

Strathmore
UNIVERSITY

APPLICATION PROPOSAL

By Integrated Development Consultants Ltd.

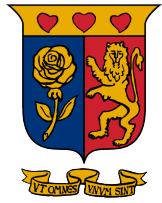


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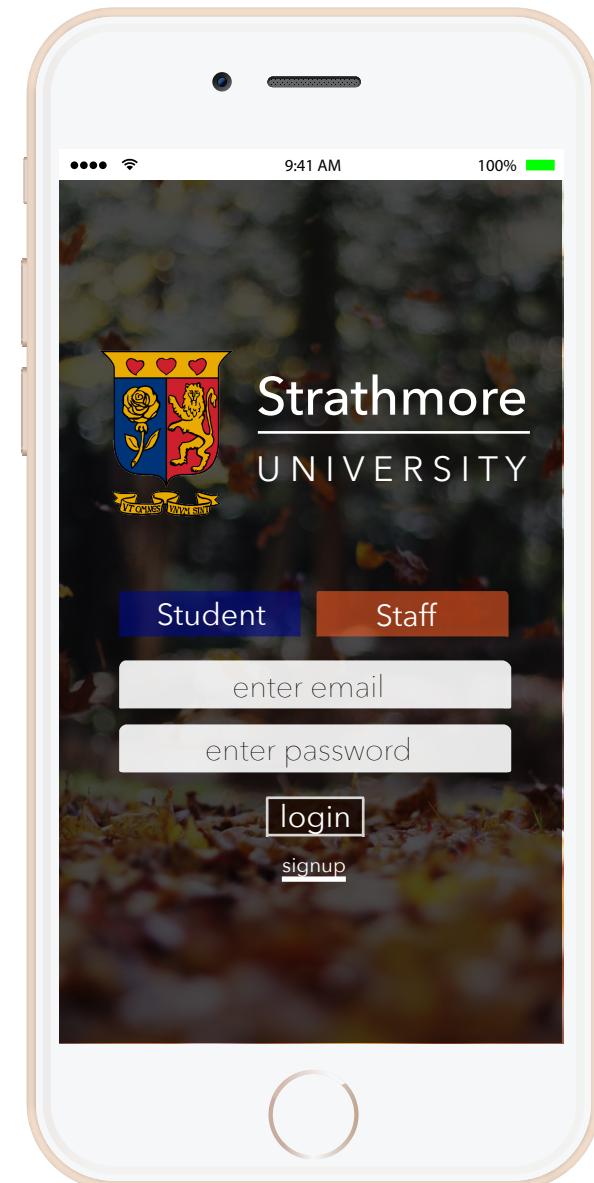


