1. Objectives

The first project IPRO 329 is working on this semester is a financial-aid educational game, ***CollegePursuit,*** targeted to high-school seniors and their parents. Work on this project started during the Fall 2003 semester and we will be completing the design, development, and testing of this game for submission to a competition. The second project IPRO 329 is working on this semester is a suite of games directed towards elementary school children to teach them fundamental skills.

The specific project objectives our team has determined include:

- Completing CollegePursuit.
- User testing CollegePursuit
- Submitting CollegePursuit to a competition
- Researching content for Elementary Level Gaming Suite
- Producing paper designs for Elementary Level Gaming Suite
- Developing functioning beta version of Elementary Level Gaming Suite
- User-testing Elementary Level Gaming Suite

The development of the CollegePursuit game package is our first objective, but we will be only satisfied if we manage to achieve this objective through a collaborative and engaging learning experience. Our efforts to create such an experience for every team member are as important as the project itself.
Our second objective is the planning and primary development staging of the new project, an Elementary Level Gaming Suite. Everyone will creatively collaborate on ideas for the Elementary Level Gaming Suite and will be heard.

2. Background

IPRO 329 is working on the design, development and roll-out of a financial-aid educational game, titled CollegePursuit, targeted to high-school seniors. The need for such a product has been determined through surveys within the IIT student community and confirmed by the IIT Financial Aid department.

As the costs associated with attending college are consistently increasing, the need for financial aid resources is also increasing. But many students and parents are unaware of all possible financial resources and the procedures for utilizing them. Our game's primary goal is educate high-school students (and their parents) about the problems related to financing a college education and how to solve them.

Most of the design and coding has been completed during the last two semester of our IPRO program. This semester, the team will refine and complete CollegePursuit.

Anticipating the completion of CollegePursuit, IPRO 329 brainstormed new ideas for our next Edutainment game. After reviewing the pros and cons of team member's ideas, the team voted to pursue an Elementary Level Gaming Suite. The elements and logistics relating to the Elementary Level Gaming Suite will be researched and developed during this semester.

3. Methodology

There are a number of approaches to software development, each of which has a set of advantages and disadvantages associated with it. For our projects, we have chosen an approach that we call the *Iterative Prototyping* process model. This model is based on the general *Prototyping Process Model*.

When using the *Prototyping Model*, the developers build a simplified version of the proposed system and present it to potential users for consideration as part of the development process. The users in turn provide feedback to the designers and developers, who go back to refine the system to incorporate the additional information.

The process consists of the following looping steps:

- **Requirements Definition/Collection.** The information collected is usually limited to a subset of the complete system requirements.
- **Design.** Once the initial layer of requirements information is collected, or new information is gathered, it is rapidly integrated into a new or existing design so that it may be folded into the prototype.
- **Prototype Creation/Modification.** The information from the design is rapidly rolled into a prototype. This may mean the creation/modification of paper information, new coding, or modifications to existing coding.
- **User Testing.** The prototype is presented to possible users for review. Comments and suggestions are collected from the users and reported back to the team.
- **Prototype Refinement.** Information collected from the customer is digested and the prototype is refined. The developer revises the prototype to make it more effective and efficient.
- **System Implementation.** In the traditional model, the system is rewritten once requirements are understood. In the *Iterative Prototyping* process, the results of the tests are used to guide the changes to the system. As some parts or phases of the software are implemented, other parts and prototyped and tested.

The process model we use has proven successful to the needs of similar past projects of ours. There are several benefits of this approach:

- Creation of the major user interfaces without any substantive coding in the background gives the users a "feel" for what the system will look like and uses their feedback to refine the system at a very early stage.

The iterative nature of development allows for parallel progress of several tasks – different system features are being designed, tested and implemented at the same time.

