Capstone Proposal

# Team Information

|  |  |
| --- | --- |
| Josh Hum (Team Leader) | 9583157 |
| Katrina Anderson | 9106251 |
| Cristian Asenjo | 9280014 |
| Christian Daher | 9599673 |
| Cynthia Donato | 9353852 |
| Mikhail Levkovsky | 9583165 |
| Patrick Modafferi | 9401377 |
| Ryan Nasr | 9605614 |
| Matthew Tam | 9675701 |

# Stakeholder

Dr. Olga Ormandjieva

# Project Description

For our capstone project, we are proposing a web application that could be used by restaurants to provide a higher level of service to their clients using a familiar technology, the cell phone. Our web application would allow users to have a personalized experience from their phones using NFC tag technology. We see this project working in phases as it can be modularized into various components.

First, we will develop the main web application that will be hosted on a server. This web application will allow users to view menus of subscribed restaurants, place orders and request assistance from their waiter/waitress, for example: “I’m ready to pay” or “I would like some water”. The application would also ensure that certain preferences, such as “Please do not make it spicy” or “I’m allergic to shellfish,” will be passed onto the chef when the order is placed.

Second, we will acquire NFC tags and program them to launch a web browser when a cell phone swipes the tag. The tag will then direct the web browser in the customer’s phone to our front end web application and display the appropriate menu for the restaurant which they are dinning at.

Third, we will develop a cell phone application that will communicate with our web application using web services. This will require both the development of a mobile application in either Native language or a cross-platform mobile development framework, such as PhoneGap, Titanium, etc. It will also require writing and securing the web service application, which will allow our mobile application to communicate with our web application’s backend technology.

Fourth, we see a commercial appeal in integrating social networking and media sites into our application. This will allow users to rate meals/restaurants and leave commentary for other clients coming into the restaurant. We can also collect statistics from orders made through the phone and display them alongside the menu such as “Most popular dish this week”.

If time permits, we will look into: implementing payment methods, such as allowing payments though PayPal; allowing customers to make reservations either through the browser or through the mobile application; how existing systems, such as Maître D, can be integrated into our application.

# Chosen Process

For our project we choose to follow the agile development process for the following reasons:

The project that we would like to implement has a defined set of features. These features can be separated into modules that can be developed separately and independently. Thus, if we were unable to finish some features, it would not break the system as a whole. The agile development process allows us to take advantage of this by dividing these modules into sprints.

Not many systems have been developed similarly to ours, thus we are expecting a lot of uncertainty from the stakeholder’s point of view, especially when it comes to the NFC technology which we do not have experience with. Agile development will allow us to mitigate risks and secure requirements from stakeholders.

There is one issue about agile development that we made sure to be aware of. That issue is that some people when working in agile development tend to ignore documentation and high level design; they just get right into coding during the sprint and start implementing the features. We made sure to keep ourselves aware of such pitfalls in order to maintain higher quality in our work.

# Budget

All estimates are for the entire duration of the project (28 weeks)

|  |  |  |  |
| --- | --- | --- | --- |
| Labour Costs Estimate |  | Weeks for Project: | 28 |
| **Employee** | **Hours/Week** | **Salary ($/h)** | **Total Cost** |
| Josh Hum | 27.0 | 40.00 | 30240.00 |
| Mikhail Levkovsky | 22.5 | 27.00 | 17010.00 |
| Katrina Anderson | 22.5 | 27.00 | 17010.00 |
| Cynthia Donato | 22.5 | 27.00 | 17010.00 |
| Patrick Modafferi | 22.5 | 27.00 | 17010.00 |
| Matthew Tam | 22.5 | 27.00 | 17010.00 |
| Cristian Asenjo | 22.5 | 27.00 | 17010.00 |
| Christian Daher | 22.5 | 27.00 | 17010.00 |
| Ryan Nasr | 22.5 | 27.00 | 17010.00 |
|  |  | Projected Labour Cost | 166320.00 |
|  |  | 15% Uncertainty\* | 24948.00 |
|  |  | Total Projected Budget | **191268.00** |

*\*A standard 15% uncertainty factor is taken into account for the costs of this project in order to mitigate risks.*

# Tentative Dates for Interim Reports

Deliverable 1 – October 19, 2012

Deliverable 2 – December 14, 2012

Deliverable 3 – February 22, 2013

Final Report – April 12, 2013