Concept Shots

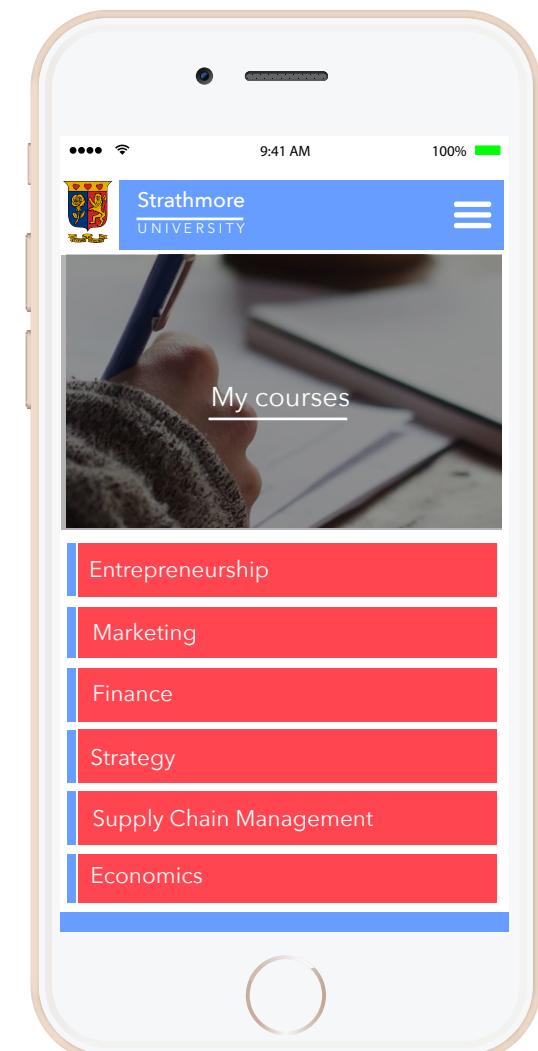
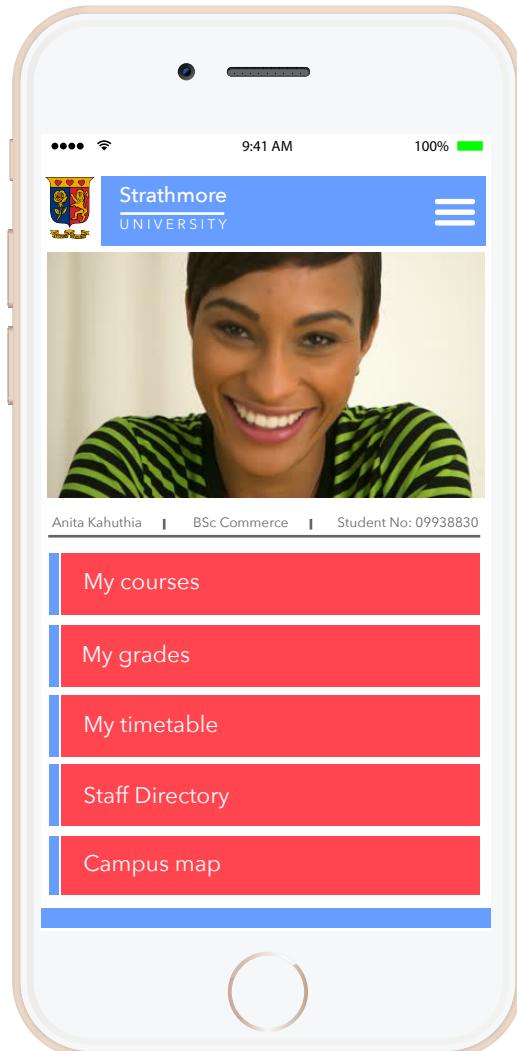


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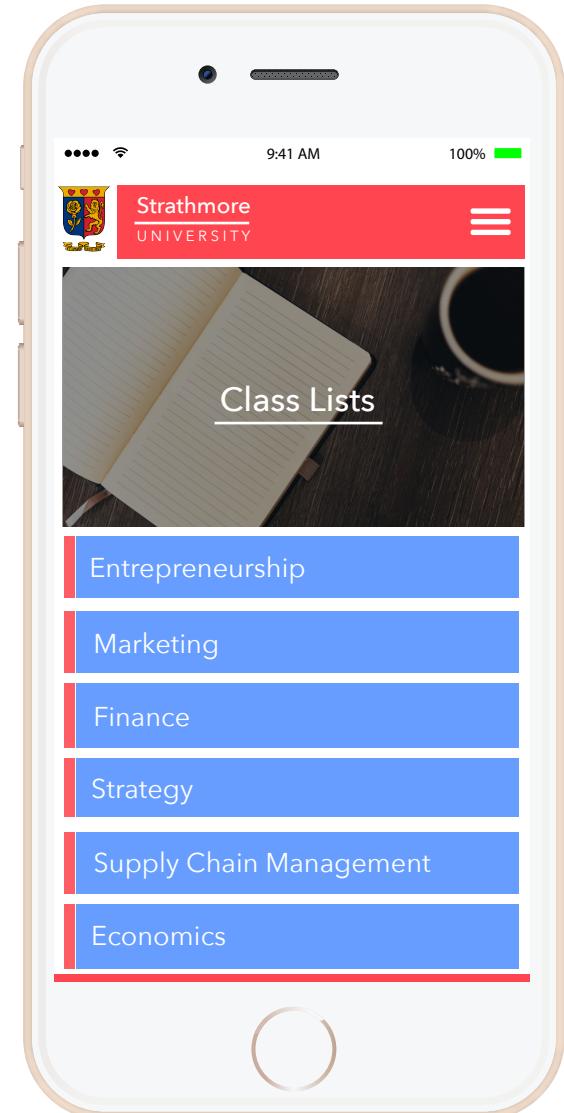
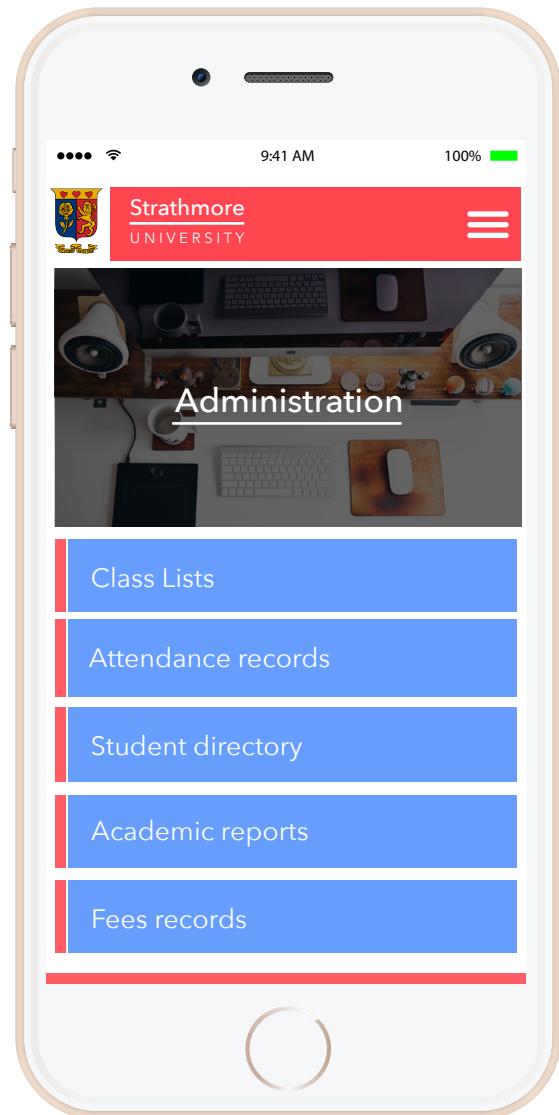
THE HOMEPAGE

