



# IS480 Project Proposal

## Accounting Information System (AIS) for SMUSA

### Chocolicious

Ver 1.6  
3 July 2014

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#### Faculty Supervisor:

- Prof Youngsoo KIM

#### Sponsor and/or Clients):

Office of Student Life (OSL)

SMU Students' Association (SMUSA)

- Wong Yew Tong ([ytwong@smu.edu.sg](mailto:ytwong@smu.edu.sg)) - Project Sponsor
- Balakrishnan Jagadesh ([v.president@sa.smu.edu.sg](mailto:v.president@sa.smu.edu.sg)) - Project Requirements

## Project Overview

### 1.1/1.2 Project Description and Motivation

Each year, there are 2 budgeting cycles and currently, club funds are allocated arbitrarily and there is often poor utilization of budgeted funds. This is caused by the fact that there is no unified approach to bookkeeping and the large number of student clubs makes tracking difficult. The current claims process is convoluted and students have found that the process is too long; causing much unhappiness as students often have to fork out their own money which may amount to thousands. There is also no direct way to track the progress of the claim request.

In this project, our team is building a one stop service portal for SMU students. This service portal will serve the accounting purposes of the many student clubs and societies, such as managing their club funds accounts, propose budgets or submit and track claims.

Our proposed system will bring all clubs' accounts together and include tools such as report generation as well as an analytics dashboard. In doing so, SMUSA will be able to more efficiently allocate budgets to the clubs and students will know the status of their claims. The unified approach to bookkeeping will also simplify audit efforts and eliminate current problems like irreconcilable account balances. We aim to eliminate the underutilization of budgeted funds which currently is about \$50,000 each semester. This system will affect all SMU students who are involved in school clubs, especially students with leadership positions.

### 1.3 Stakeholders:

|                  |  |
|------------------|--|
| <b>Sponsor</b>   | Mr Wong Yew Tong, Associate Director (Student Leadership) of the Office of Student Life, SMU |
| <b>Client</b>    | SMUSA  |
| <b>End Users</b> | All finance secretaries in SMU   |

### 1.4 Deliverables:

We will be delivering the web application to SMUSA with full source code and documentation. The web application will be deployed on a deployment server provided by SMUSA.

### 1.5 Scope:

|   |   |
|---|---|
| <b>Electronic bookkeeping</b>             | Users will be able to track all transactions on their expenditure accounts and reserve accounts.  |
| <b>Claims management</b>                  | Depending on user privileges, users will be able to create, edit, submit, approve, reject and endorse claims from their expenditure accounts.<br>Finance secretaries will be able to claim outside their budget if clubs have revenue.<br>All users will be able to track the statuses of their claims.                                     |
| <b>Funds management</b>                   | Finance secretaries will be able to transfer funds from one account to another and will be able to request for withdrawal of funds from the reserves account.<br>They can also deposit funds into their accounts.   |
| <b>Budgeting tool</b>                     | Club finance secretaries will be able to propose and submit budgets during the budgeting cycle. CBD finance secretaries and the SMUSA finance secretary will be able to review, edit and approve the budgets.   |
| <b>Allocation &amp; pullback of funds</b> | The finance secretary of SMUSA will be able to allocate funds into the expenditure accounts of all student clubs at the start of budgeting terms. At the end of budgeting terms, they can initiate the pullback of unutilized budget into the reserve accounts. The formula for pullback can be modified by the finance secretary of SMUSA. |
| <b>Analytics dashboard</b>                | Users with different privileges will be able to generate different kinds of reports such as viewing expenditure patterns by the different clubs or CBDs and expenditure or pullback trends.   |
| <b>Additional features</b>                | Sensitive financial data will be encrypted.   |

## Project Plan

### 1.6 Project milestone:

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| Iteration | Due Date    | Milestone               | Deliverable   |
|-----------|-------------|-------------------------|---|
| 2         | 18 Jun 2014 | Proposal                | Project scope and requirements  |
| 5         | 14 Aug 2014 | Acceptance Presentation | Prototype with basic functionalities  |
| 8         | 25 Sep 2014 | UAT 1                   | Prototype with advanced functionalities: i.e. till pullback                     |
| 9         | 10 Oct 2014 | Mid Term Presentation   | Partially functioning front end of the system with modifications based on UAT 1 |
| 11        | 6 Nov 2014  | UAT 2 -Beta             | Fully functioning system  |
| 12        | 10 Nov 2014 | Poster Day              | Poster  |
| 13        | 22 Nov 2014 | Final Presentation      | Fully functioning system  |

### 1.7 Risks

| Risk  | Explanation   | Risk Mitigation Plan  |
|---|---|---|
| <b>Project Risk</b><br>Minimal knowledge<br><br><b>Probability</b> : 2<br><b>Effect</b> : 2       | Minimal or lack thereof knowledge on <ul style="list-style-type: none"> <li>Languages</li> <li>Frameworks</li> <li>Accounting-related software/tools</li> </ul> | <ul style="list-style-type: none"> <li>Project Manager to allocate time for collaborative learning for the team.</li> <li>Lead Developer to organize meetings to facilitate team learning.</li> <li>Team to speak with SMUSA accountant.</li> </ul> |
| <b>Project Risk</b><br>Incompletion of Tasks<br><br><b>Probability</b> : 1<br><b>Effect</b> : 3   | <b>Reason</b><br>Unable to code out the function<br><b>Implications</b><br>Deviations from project schedule will affect the whole team                          | Project Manager to assign other team members to team member's aid as well as reassess team member's capabilities so as to better assign tasks.  |
| <b>Business Risk</b><br>User-unfriendly system<br><br><b>Probability</b> : 2<br><b>Effect</b> : 3 | <b>Reason</b><br>Non-technical users may find the system user-unfriendly<br><b>Implications</b><br>System will be deemed useless if users reject it             | Business Analyst and Quality Assurance Analyst to ensure that user guide caters to non-technical users.<br><br>Project Manager to arrange meeting with client and personally teach him/her.   |

### 1.8 Resource and reference



|                              |  |                                |  |
|------------------------------|--|--------------------------------|--|
| <b>Project Management</b>    | Asana  | <b>Development Methodology</b> | MVC (Model, View Controller)   |
| <b>Design Tools</b>          | Draw.io  | <b>Web Interface</b>           | Bootstrap 3  |
| <b>Collaboration Tools</b>   | Team Viewer, Google Drive, Dropbox                                     | <b>Java script</b>             | jQuery 2   |
| <b>Prototyping</b>           | Bootply, <a href="http://www.bootply.com/">http://www.bootply.com/</a> | <b>IDE</b>                     | Aptana Studio 3  |
| <b>Server</b>                | Amazon Web Service (AWS)   | <b>Graphing API</b>            | D3.js, <a href="http://d3js.org/">http://d3js.org/</a>   |
| <b>Server Environment</b>    | Linux OS running Ruby on Rails   | <b>Form Validation</b>         | Bootstrap Validator, <a href="http://bootstrapvalidator.com/getting-started/">http://bootstrapvalidator.com/getting-started/</a> |
| <b>Database</b>              | MySQL 5.6.17   | <b>Web Excel Sheet</b>         | Handsontable, <a href="http://handsontable.com/">http://handsontable.com/</a>  |
| <b>Programming Language</b>  | Ruby   | <b>Libraries/Packages</b>      | AWS SDK for Ruby   |
| <b>Development Framework</b> | Ruby on Rails  |                                | Twitter Bootstrap Gem  |

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