

Request for Proposal – Web-based Application for *CEO Simulation*

Issued by: Junior Achievement of NEPA, Inc.
Wilkes University

Project Description

Junior Achievement of NEPA, Inc. and Wilkes University have received funding from the Wall Street West consortium to create an educational program for secondary students called *CEO Simulation*. This computer-based simulation will allow students working in groups of up to 75 to learn about the business start-up process. The complete project will include several components such as in-school curriculum and promotional materials. The core deliverable will be a web-based application to support a half-day long simulation event at the JA Mericle Family Center for Enterprise Education in Kingston, PA. This RFP is for bids from programming vendors to create the final version of this web-based application in a production development phase.

The project partners are engaged in developing a functioning prototype of the web-based application that will be tested in a program pilot. The prototype and all available documentation and resources will be forwarded to the programming contractor to create a finished version of the product that can be installed on a server at the Mericle Center and elsewhere.

Web-based Application Specifications

The detailed specifications include a list of databases table schemas (Attachment A) and a list of web pages that make up the applications (Attachment B). For each web page the list specifies:

- Variables entered and displayed in the page
- Action links from the page
- What happens when the user enters or leaves the page.

The attached materials are in draft version and are subject to change during the prototype build, pilot, and revision stages.

Prototype Organization

- The prototype will be built in the Zope content management system (www.zope.org) using DTML mark-up tags and Python scripting.
- Content on the *Market Status* page (16) will be included in the layout of most pages. In the prototype this will be accomplished with frames. There are no other pages that are a subset of another page.
- The *Market Page* and the *Cycle News* (17) pages will be programmed to automatically reload every 15 seconds to drive the simulation.
- All other scripts embedded in the prototype will be event driven.

Production Application Environment

- The production version will be installed on a Windows 2003 Server running IIS and MS SQLServer.
- Junior Achievement currently runs two different web-based simulation applications on this server, written as .ASP pages on top of the SQLServer. The production version of the CEP Start-up Simulation may be programmed in another language/server platform.
- The production application will need to serve up to 75 simultaneous users.

Resource List

At the beginning of the production development phase the programming vendor will receive:

- The prototype application – An archived Zope web site w/ DTML tagging; Python server scripts; MySQL database.
- Text files of: web page content, permanent database content.
- Page design and layout files (based on programming vendor's recommendations/specs for page design.)

Deliverables

- Complete web-based simulation including: web pages, database, and server scripts.
- Installation instructions.

Timeline

- Resources to be delivered in the 1st quarter, 2009.
- Deliverables to be delivered in the 2nd quarter, 2009.

Terms

- The project contract must include terms assigning all intellectual property rights for the project deliverables to Junior Achievement of NEPA, Inc. This includes, but is not limited to, rights to make alterations to all parts of the code and rights to re-sell the application code.

RFP Requirements

A complete proposal should include:

- Cost
- Estimated time to complete project in weeks
- Description of proposed technologies (scripting applications, server applications)
- Estimate of cost and resources required for installation and maintenance not covered in the proposed work.

Selection Criteria

Proposals will be judged on the following criteria:

- Cost
- Quality of proposed application development
- Cost and complexity of installation and maintenance.

Deadline

Please respond to this RFP by November 21, 2008.

Contact Information

Please address questions and the final proposal to:

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Attachment A: Database Table Schema

Table	Field	Type
banks	bankId	int
	name	text
	cash	int
	passcode	text
	desc	text
	setupFinished	boolean
investors	invId	int
	name	text
	institutional	boolean
	cash	int
	passcode	text
	desc	text
	setupFinished	boolean
enterprises	entId	int
	entScenario	int
	name	text
	desc	text
	cash	int
	sharesForSale	int
	sharePrice	int
	passcode	text
	setupFinished	boolean
	choiceA	int
	choiceB	int
loans	loanId	int
	bankId	int
	entId	int
	principle	int
	interest	int
shares	shareId	int
	invId	int
	entId	int
	shares	int
trades	seller	int
	buyer	int
	entId	int
	shares	int
	sharePrice	int

payments	paymentId	int
	entId	int
	bankId	int
	payment	int
simulation	timeStart	datetime
	newBankCash	int
	newInvestorCash	int
	cycle	int
messages	messageId	int
	code	text
	message	text