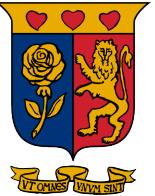


Concept Shots



Concept Shots





Introduction

We'd like to formally express interest in building an information retrieval mobile application for Strathmore University.

Situational Analysis

As it stands, Strathmore University's data is stored and accessed through a platform known as AMS. AMS is a robust database of information with a diverse set of functions. AMS's multifaceted functionality is essential for certain use cases (e.g. entering fee data). However, for users looking to conduct simpler tasks (e.g. checking attendance records), AMS proves to be too bulky and therefore delivers a suboptimal user experience.

The concept

The Strathmore University application's core purpose will be to create a simple and user friendly information retrieval experience for three primary groups of users:

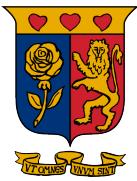
- Students
- Administrators
- Lecturers.

The app will resemble a lighter, read only version of AMS in that it will provide users with access to pre-specified repositories of information. For example, students will be able to use the application to check their lecture timetables or attendance records.

We will adopt a user centered design approach in the application's design and development process. This means that every stage of the project will be informed by the end user's needs and requirements. Aesthetically, the application will be designed in accordance with contemporary design practices. The design will be clean and minimalistic, therefore creating a pleasant and uncluttered user experience throughout.

In addition the application will be designed in accordance with the University's core brand colours and theme, therefore allowing for a seamless extension between it and Strathmore's digital brand.





DESIGN METHODOLOGY

Our Design approach

The project's initial phase will involve a series of user experience (UX) research activities. Conducting these activities will enable us to design an application that is not only functional but tailored to the end users' requirements. Our UX research activities will include:

User interviews

We will hold brief open ended interview sessions with students, lecturers, and administrators. The interviews will enable us to ascertain each user group's needs, problems, and current patterns of usage.

User stories

We will use the information gained from interviews to develop user stories for each group. A user story is a narrative based on a fictitious individual that details their character, behavioural traits, and application usage scenarios.

The user stories developed will be shared with the Strathmore University stakeholders to ensure accuracy in our depiction of user needs. The user stories will form a foundation for the application's features and interface.

Prototypes

Our pre-development prototypes will be based on the features derived from the user story exercise. We will use paper and design software (Adobe Illustrator) to design the application's prototypes.

The prototypes will be presented to the Strathmore stakeholders for recommendations and approval before application development.





Implementation approach

We will develop the app using the SCRUM methodology. SCRUM is flexible development approach through which a team makes frequent releases and iterative amendments based on real-time client feedback. SCRUM mitigates the risks of building a broken application whilst ensuring timely delivery.