4. Expected Results

The results we expect to achieve through this semester are directly derived from our project objectives:

- Final-version of CollegePursuit.
- User-testing report for CollegePursuit
- Uploading CollegePursuit to a server
- Beta Version of Elementary Level Gaming Suite
- User Testing report Elementary Level Gaming Suite

The combined outcome of the above results will be an entertaining and educational financial-aid game, thoroughly user-tested, complete with a user manual and a rollout plan. Along with a complete CollegePursuit, we will have a beta-version of our next Edutainment game, the Elementary Level Gaming Suite.

5. Budget

> **Comment [SF1]:** Let's work on budget next week.

Included below is the itemized budget for the project:

Design Team	Expenses
Hired ID designer @ $15/hr	
60hrs for user interface	900
35hrs for building models	525
5hrs for logo design	75
40hrs project item models	600
Subtotal	**2100**

Marketing Team	Expenses
3 copies of Final Report @ $20	60
25 brochures @ $2	50
Subtotal	**110**

Development Team	Expenses
Hired Lingo programmers @10/hr	
Programmer 1 - 50hrs	500
Programmer 2 - 50hrs	500
Subtotal	**1000**

Usability Team	Expenses
Testing users @ $20/person	
3 tests x 6 people	360
2 user manual copies @ $12	25

Subtotal	**385**

IPRO Team	Expenses
STC seminar	200
Final poster	100
Subtotal	**300**

GRAND TOTAL	3895

The success of our project is strongly dependent on the availability of these resources.

6. Project Deliverables and Milestones

Project Deliverable	Due Date	Teams
User Manual	draft: final:	User Testing, Marketing
Product Rollout Plan	draft: final:	Marketing
Usability Testing College Pursuit		User Testing, Marketing
Completed College Pursuit	Oct 8 – Week 6	Design, Development
Beta Version: Elementary Level Gaming Suite		
User Testing report Elementary Level Gaming Suite		
User Manual		
Development Documentation		Development

IPRO Deliverable	Due Date		Teams
Project Plan & Budget		Sep 10 – Week 2	All
Mid-term Report		Oct 22 – Week 8	All
Website	draft: final:	Oct 8 – Week 6 Dec 1 – Week 14	Design + help
Presentation	draft: final:	Nov 5 – Week 10 Dec 1 – Week 14	Design + help
Poster	draft: final:	Nov 23 – Week 13 Nov 29 – Week 14	Design
Abstract		Nov 29 – Week 14	All
Final Report		Dec 3 – Week 14	All

7. Weekly Assignments

Week	Tasks and **Deliverables**
Sep 3 – Week 1	Meet with team and review last semester ➢ Begin project plan
Sep 10 – Week 2	All ➢ Brainstorm new game ➢ Decide on topic for new game Other ➢ Finalize project plan and budget (due Sep 10)
Sep 17 – Week 3	Programming ➢ College Pursuit - coding Design ➢ College Pursuit – Finalize Result Screens ➢ Brainstorming - Decide the educational game type and age group the game will target. ➢ Website – begin design Marketing ➢ New game content ➢ Product Rollout Plan – continue working Usability ➢ User Manual – determine format and begin work on Phase I (help from Marketing Group if needed through the project) ➢ Prepare testing materials for internal and external testing
Sept 24 - Week 4	Programming ➢ College Pursuit - coding Design ➢ Brainstorming - Discuss the fun portion of the game ➢ Think of the look and feel of the educational part. ➢ Website – continue design Marketing ➢ New Game content – continue work ➢ Product Rollout Plan – upload to server Usability ➢ User Manual – continue work on Phase I ➢ Prepare testing materials for internal and external testing

Oct 1 – Week 5	Programming
	  ❯ College Pursuit - coding
	
	Design
	  ❯ Brainstorming - Decide on the look of the fun parts.
	  ❯ Design - Begin making screens for the educational part.
	  ❯ Website – continue design
	
	Marketing
	  ❯ **New Game Content**
	  ❯ Product Rollout Plan – upload to server
	
	Usability
	  ❯ Conduct Internal Test and report back
	  ❯ Setup external user testers

