LAB 1-Team Silver Descriptive Paper

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Version 4
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Introduction

1.1 Problem Statement

The lack of student involvement and engagement in campus communities, events and organizations can negatively impact academic performance. According to, college atlas 30% of college freshmen drop out after their first year of college. Entry-level and transfer students find it difficult in achieve success and struggle in their chosen programs. The problem begins from not being inform on the resources the student need. This sort of the problem continues to be more common amongst a high school student, for they are not given a chance to leave or to guide themselves. Not only luck of information but also they cannot find every information they need in organized form.

1.2 Problem Characteristics

Students are not aware and informed on most topics before they come to school. Information such as where to find tutors? where to live? with third party housing reviews. Students are unaware of events, resources and organizations on campus and find it difficult to find optimal, safe and affordable living situations on and off campus. Renting a house or apartment, as a new college student, can be daunting. Most of the housing have twelve, six or three-month lease agreement. Most land lords require one-year lease if there is any problem with the house, the tenants have to stay until the lease ends. The other option is to break the lease which it can be potential expense.

Students who are not from Hampton Roads are unaware of local restaurants and entertainment. Students are doing it in an old fashion manner as shown in figure 1.
1.3 Solution Characteristics

NGage as a single platform to get students engaged in the campus community and the outside campus environment. This includes consolidated live feed of all upcoming events. We will post and update live feed instantly so that the user can get any information right away. Students can get information about on and off campus housing opportunities, complete with verified first hand reviews from students. Our specific target audience is college students at ODU.
2. NGage Product Description

2.1 Solution Method

Online engagement maximization helps students on information of all sorts and one part of a downside for that is procrastination. With time spent on social media needlessly delaying other responsibilities. NGage is a web based design with a concept of social media but address specifically to a university student. NGage will be a tool that will combined educational and non-educational information together in their proper category such as clubs on campus, leisure activities, needs academic help, and housing. For an illustration of a complete process flow see figure 2.3 solution flow

Figure 2.3 solution flow
2.2 Goals and Objectives

The main objective of NGage is, with available resources to help students to engage and familiarize themselves with school and outside school environment to pursue their education with success. Starting a new life specially with student status is difficult. NGage will addressed the transition problems and will serve as a bridge by providing resources that the student need. In order to achieve the goals NGage must accomplish several tasks such as create a website to present an information about housing, tutors, leisure and students organization in separate categories. Student can access the site without log-in but if they choose to get an update they should log-in and provide their e-mail address to get instant update. Besides the categories on the web site NGage must have a live feed separate section.

2.3 Key Product Features and Capabilities

To mention a significant feature of NGage, live feed about all the resources that are approved by NGage administrators. Using NGage platform students can log-in and customized their personal live feed. Students can save and get follow up on their searches such as school activities through clubs and organization, housing information, campus events and any update that interest them. By providing email address students can request a particular update from the site. The main thing that NGage is different from the other countless social media platforms is, it included the third party independent reviews about housing and organization and restaurant as well.

Even if NGage try to accommodate a different type of category, it does have its limit. Students cannot use the site to reserve a tutor or register for any organization or to rent a house. NGage also does not deal with any type of fees with its users in this case the students.
2.4 Major Components (Hardware/Software)

The major components of NGage are, Website, Database server, Social media API, and internet accessed device. As mentioned in Figure 2.4 it required web enabled device for the user to access the site. The second one is website; it is written in AngularJS. The third major component, database, NGage use MySQL to store user account information, requested update, third party reviews, and pictures. Last but not list social media API with interface for viewing, posting on the news feed, account maintain and apartment listing.

![Figure 2.4 Major Functional Component Diagram](image)

3 Identification of Case Study
3.1 User

The target customer base includes students, faculty and residents of Norfolk. Student organizations, Landlords, restaurants and any other companies can also use NGage.

3.2 Reason for visiting site

Students visit NGage for a couple of reason. The first one is to get an information by visiting the site and the other one is to provide their information to gain an account with NGage. When the students browse to look for an information they need they also can see the live feed. That way they will have more knowledge about the student’s organization, events, and housing. The other reason is they visit the site to create an account and provide they email address to get instant message on their choice of interest.

3.3 Future

NGage is based on the O.D.U area in the future all types of student will be accommodated. NGage will help transfer students to make their own decisions by providing an information they need around and within the school. For the future NGage will try to accommodate the students prior to their arrival, for early preparation purpose high school graduates can also use NGage before they graduate from high school. NGage will Plan to reach all type of group and accommodate more than students specially on the residential area and recreational or shopping. Parents can get instant notification and update so they can be more active on their children’s college life.
4. NGage Product Prototype Description

The NGage Web Application Prototype will serve as a glance view of the finished product to give a sense of direction on how the NGage will look like and what it does.