Web service development

Our process will begin with the development of a webserver. The webserver will act as a gateway between AMS and the application. Our webserver will be restricted to 'readonly' access of the AMS data.

The web service shall be implemented using the Ruby on Rails framework. Our firm knowledge and experience with this framework will help us save on development time and costs. Furthermore Ruby On Rails is open source, popular, and supported by a large number of operating systems. This mitigates potential issues we could experience through cross browser compatibility.

App development

We will create two separate applications for the staff and students. The student app will be accessible through the Internet, whereas the staff app will be accessible through the University's local network. This decision has been made in order to ensure compliance with Strathmore University's current AMS regulations.

The App will be created using HTML5's Ionic framework. We've chosen Ionic because it is a more time-friendly and flexible alternative to a native approach.

TECHNICAL METHODOLOGY

Device support

The app will support iOS6+ and Android 4.0+. Users with older versions will be required to upgrade their operating systems in order to access the application.





Testing

We will run three different types of tests on the system:

Unit testing - these tests will enable us to test each end component of the system's code. Unit tests will be run throughout the system's development to ensure maximum quality.

Integration testing - we will conduct these tests to ascertain the stability of both applications' integration with AMS and the web service.

Acceptance testing - this test will be run at the end of the project. Its purpose will be to ensure that the application satisfies Strathmore University's requirements.

Training & documentation

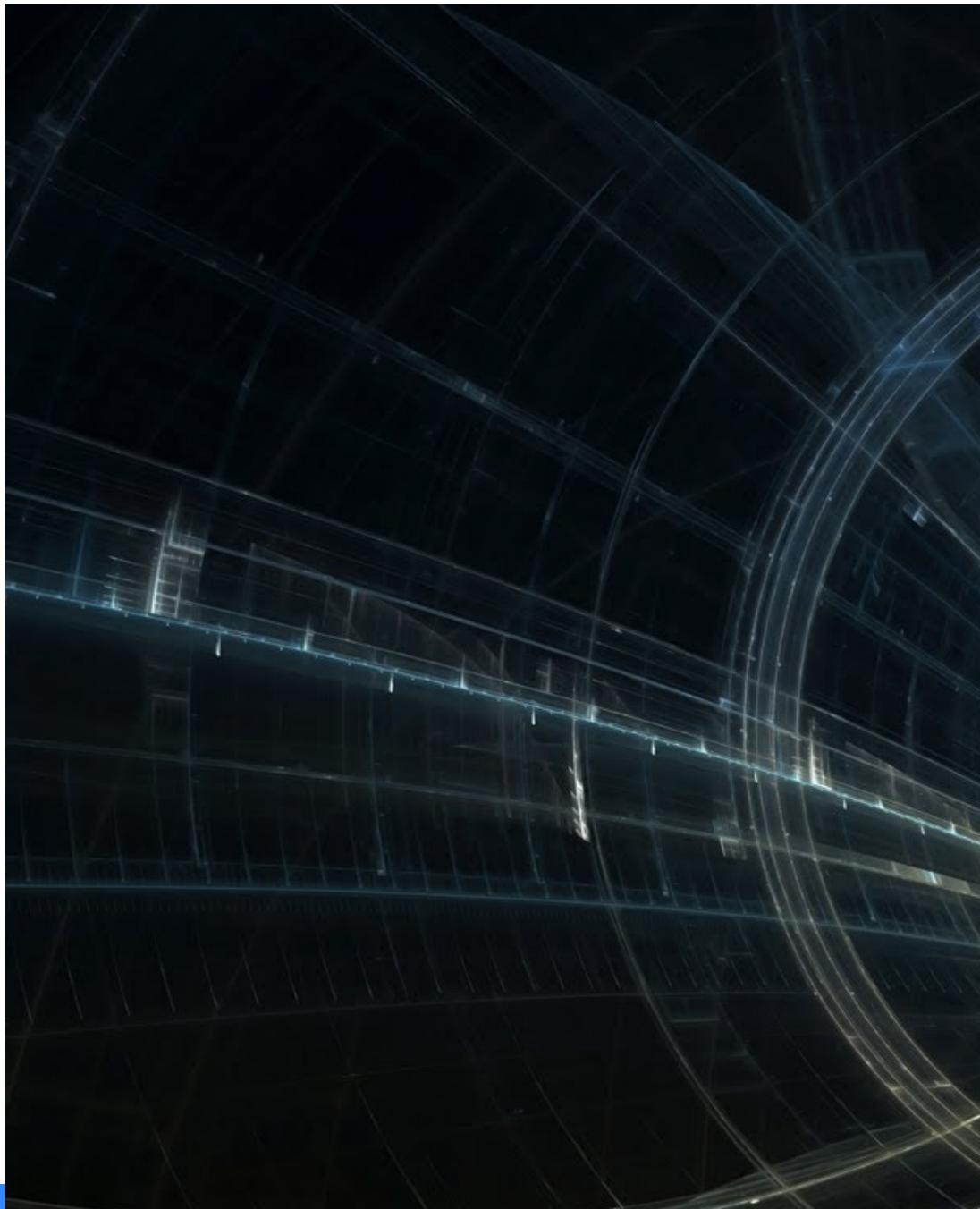
Once the system is deployed, we will offer support to the Strathmore IT department through training and the provision of system documentation. Our training will include:

- How to start and stop the web server
- How to monitor and diagnose the application

The documentation will contain information detailing:

- System architecture
- System specifications
- Maintenance manual
- System screenshots

TECHNICAL METHODOLOGY





STUDENT APPLICATION

The student application will be available on both iOS and Android app stores. It will have the following features:

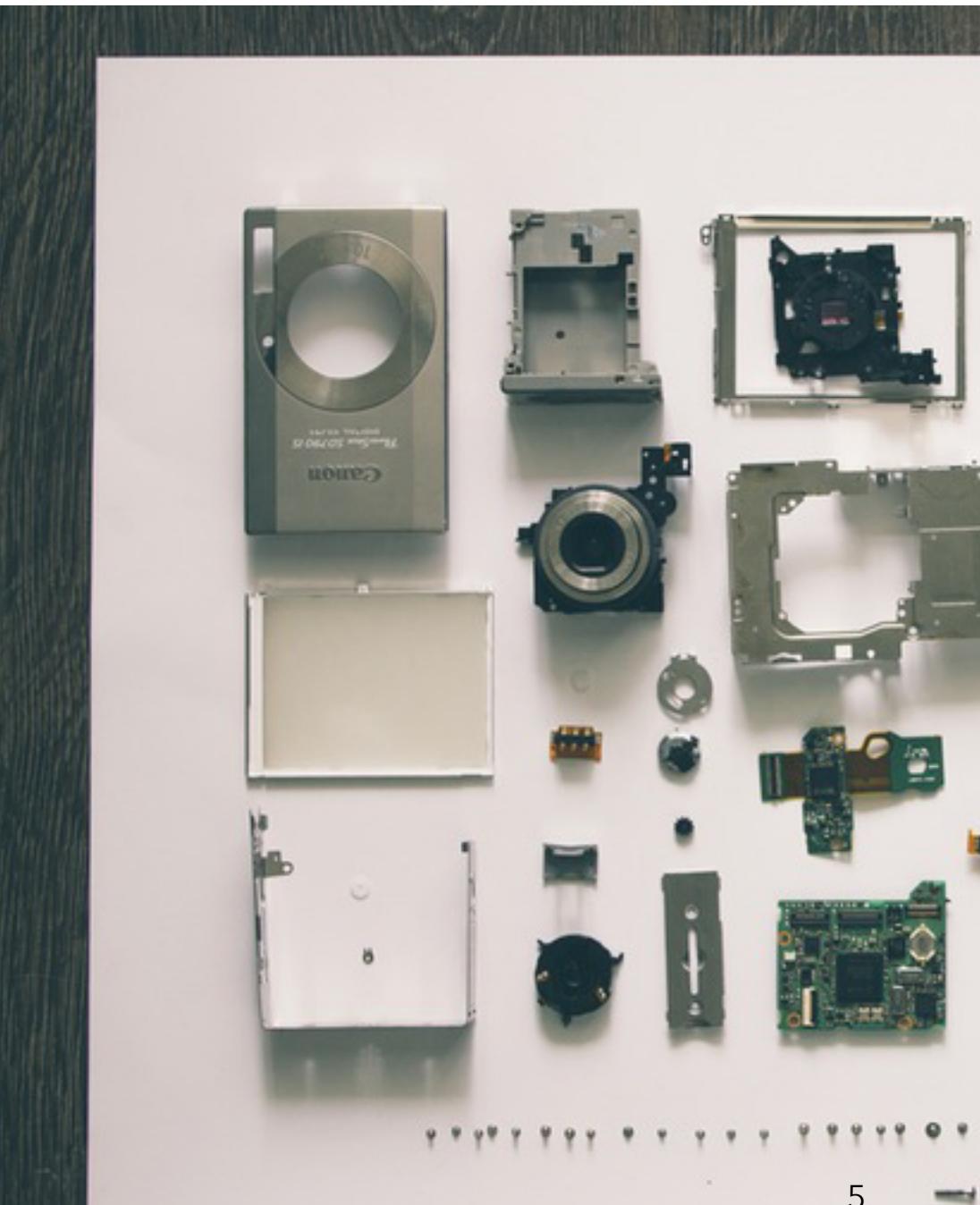
- Student Full Name
- Student picture
- Student ID number
- Campus map
- Staff Directory
- Registered Courses
- Class Timetables
- Grades (current and past)