Oct 8 – Week 6	Programming
	  ❯ **College Pursuit – complete coding**
	
	Design
	  ❯ Design - Screens for the educational portion.
	  ❯ **Website – present draft design for review**
	
	Marketing
	  ❯ New Content – continue work
	  ❯ Product Rollout Plan – submit to competition
	
	Usability
	  ❯ **User Manual – present rough draft of Phase I**
	  ❯ External user test and report results
	  ❯ Determine changes to make and prepare report

Oct 15 – Week 7	Programming
	  ❯ College Pursuit – Any bug fixes from usability test
	  ❯ Investigate technologies for new game
	
	Design
	  ❯ Design - Screens for the educational portion
	  ❯ Present - Present educational screens to group.
	  ❯ Design - Begin fun screens.
	  ❯ Website – continue design
	
	Marketing
	  ❯ New Game content – continue work
	
	Usability
	  ❯ User Manual – new game
	
	Other
	  ❯ Midterm Report to IPRO office (due Oct 22)

Oct 22 – Week 8	Programming
	  ➢ Begin initial software design
	
	Design
	  ➢ Design - Finish up with fun screen designs.
	  ➢ Website – continue design
	
	Marketing
	  ➢ New Content – continue work
	
	Usability
	  ➢ User Manual – continue work

Oct 29 – Week 9	Programming
	  ➢ Continue coding
	
	Design
	  ➢ Present - Present the fun portion of the game to the group.
	  ➢ Present - Present the final game to the group.
	  ➢ Work with programmers to fix the bugs and other areas.
	  ➢ Website – continue design
	  ➢ Presentation – create draft
	
	Marketing
	  ➢ Marketing materials – begin work on brochure, etc.
	
	Usability
	  ➢ User Manual – continue work

Nov 5 – Week 10	Programming
	  ➢ Continue coding
	
	Design
	  ➢ Fix - Work out kinks of the game.
	  ➢ Website – continue design and final draft
	  ➢ **Presentation – continue draft and present**
	  ➢ Poster – determine assignments and design
	
	Marketing
	  ➢ Marketing Materials – continue work
	
	Usability
	  ➢ User Manual – continue work

Nov 12 – Week 11	Programming
	   ➢ Continue coding
	
	Design
	   ➢ **Website – review and present final draft**
	   ➢ Presentation – update and practice
	   ➢ Poster – continue work
	
	Marketing
	   ➢ Market Materials – continue work
	
	Usability
	   ➢ User Manual – final draft
	   ➢ Setup external user testers

Nov 19 – Week 12	Programming
	   ➢ Continue coding
	
	Design
	   ➢ Website – review final draft
	   ➢ **Presentation – continue update and practice**
	   ➢ Poster – continue work
	   ➢ Abstract – create draft
	
	Marketing
	   ➢ **Marketing materials – present drafts for review**
	
	Usability
	   ➢ User Manual – review draft and make modification
	   ➢ **External user test and present report**

Nov 26 – Week 13	Programming
	   ➢ **Complete game beta, present game and documentation**
	
	Design
	   ➢ Website – finalize
	   ➢ Presentation – final practice
	   ➢ Poster – revisions and finalize
	   ➢ Abstract - finalize
	
	Marketing
	   ➢ Marketing materials – review draft
	
	Usability
	   ➢ **User Manual – present final draft and make modifications**
	   ➢ Determine changes from test and give to development

Dec 3 – Week 14	➢ Finalize Everything
	   ➢ Find equipment for presentation and exhibit
	   ➢ Submit Abstract and Poster (Nov 29)
	   ➢ Submit Website & Presentation (Nov 29)
	   ➢ IPRO Day: Dec 3
	
	Turn in Notebook, Final Report, and CDROM

Dec 10 - Week 15	IPRO Debreifing
Dec 17 – Week 16	IPRO Debreifing