JAMES RUSE AGRICULTURAL HIGH SCHOOL: TAS FACULTY

HSC IPT | Major Project

Date due: **Thursday 27 June (Week 10, Term 2)** | Project weighting: **25%**

Introduction

Information systems arise out of problems, needs and opportunities that involve people and data. The development and implementation of an effective information system requires the combination of a broad range of knowledge and skills, including a firm grasp of the information processes, the creativity to construct an unidentified solution to a poorly defined problem, and a command of numerous project management techniques.

Project Scenario

While multimedia has a wide range of applications in educational, engineering, medical and other spheres of life, contemporary society has used multimedia primarily for one purpose: storytelling. This is surprising on one level, but totally expected on another; narrative is the natural language of the human psyche, common to every culture that has ever or will ever live on the face of the planet. In addition, storytelling is a powerful tool – it possesses the unique ability to allow one person to enter into the heart and mind of another and make them experience empathy for others.

Your task is to design and construct a *multimedia mystery* – an electronic environment that contains within it the forensic details of an enigma that must be solved by the user. All media types must be clearly evident in the final product, and should be employed in a way that creatively and professionally showcases the unique strengths of each type.

Assessed Outcomes

- **H1.1** Applies and explains an understanding of the nature and function of information technologies to a specific practical situation
- **H1.2** Explains and justifies the way in which information systems relate to information processes in a specific context
- **H2.2** Develops and explains solutions for an identified need which address all of the information processes
- **H3.1** Evaluates and discusses the effect of information systems on the individual, society and the environment
- **H4.1** Proposes and justifies ways in which information systems will meet emerging needs
- **H6.1** Analyses situations, identifies needs, proposes and then develops solutions
- **H7.1** Implements and explains effective management techniques
- **H7.2** Uses methods to thoroughly document the development of individual and team projects

Explicit project management techniques, as laid out in the System Development Life Cycle, are to be integrated into the designer's operational approach to this task. All participants are required to use a hybrid of the Structured and Spiral approaches for the completion of their multimedia system.

Participants are permitted to choose between (α) building their system as an extension of the current school cloud-based intranet or (β) constructing an independent system with their selection of authoring, scripting or programming software.

Project Stages

This assessment task is comprised of three well-defined chronological stages. Each requires the submission of certain deliverables that relate to the stage.

1. **Planning Stage:** due Thursday 11 April (Week 11, Term 1)
   In the first stage, significant time and effort must be invested to investigation and planning to ensure that later work is appropriately and efficiently directed. At the end of this stage, participants are required to submit planning documentation that:
   a. Articulates a clear understanding of the system's purpose
   b. Proposes a series of potential designs and components that align with these objectives
   c. Outlines a realistic schedule for the completion of these components that takes into account the complexity of each component, constraints placed upon the designer, and delays associated with external sources of data.

2. **Prototyping Stage:** due Thursday 30 May (Week 5, Term 2)
   In the second stage, participants must demonstrate a practical understanding of the spiral development approach by producing an initial prototype of their multimedia system. The prototypes must clearly demonstrate the specific benefits that arise from the iterative development process.

   The prototype must be trialled and evaluated by potential users of the final system. System testers should represent an appropriate cross-section of the school population. In order to ensure that relevant and critical feedback is supplied by testers, they should be provided with a structured pro forma to guide their evaluation of your system. The entire feedback process must be documented and explicit connections must be made between the evaluations of users and the subsequent changes that will be introduced into the system.

   At the end of this stage, participants are required to submit the following:
   a. Prototype: this version of the multimedia system must demonstrate the essential functional features and how they function together to achieve the system's purpose, even though the quality of these features may be low at this stage.
   b. Documentation of feedback from potential users and a record of the planned changes, including a rationale for each one.

3. **Implementation Stage:** due Thursday 27 June (Week 10, Term 2)
   In the third stage, there will be a dual focus on the refinement of the final product and on reflection upon the entire system development process. At the end of this stage, participants are required to submit the following:
   a. Final product: the completed multimedia system, either uploaded to the school's intranet or uploaded to an external file server
   b. Project report: a 1,500 word article incorporating the following elements:
      i. Rationale for the specific components included in the multimedia system (with regard to the usefulness of each media type and the achievement of the system's purpose)
      ii. Outline of the key difficulties encountered during the development process
      iii. Evaluation of the project management techniques used in the design and production of the final product

Project Criteria

Marks will be awarded for:

- Original and creative use of appropriate software
- Demonstration of competence in the learning outcomes listed above
- Balance between scope and depth in the completed product
- Depth and clarity of project documentation