# *Systems IV Assignment 6*

# *PEA, Final Research Report*

Date assigned: Tuesday, February 27, 2018

PEA date due: **Tuesday, February 27, 2018, at the end of the lab**

Research date due: **Tuesday, March 13, 2018, at the start of the lab**

**Learning Objectives**

Upon successful completion of this assignment, the student will be able to:

* Fulfill the requirements for PEA Deliverable 6 (Analysis)
* Write an executive summary.
* Write a formal report based on research they have conducted in the Information Technology field.

To do:

**Part A – PEA**

**Create a folder named YourUserName E42 A06 in your H:\3rdYear\420-E42 folder to hold all the folders and files for this assignment.**

**Copy the folder named YourUserName E42 PEA from the YourUserName E42 A05 folder to the YourUserName E42 A06 folder.**

1. Make the changes/corrections identified in the work submitted for Assignment 5.
2. Based on the discussion in class, complete the following PEA Deliverable:

**Deliverable 6: Analysis**

* The technical feasibility analysis.
  + The architecture technical analysis
    - Write a paragraph summarizing the technical analysis that was performed to determine the ASP.NET architecture, the Entity Framework approaches, the Presentation Layer approaches (MVC vs Web Forms) and the options for testing the recommended architecture. Mention advantages and disadvantages of your approach.
    - Include a link to E50 Assignment 8.
  + The application architecture
    - Write a paragraph summarizing the n-tiered architecture of the system. Describe the number of tiers that exist in the application architecture **and the physical location** of each tier. Refer to <https://msdn.microsoft.com/en-us/library/bb384398.aspx> for help on n-tiered architectures.
  + The project trade-offs
    - Write a short paragraph summarizing the trade-offs that you analyzed when determining the feasibility of the system.
    - Update and include the “Trade-off Sliders” slide in your inception deck that you prepared in E50 Assignment 9.
* The analysis models for the system.
  + The class diagram
    - Write a short paragraph describing the initial class diagram that was produced for the entity classes in E50 and briefly describe how it has evolved.
    - Generate the current class diagram from VisualStudio, including the classes from your application, and the relevant classes from CSAdmin/Clara, and link to the diagram. Arrange the classes logically on the diagram, so that the classes from your application are on the left, and the CSAdmin/Clara classes are on the right. You will need to manually draw the associations between the classes. You can use any drawing tool to draw the class diagrams, for example Visio or Word.
* A statistical analysis report
  + The report and statistical analysis were developed in the Statistics course. Update the report with the feedback from the Statistics instructor, if you have not already done so.
  + Write an introductory paragraph explaining the subject of the statistical analysis.
  + Write a short paragraph describing the process involved for the statistical analysis.
  + Include a link to the statistical analysis report.
* Ethical Analysis
  + Describe a moral, legal or social issue that was considered during the development of the system (For example, privacy, security, etc).
  + Provide a description of whom or what is impacted by the issue.
  + Provide a description of the implementation of these considerations into the system.

**Check the spelling on all the documents and web pages that were created during this assignment. Copy your work from the Analysis page into a Word document called YourUserName\_E42\_PEA\_A06.docx. Hand in both the zipped web files and the Word document.**

**Part B – Research Report**

1. Copy the document named **YourUserName\_E42\_A05\_Research\_Draft** to the document **YourUserName\_E42\_A06\_FinalReport** to record your answers.
2. Complete any of the sections of the research paper that have not been completed.
3. View the Slide Presentation on Moodle called “**Writing Abstracts**”.
4. Write the conclusion of the research report, which summarizes the main points from the paper, and makes a recommendation for how the Computer Science program should evolve to address the trend.
5. Write the introduction to the research report, which explains the purpose of the report, defines the trend, and outlines the contents of the report.
6. Write the Executive Summary for the report. The Executive Summary should summarize the purpose of the report, the main points, and the recommendations and conclusions.
7. Ensure that your References are at the end of the document, in MLA format. Each source should be numbered, and throughout the document you should refer to your sources using their number.
8. Auto-generate a Table of Contents and Table of Figures (if applicable).
9. Make the report visually appealing. The report should be single spaced.

The report must have the following sections:

* Title Page, containing the title of the report, author, course, instructor, and date
* Executive Summary
* Table of Contents
* Table of Figures, if applicable
* Introduction, which explains the purpose of the report, defines the trend, and outlines the contents of the report.
* The main content of the report. Make sure each section and subsection is numbered.
* Conclusion, which summarizes all of your main points and makes a recommendation for how the Computer Science program at Heritage should evolve to address the trend.
* References, containing an alphabetical list of all references used.

The report will be evaluated on the following criteria:

* Required content, as stated above
* Organization and flow of ideas
* Clarity of writing, including grammar, spelling, and report format
* Appropriate documentation of works cited

**To submit:**

When you have completed the assignment, upload the following to the Moodle page for the course:

* YourUserName E42 PEA folder, containing all the files in the digital portfolio
* YourUserName\_E42\_PEA\_A06.docx containing the content from the pages you wrote today in Word format.
* YourUserName E42 A06 Final Report.doc