STAFF APPLICATION

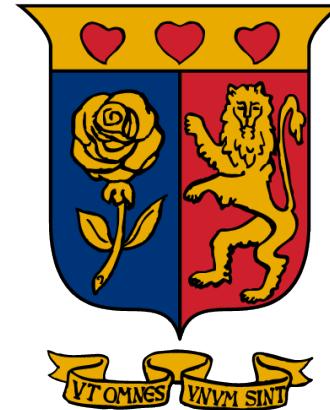
The staff application will cater to lecturers and administrators. In compliance with the University's rules, it will only be accessible through the campus's local network. We will liaise with Strathmore to determine which permissions to grant lecturers and administrators on the application. The staff view will have the following features:

- Class list by year/ Course Registration
- Attendance records
- Student directory (plus access to student profiles)
- Student marks
- Student fee statements

FUNCTIONALITY SPEC.



REGULATORY COMPLIANCE



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The application will be built to comply with Strathmore University's current AMS rules and guidelines. In particular, the application will not give any of its users the ability to edit or change any data within AMS.

We respect the sensitive nature of the data held within AMS. To this extent we will sign an NDA with the Strathmore University IT department restricting us from sharing or altering the data in AMS.



Edwin Maganjo

**BSc Business Management,
MSc Luxury Brand Management.**

Edwin holds an undergraduate degree in business management (University of Birmingham), and a masters degree in Luxury Brand Management (Regent's University London).

He has been deeply involved in the technology space for the past three years. In this time, he has grown his skill set within the areas of: user experience and user interface design, design for branding (e.g. logos), website design, business development, project management, revenue model generation, proposal writing, concept pitching, and desk research. He has experience working in both the London and Nairobi technology scenes.

Experience

- Conducted a branding campaign for Humphrey & Co Advocates which entailed: Letterhead design, Complimentary slip design, and Profile design - 2015
- Designed Pimbl.com a content presentation platform - 2013- 2014.
- Designed Gnibl.com a content sharing platform - 2012-13.
- Developed and deployed Sketch Careers. A company geared towards holding career advice seminars and providing holiday internships for students - 2009.

THE TEAM



Eric Kiilu

Bsc Computer Science.

Eric holds an undergraduate degree in computer science (University of Nairobi).
Eric has 8 years of programming experience.
He has a deep passion in mobile technology and its impact in Kenya and Africa.

Technical Knowledge

Eric has vast experience in the following areas.

- Database Management and Optimization
- Linux System Administration
- Project Management
- System Implementation and Design
- Mobile app development (HTML5 , Android , Windows and ios)

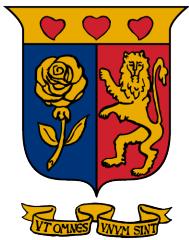
Experience

- Packhouse Manager- Developed and deployed a packing house system for fresh produce exporters and importers.
- Developed wppdf.org - An e-book project in use by more than 5000 sites and growing.
- Fikaa.com (2010) - Developed one of the earlier classifieds sites in kenya.
- Socialautoposting.com - Developed and maintained a social marketing tool for e-commerce merchants.