Attachment B: Web Page List

Nbr	Page Name	Action	Enter	What happens
1	Bank Login	login	bankId	1. Jump to Bank menu w/ name onscreen
			passcode	
2	Bank Menu	extend loan		1. display cash
		setup bank		2. display loan items
				3. display loan total
3	Setup Bank	enter	name	1.update name, desc, setupFinished(true) in banks (bankId)
			desc	
4	Extend Loan	enter	entId	1. create record in loans (bankId, entId, principal, interest)
			principal	2. deduct principal from banks.cash (bankId)
			interest	3. add principal to enterprises.cash (entId)
				4. add principal to enterprises.debt (entId)
				5. return to Bank Menu
5	Investor Login	login	invId	1. Jump to Investor menu w/ name onscreen
			passcode	
6	Investor Menu	purchase shares		1. display cash
		setup investor		2. display share items (shares, value (shares x sharePrice))
				3. display share value total
				4. display investor net worth
7	Setup Investor	enter	name	1. update name, desc, setupFinished(true) in investors (invId)
			desc	
8	Purchase Shares	enter	entId	1. create record (shareId, invId, entId, shares)
			shares	2. deduct share value (shares x sharePrice) from investors.cash (invId)
				3. add share value (shares x sharePrice) to enterprises.cash (entId)
				4. deduct shares from enterprises.sharesForSale (entId)
				5. return to Investor Menu
9	Enterprise Login	login	entId	1. Jump to Enterprise menu w/ name on screen
			passcode	
10	Enterprise Menu	setup enterprise		1. display cash
		make loan payment		2. display loan items
				3. display loan total

				4. display net worth
11	Setup Enterprise	enter	name	1. update name, desc, sharesForSale, sharePrice, setupFinished(true) in enterprises(entId)
			desc	
			sharesForSale	
			sharePrice	
12	Choice A	enter	choiceA	1. update enterprises.choiceA (entId)
13	Choice B	enter	choiceB	1. update enterprises.choiceB (entId)
14	Make Loan Payment	enter	bankId	1. create record in payments (entId, bankId, payment)
			payment	
15	Share Trade Page	enter	invId (seller, buyer)	1. deduct shares from seller shares.shares(invId,entId) or trade fails
			passcode (seller, buyer)	2. deduce share value (shares x sharePrice) from buyer investors.cash(invId) or trade fails
			entId	3. add share value (shares x sharePrice) to seller investors.cash(invId)
			shares	4. add shares to shares.shares(invId,entId) or create shares (invId, entId, shares)
			sharePrice	5. create record in trades (intIdx2, entId, shares, sharePrice)
				6. update sharePrice(entId)
16	Market Status	(reloads every 15 seconds)		1. (shown in every page on frame)
				2. display sharePrices
17	Cycle News	(reloads every 15 seconds)		1. script assembles messages into webpage
				2. based on scenario, cycle, and choices
18	Admin Login	login	admin passcode	1. Jump to Admin Menu
19	Admin Menu	reset		1. display bank, investors, enterprises
		begin simulation		2. including cash, loans, shares, sharePrices, worth
		print login pages		
20	Reset	enter	number of banks	1. delete all records in banks, investors, enterprises, loans, shares, payments
			number of institutional investors	2. add number of banks in banks (bank cash) auto-generate passcode
			number of private investors	3. add institutional and private investors (investo.cash) auto-generate passcode
			checklist of scenarios	
			newBankCash	

			newInvestorCash	
21	Begin Simulation	enter		1. enters current time in simulation.timeStart
22	Advance Cycle	enter		1. advances to the next cycle and runs algorithm to update sharePrices
23	Print Login Pages	enter		1. generate print file with Id's and passcodes