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IDT 505 Research Paper

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### Description

For my research project I am planning on developing a Flash-based learning object that will utilize ActionScript flow control and logic, XML files as data files for creating dynamic text screens like learning unit title and objectives, lesson titles, etc. and quizzes that will be incorporated into the learning object interface, and Camtasia generated instructional videos that will be incorporated into the learning object as lessons.

### Learning Objectives

Since it is a shell that I am developing the learning objectives will vary depending on the Learning Unit being present, but for this specific research project I will compile a Learning Unit demo that will include these learning objectives: Understanding basic HTML syntax, compose an HTML page using an ASCII text editor, compose an HTML page using HTML heading and list elements.

### Target Audience

The target audience for this learning object will be students enrolled in both the face-to-face and online CSIS 115a Web Development Level 1 courses taught at Mt. San Jacinto College.

### Delivery

The learning object will be delivered via an ASP page retrieved from the cis.msjc.edu Web server with the student using a W3C standards compliant Web browser on the client side.

### Instructional Design

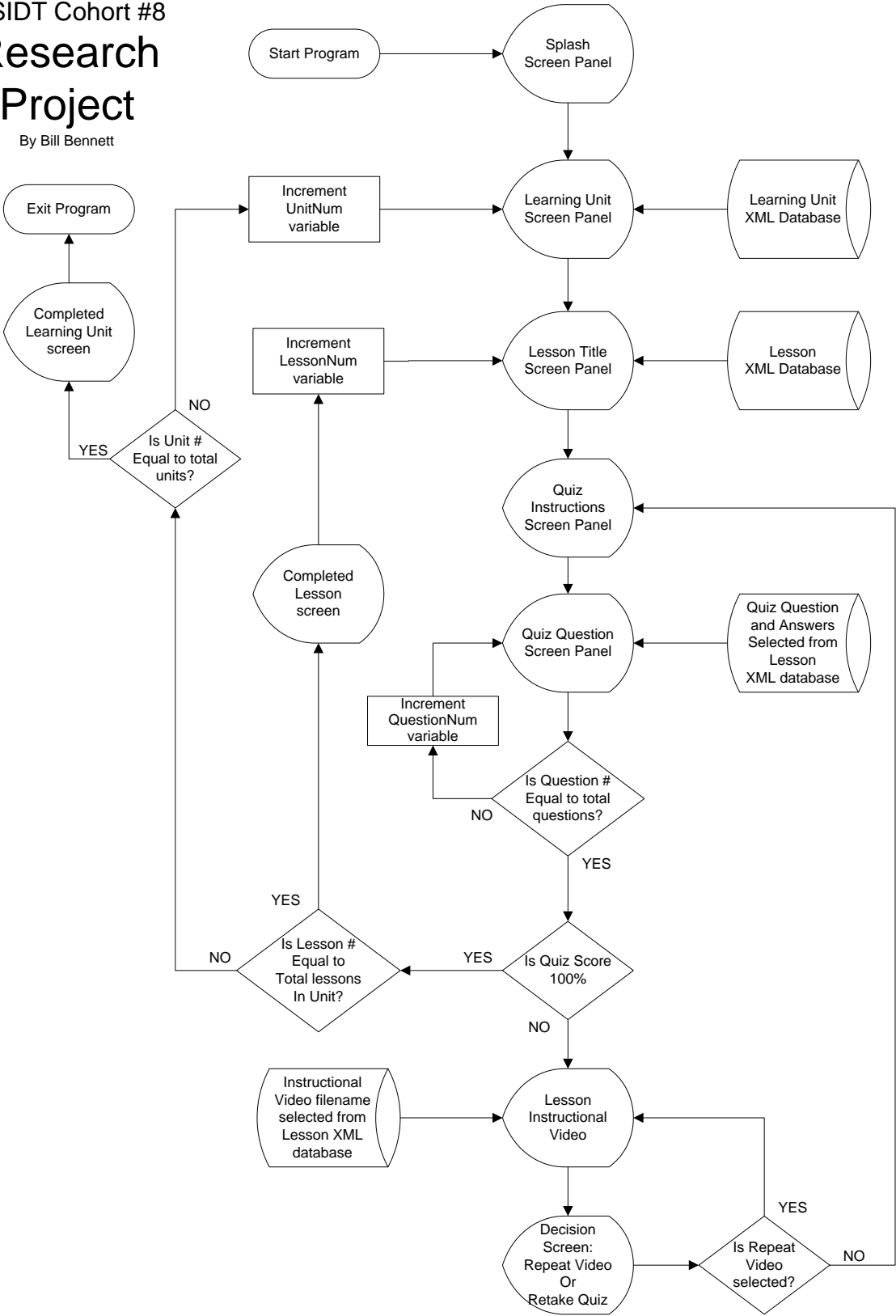
The instructional design will be a Flash-based interface consisting of single screen panels organized in a linear structure. The navigation buttons will be placed mainly in the lower-left hand corner of the screen panels allowing for forward motion through the interface with some navigational buttons being placed in the middle of a screen panel when the user is being ask to

make a choice of returning to a previous screen panel or moving ahead to the next screen panel. On the instructional video screens there will be a single button with pause and play functionality. On the screen panel following an instructional video the user will be presented with two buttons giving them the choice of replaying the instructional video or retaking the quiz for the lesson they are working on. On the quiz question screen panels there will be four radio buttons labeled with answer choices allowing users to select an answer and a button in the lower-left corner to advance to the next question.

Flowchart

(See next page)

CSUF  
MSIDT Cohort #8  
**Research  
Project**  
By Bill Bennett



## Presentational Design

The presentational design of the learning object will incorporate the CIS Web site color scheme of lime and forest green into all elements (text, buttons, etc.), with some varying shades of these two colors when necessary (i.e. screen panel background color). The MSJC logo will be present on each of the main title screen, the Learning Unit title screen, and the Lesson title screens. The main and title screen panel headings will be listed in the center of the screen using the font-family Arial Black, 36 pt., and colored forest green. The Quiz and Instructional Video screen headings will be placed at the top of the screen using the font-family Arial Black, 24 pt., and colored forest green. The Main title screen, the learning Unit title screen, and Lesson title screens will have a rounded-corner rectangle under the screen panel heading with a 3 pt. forest green border and a solid white fill. The Decision screen panel that appears after an instructional video will have no header, but will have two round-corner boxes with a 3 pt. forest green border and a solid white fill. The Quiz questions will be formatted Arial Bold 18 pt. forest green. The Quiz answers will be formatted Arial Normal 14 pt. black. Quiz screen panels will identify the question number in a 1” circle with a 3pt. forest green border with a white fill with a 48pt. Arial Black forest green question number in the center.

## Recommendations

Four recommendations were made during the usability phase: 1) allow for repeat on conclusion screen panels, 2) add timer to instructional video screens, 3) allow user to end instructional video before end of video, 4) randomly generate order of answers for quiz questions. All of these recommendations are incorporated into the new design of the research project.

## Conclusion

Most of the ground work has been laid for this project during the development of Learning Object #1 and Learning Object #2. Creating the flowchart has helped me to better identify organization of screen panels in Flash development and how to better control flow through ActionScript then has been done up to this point. Deployment through Web services and compatibility of interface with W3C compliant browsers has been confirmed. There does not appear to be anymore development challenges to completing this research project by the end of the CSUF MSIDT Masters program at this time.