TASKS & TIMELINE





Task ID	Name	Duration	Start	Finish	Task allocation
1	Business Requirements	3.5 days	7/13/15 8:00 AM	7/16/15 1:00 PM	Development Team;Design
2	Evaluate Existing Processes	1.5 days	7/13/15 8:00 AM	7/14/15 1:00 PM	Development Team;Design
3	Regulatory Compliance	0.5 days	7/13/15 8:00 AM	7/13/15 1:00 PM	Development Team;Design
4	3rd Party interconnects	0.5 days	7/13/15 8:00 AM	7/13/15 1:00 PM	Development Team;Design
5	Evaluate Existing	0.5 days	7/13/15 1:00 PM	7/13/15 5:00 PM	Development Team;Design
6	Evaluate System Workflow	0.5 days	7/14/15 8:00 AM	7/14/15 1:00 PM	Development Team;Design
7	UI Requirements/Designs	2 days	7/14/15 1:00 PM	7/16/15 1:00 PM	Design Team
8	UX research	1 day	7/14/15 1:00 PM	7/15/15 1:00 PM	Design Team
9	Mockups/Prototypes	1 day	7/15/15 1:00 PM	7/16/15 1:00 PM	Design Team
10	Define Specific Technology	1.5 days	7/16/15 1:00 PM	7/17/15 5:00 PM	Development Team
11	Functional Requirements	1.5 days	7/16/15 1:00 PM	7/17/15 5:00 PM	Development Team
12	Process Models	1 day	7/16/15 1:00 PM	7/17/15 1:00 PM	Development Team
13	User Interface	0.5 days	7/17/15 1:00 PM	7/17/15 5:00 PM	Development Team;Design
14	Client Signoff	1 day	7/20/15 8:00 AM	7/20/15 5:00 PM	Strathmore stakeholders
15	Application Development	52 days	7/20/15 8:00 AM	9/29/15 5:00 PM	Development Team
16	Define Andriod features	2 days	7/20/15 8:00 AM	7/21/15 5:00 PM	Development Team
17	Define iOS features	2 days	7/22/15 8:00 AM	7/23/15 5:00 PM	Development Team
18	Define web service features	2 days	7/24/15 8:00 AM	7/27/15 5:00 PM	Development Team
19	Setup Development	3 days	7/28/15 8:00 AM	7/30/15 5:00 PM	Development Team
20	Develop Web Server API	25 days	7/31/15 8:00 AM	9/3/15 5:00 PM	Development Team
21	Develop Android App Version	36 days	7/31/15 8:00 AM	9/18/15 5:00 PM	Development Team
22	Develop ios App Version 1.0	7 days	9/21/15 8:00 AM	9/29/15 5:00 PM	Development Team
23	Testing	12 days	9/30/15 8:00 AM	10/15/15 5:00 PM	Development Team
24	Web Server API Test	1 day	9/30/15 8:00 AM	9/30/15 5:00 PM	Development Team
25	Android App Test	2 days	10/1/15 8:00 AM	10/2/15 5:00 PM	Development Team;Design
26	ios App Test	2 days	10/5/15 8:00 AM	10/6/15 5:00 PM	Development Team;Design
27	Bug Fixes	7 days	10/7/15 8:00 AM	10/15/15 5:00 PM	Development Team
28	Application Deployment	3 days	10/16/15 8:00 AM	10/20/15 5:00 PM	Development Team
29	Web Server Deployment	1.5 days	10/16/15 8:00 AM	10/19/15 1:00 PM	Development Team
30	Database Deployment	2 days	10/16/15 8:00 AM	10/19/15 5:00 PM	Development Team
31	Production Data Migration	1 day	10/16/15 8:00 AM	10/16/15 5:00 PM	Development Team
32	Operation Switch Over	2 days	10/19/15 8:00 AM	10/20/15 5:00 PM	Development Team
33	Training	2.333 days	10/21/15 8:00 AM	10/23/15 10:40 AM	Design Team;Strathmore IT
34	Application Maintaintce	0.333 days	10/21/15 8:00 AM	10/21/15 10:40 AM	Design Team;Strathmore IT
35	User Training	2 days	10/21/15 10:40 AM	10/23/15 10:40 AM	Strathmore Law School



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FINANCIAL PROPOSAL



Estimated Dates

Start date

7/13/15 8:00 AM

End date

10/23/15 10:40 AM

Duration

Scheduled

74.33 days

Remaining

74.33 days

Time (@ 8 hours/day)

Scheduled

944 hours

Remaining

944 hours

Costs (@ \$15/hour) inc. VAT

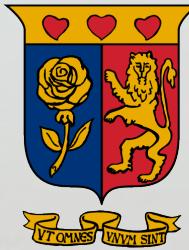
Scheduled

\$15,056.08

Remaining

\$15,056.08





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