, like breathing exercises. Mood boosts, too, can, as the title implies, help boost your mood, from helping you get more calm before a big meeting to giving you an extra boost of confidence.

**Weakness:**

* + - **It comes at a price ($.99 for each program)**
    - **It is limited to control of mood swings.**
    1. **Relationup:**

With Relationup, all you have to do is submit a question on their contact page, and one of their experts will reply within 48 hours. If you go to their website, you'll see that people ask for advice on all kinds of relationship topics, such as "Should I confront my date about her embarrassing behavior?"

**Weakness:**

* + - **There is no anonymity.**
    1. **Mend:**

Mend, the app that'll help you cope with a breakup. The self-care app will help you through your heartbreak day-by-day, and who couldn't benefit from that?! First, you can have a 28-day free trial via their Heartbreak Cleanse. You check in daily and then listen to a short audio recording, which will include you journaling.

You can also access advice, stories, and interviews to help you along the way. After the 28-day cleanse, you advance to the next phase, if you will, aka their Moving On program. This includes three trainings a day and will help you get to know \*you\* again. After those initial free 28 days, you can choose from a few payment options.

**Weakness:**

* + - **It is limited to breakups**
    - **It comes at a price of $9.99 per month**
    - **It is limited to IOS devices.**
  1. **Comparison with Related Applications.**

Table: Comparisons for the Related Systems.

|  |  |  |
| --- | --- | --- |
| Application | Strengths | weaknesses |
| Repair My ‘Ship | * Free of charge (cheap) * Web based hence its easily accessed on all devices * Anonymity is guaranteed * Wide source of advice | * Susceptible to attack * Limited expert knowledge or advice |
| ****Date ‘em or Dump ‘em:**** | * Expert advice is guaranteed * It’s cheaper | * At a price of $1 the application offers tool little. * One can get advice from only five people * Its limited to only romantic relationships |
| Mindsail | * It offers a wide range of expert advice * Its web based hence easily accessed on all devices | * **It comes at a price ($.99 for each program)** * **It is limited to control of mood swings** |
| Mend | * It offers expert knowledge and analysis * It tracks one’s performance | * **It is limited to breakups** * **It comes at a price of $9.99 per month** * **It is limited to IOS devices.** |
| Relationup | * Its free * Its web based * Offers expert advice * Offers a wide source of advice | * **There is no anonymity.** |

* 1. **Summary.**

Summary, the table above can describe some of the related existing web applications and how they differ compared to the Repair My ‘Ship application.

* 1. **Conclusion**

This section mainly described the literature review which includes relationship challenges however also information was gathered about other related web applications how they function, and the enhancements needed to improve application.

1. **RESEARCH METHODOLOGY**
   1. **Introduction**

The methodology focuses on the patterns of research, approaches to data collection, techniques for analysis and tools that will be used for designing and implementation of the application. The methodology shows approaches used to finish the project and methods to be used for data collection.

* 1. **System Study and Analysis**

In this project fact finding techniques will be used in order to determine the application and user requirements as well as the application inputs and outputs. This will greatly determine what the application is expected to do and these include:

* 1. **Data Collection Techniques and Methods**

**Table indicating techniques and methods used to achieve the desired objectives:**

|  |  |
| --- | --- |
| Objective | How to achieve the objective |
| To study the current ways in which students get relationship advice. | * I expect to use questionnaire guides to be filled in by students who usually require relationship advice. * I expect to use the interviews to interact with the students. * I will also use the observation technique to notice how students get relationship advice. * I will also use existing literature like journals, books and the web to know more about the relationships at the different campuses. |
| To design a web application that allows students to post relationship issues and also allow parents and students to chime in with advice and feedback. | * Process Modelling will be achieved by use of Data Flow Diagrams to show processes and external entities in the system and the end product. * Data Modelling will be achieved using Entity-Relationship Diagrams that show the data requirements and model * Languages such as HTML used for tagging files, PHP used for web scripts as a programming language and MySQL used for adding, accessing and processing data will be used. |
| To test and validate the Repair My ‘Ship application to check for any errors and to see whether it meets the user requirements | * Testing will be carried out using different web browsers forexample Google Chrome, Safari, Internet Explorer... in order to be sure about its compatibility. * End user representatives will carry out the validation by trying out the application so as to verify that it meets the intended user requirements. |

* 1. **Data Analysis Methods**

Spreadsheet software will be used to analyze and capture records(data) from students so as to know what relationship issues are to be addressed in order to save time and maintain their anonymity, security but also to keep track of students activity on the application.

* 1. **System Analysis and Design**

The analysis and design of the application system will be carried out to clearly identify the inputs, the processes that transform the inputs into outputs while satisfying the application system constraints. Data flow diagrams and entity relationship diagrams will be used to demonstrate the processes of data transfer in the system as well as the relationship among entities in the application system respectively.

* + 1. **System Analysis**

System analysis is the process of identifying and summarizing data with the intention to extracting useful information and develop conclusions. The requirements in system analysis included functional and non-functional based on the system study.

**Functional.**

**Administration Module**

Repair My ‘Ship application is aimed to include an easy-to-use browser-interface to perform user account management related tasks.

This module will enable students(users) to manage their information along with their privileges and access rights. Users will further manage posts, configure rules and generate feedback. Another key activity that will be performed with the application is managing the content online and otherwise.

**Non-functional**

Synchronization of data with the web server is the non-functional attribute the application will perform.

* + 1. **System Design**

**Process Modelling:** This will be achieved by use of Data Flow Diagrams to show processes and external entities in the application system and the end product will be a detailed description of processes involved (process models). The information will be used in building the Data Flow Diagram.

**Data Modelling:** This will also be achieved using Entity-Relationship Diagrams that show the data requirements and model. This will lead to the structure of relations in the relational schema (database).

* 1. **System Implementation**

System implementation includes the physical realization of the database and the application design where by both the database and the application programs will be implemented. It will be achieved by the Data Definition Language(DDL) of the selected Database Management System (DBMS).

* 1. **System Testing and Validation**
     1. **Testing**

This process requires the execution of the application program with an intention of finding errors and observing its behaviors as expected. If faults are found, then they will be corrected and the whole process will be repeated until the system works to its expectation in order to satisfy the users’ specification and performance requirements.

1. Testing how the system performs its work, efficiency, disk space and its throughput to ensure proper functioning of the system.
2. Testing will be carried out using different operating web browsers for example Google Chrome, Internet Explorer, Safari… in order to be sure about its compatibility.
3. Testing for security issues so as to avoid remote attacks and unwanted authentication procedures.
   * 1. **Validation**

Repair My ‘Ship application’s validation will ensure that the application meets the intended purpose and needs of the users. Validation will be carried out to check whether the application meets the identified user functional and non-functional requirements.

End user representatives will also carry out the validation by trying out the application so as to verify that it meets the intended user requirements.

* 1. **Conclusion**

In summary, this section describes the methodologies that will be used for the different patterns of research, approaches to data collection, techniques for analysis and tools that will be used for designing and implementing the application.

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