4.1 Prototype Architecture (Hardware/Software)

The prototype is going to be hosted on an Ubuntu 16.04 Web server, written in Angular, and will utilize a MySQL database to store user account information, status updates, events, and apartment-listings. Any computer with Internet access and a web browser can access NGage. The NGage prototype will be partially functional, it does not include the features of Organizers can manage their own page, registered user can join organizations and R.S.V.P for events, and student’s comments and direct messaging. As shown in the figure 4.1 below the components are described in the major fully functional, partial, and eliminated component with the comparison with the real world product and prototype version.
<table>
<thead>
<tr>
<th>Fully Functional Components</th>
<th>Prototype</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students can search information on Organizations and grocery stores,</td>
<td>• Guests can use the site,</td>
</tr>
<tr>
<td>• Students can create user accounts to save their preferences and searches</td>
<td>• Search Information and get updates about housing on campus and near to campus,</td>
</tr>
<tr>
<td>• Organizer can manage their own Page on the site if they choose</td>
<td>• Tutoring hours will be posted for each department,</td>
</tr>
<tr>
<td>• Users can post comments about their personal experience with an apartment, house, or dorm</td>
<td>• A list of all clubs and organizations will be displayed with current contact information,</td>
</tr>
<tr>
<td>• Registered user can join Organizations and R.S.V.P for events</td>
<td>• Students can use the “contact us” feature to request information or sign up for email,</td>
</tr>
<tr>
<td>• Administrator can upgrade a registered user to an organizer</td>
<td>• Organizer can use “contact us” feature to update,</td>
</tr>
<tr>
<td></td>
<td>• Campus events will be posted in the live feed,</td>
</tr>
<tr>
<td></td>
<td>• Live feed can be filtered by category</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partially Functional Components</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Food, attractions and housing can be looked up on a map, students can copy and paste address into another service to get directions.</td>
<td>• Students can view a list of current clubs and organizations,</td>
</tr>
<tr>
<td></td>
<td>• Organizers can use the “contact us” form to send information they would like to see added pertaining to a club or organization,</td>
</tr>
<tr>
<td></td>
<td>• Comments may be posted for housing only through the “contact us” feature,</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eliminated Components</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students Direct Messaging</td>
<td>• Organizers can manage their own page,</td>
</tr>
<tr>
<td>• Realtors may post listings</td>
<td>• Students comments and direct messaging,</td>
</tr>
<tr>
<td></td>
<td>• Registered user can join Organizations and R.S.V.P for events</td>
</tr>
</tbody>
</table>

*Figure 4, Prototype vs Real World Product Comparison*
4.3 Prototype Development Challenges

Prototype development challenges can occur based on multiple factors such as design partitioning, performance accuracy and re-usability. Without good design practices and reference designs, it is difficult to achieve the target performance in an initial implementation. The ability to reuse a prototype (or even part of one) can save development time and lower implementation risk for future iteration. The work breakdown structure chart is showing the order flow of NGage prototype.

*Figure 4 Work Breakdown Structure*
4.4 Risk Mitigation

Coding Software is a combination of several tasks. It calls for similar unique requirements as other businesses, but is also technical in an exclusive way that is different from other models. A successful software project is the result of excellent coding skills that most people on a team cannot understand the entire code. Also proper management, planning and cooperation are needed. To reach the goal of a software project, you must identify areas where inefficient parts of the process are occurring; these are sometimes significant and technical. Effectiveness of the product can depend on different aspect. Missing target or lack of promoting the product can be a major contributor to the problem.

![Risk Matrix](image)

*Fig 4.4 Risk matrix*
5. Glossary

**Alert (email/text):** Alert messaging (or alert notification) is machine-to-person communication that is important or time sensitive. An alert may be a calendar reminder or a notification of a new message.

**AngularJS:** A JavaScript-based open-source front-end web application framework maintained by Google.

**Cookie:** (also called HTTP cookie, web cookie, Internet cookie, or browser cookie) a small piece of data sent from a website and stored on the user's computer by the user's web browser while the user is browsing.

**Git:** version control system for tracking changes in computer files and coordinating work on those files among multiple people.

**GitLab:** web-based git repository manager the includes wiki and issue tracking features.

**Gradle:** an open-source build automation system that was designed for multi-project builds.

**JavaScript:** a programming language commonly used in web development where the code is processed by the client’s browser.

**MySQL:** an open source multi-user database management system.

**ODU:** Abbreviation for Old Dominion University

**Platform:** an integrated set of packaged and custom applications tied together with middleware.
RSVP: a process for a response from the invited person or people

Student involvement: the amount of physical energy students exert and the amount of psychological energy they put into their college experience.

Ubuntu: open-source Linux operating system.

Virtual machines: an emulation of a computer system that provide functionality of a physical computer.

Web Application: a client server computer program in which the client (including the user interface and client-side logic) runs in a web browser.

Wiki: a website on which users collaboratively modify content and structure directly from the web browser.
6. References


“Interview with Dan Zimmerman” March 17 2017


Office of Institutional Research