**SYSTEMS ANALYSIS & DESIGN**

POLYTECHNIC WEST

# HSU201 System Analysis and Design
# Project

## Mobile Application for PWA Transport Services

**Objectives of the unit:**

Demonstrate evidence of the knowledge set and skill set required by the systems analyst

**Learning outcomes:**

- Describe and demonstrate an understanding of components required for developing a IT system that enhances the service in a transportation organization
- Demonstrate skills of preparing report as a proposal for a new system with architecture
- Design and develop a framework of the front-end and back-end of the proposed system
- Demonstrate an understanding of system analysis and design

**Due Date: Friday, Week 14, (by midnight)**

**Assessment Value:** 35% of total mark

**Assignment Tasks:**

**Task1:**

Provide the literature review of a transportation management. The review should highlight the existing methods used by transportation companies for managing schedules to provide similar transport services.

**Task2:**

Your company has received a project from PWA Transportation. As a part of the project, you need to install GPS in every vehicle. Additionally, you need to develop a mobile application that interacts with the PWA Transportation system to provide the following information:

- The location of the vehicle
- Estimated time of arrival of the vehicle to its destination and return
- Total distance in kilometers
- Estimated time for the journey in the current traffic and without traffic

**Task3:**

Prepare a framework for a proposed new IT system for PWA Transportation using UML (use case, class and sequence) diagrams, DFDs (context, level-0 and level-1), ER diagrams and logical database model. Describe each diagram in words.

**Task4:**

Demonstrate the advantages of using a new system that you have designed over the existing system.

**Task5:**

Prepare user documentation for the new system

**Format and Submission**

- Your assignment should be submitted as a report using e-campus
- It should be created using Microsoft Word and submitted as a single file. The file name should be **yoursurname_unitcode_A1**

- The report should contain a title page containing the assignment title, your name, student number, unit's name and submission date. The second page should contain the peer assessment form (You can find the form and the criteria of filling it at the end of this document).

- **Font style and size:** The normal text should use the font Times New Roman in size 12 point, first level headings should use the font Arial, be bold and size 14. Other headings should use the font Arial, bold and size 12 point

- Page orientation should be in a portrait style. However, tables and figures which do not fit in the portrait size should be in a landscape style. Margins should be 2.5cm (~1 inch) at the top, bottom, left and right side

- Header information should be the unit code and the title of the assignment. Footer information should be student name and page number

- The report should contain (at least) the following sections. Each section should start in a new page.
    - Cover page
    - Table of contents
    - Executive summary
    - Introduction
    - Sections according to the requirement of the assignment tasks
    - Conclusion
    - References

- Each figure and the use of tables should be captioned with an appropriate label and also should be explained in words.

- Excluding cover page, table of content and references, the report should be **around 3,000 words**

- The Executive Summary should be approximately 150 words

**Marking Key**

Make sure that you use the marking key of this assignment which is provided on e-campus.

**Plagiarism**

Plagiarism is considered as a serious offence which may lead to unfavorable consequences. Thus, ensure that you understand about the plagiarism and avoid plagiarized content in your assignments.

William Kenworthy

# Peer Evaluation

Peer evaluation is one of the essential parts of a group work students need to complete in order to understand the group learning process. This provides understanding of group dynamics, equity and fairness. You need to reflect how much cooperation you received from your peer and what your contributions were during your group work.

The table given below should be filled with the appropriate number between 0 and 5. The score 0 indicates there is no participation, 1 represents a little participation, 2 means some participation, 3 implies adequate participation, 4 is for active participation and 5 indicates outstanding participation. You must provide a quantifiable comment for providing each mark no matter it is 0, 1 or 5.

The following table has to be integrated at the second page of your report/answer document. Failure to include the completed table may result in receiving low or no score in your group work. Your peer's final score may be influenced based on the score that you provided.

| Item/Name | Your name | Team member 1 name | Team member 2 name | Team member 3 name |
|---|---|---|---|---|
| Attended group meeting regularly and on time. | | | | |
| Responded email (or other means of communication) in a timely and courteous manner | | | | |
| Contribute with a constructive input for the group work | | | | |
| Cooperated and encouraged team members to complete the task | | | | |
| Made a sincere effort in finalizing the tasks | | | | |