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| **Academic year** | **2012/2013** | **Individual** |  | **Group** |  | **Assessment  Number** | **1** |

SCENARIO

* Synergy Solutions Ltd are a small business unit of a large software development house specialising including production of Bespoke Software Applications. The clients range from large multinationals corporations involved in chemical plant production to a diverse range of small companies.
* You have been doing given a probationary placement as an analyst with Synergy Solutions. Before analysts are permitted to work within the large contracts division they are required. to work a probationary period for the small and very small projects department. This gives probationary Analysts the opportunity to demonstrate and learn the technical analyst skills and develop the necessary knowledge and ability to use a wide range of tools and techniques.
* Synergy solutions, has assigned the Great Dunmow Taxi Service (GDTC) as your first client and your first job in your probationary period. They require you analyse and design a solution for this GDTC.
* Your immediate training predecessor, Mr AA Milne has successfully completed his probationary period. Having begun the initial stages of this project, his preliminary findings are enclosed as a series of appendices.
* The Synergy Solutions Training supervisor now requires you to complete this project using a formal methodology suitable for release for software production.
* Complete documentation is required to enable you to learn to produce documents suitable for release to production of larger, more risky projects. A good, well presented, design, and analysis will not require further significant includes from the analyst during the implementation phase. Clear specifications compliant analysis and design proceeded by a comprehensive feasibility study are some of the essential skills for a new Probationary Analyst to be admitted to the larger project teams.

**ASSESSMENT TASKS**

**Task one**

* Your supervisor is a aware of many different system life cycle models and requires you to describe, using diagrams and an appropriate range of at least two models and to distinct approaches that are common usage.
* For each model or approach you must describe:
* Advantages
* Disadvantages.
* For each model or approach, you must provide at least one schematic diagram.
* For each model or approach you must also give at least one example

**Task two**

* Your final solution will require you to choose one with a methodology for your study project. Your selection of methodology for use in the GDTC is the project using information from task one.

**Task three**

* Synergy Solutions supervisor requires you to submit detailed procedures for each of your fact finding techniques.
* Detailed planning must be prepared and submitted in advance.
* Fact finding techniques include:
* interviews
* observation
* investigation of documentation
* questionnaires
* focus groups
* Your detailed planning this should cover the following areas:
* Legal
* Social
* Economic
* Technical
* timescales
* organisational constraints Components:
* purpose;
* structure;
* intended audience;
* outcomes
* For each area explain the purpose of the feasibility criteria placed within business, social or Information System context.
* A matrix approach might be a suitable solution to demonstrate you have covered all of the applicable feasibility areas.
* Planning should cover the following:
* How do I investigate.
* What will I investigate.
* Wider environment.
* The data environment, including input, output and processes.
* Your methods of investigation should include at least four investigation techniques.

**Task four**

* Describe the data environment of the current system using techniques appropriate to the methodology you have selected from task to techniques include
* Entity relationship diagram.
* Context diagram
* dataflow diagrams

**Task five**

* Identify additional and existing specifications and requirements for the new Information Systems

**Task six**

* Outline at least two alternative solution is.

**Task seven**

* Justify your choice of solution in terms of quality constraints costs etc

**Task eight**

* Produce an initial prototype design. This must include background
* Problem statement.
* Data collection, input and output
* Recommendations

**Task nine**

* Provide diagrams using your chosen methodology to produce a design for the new proposed Information Systems.

**Task ten**

* Evaluate how user and systems requirements have been addressed.
* Learning outcomes and assessment criteria for a pass
* On successful completion of this unit a learner can:

**LO1 Understand different systems life cycles**

1.1 evaluate different systems lifecycle models

1.2 discuss the importance of following a procedural/staged lifecycle in a systems investigation

LO2 Understand the importance of a feasibility study

2.1 discuss the components of a feasibility report

2.2 assess the impact of different feasibility criteria on a systems investigation

LO3 Be able to perform a systems investigation

3.1 undertake a systems investigation to meet a business need

3.2 use appropriate systems analysis tools and techniques to carry out a systems investigation

3.3 create documentation to support a systems investigation

3.4 evaluate how user and systems requirements have been addressed.

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| * **Merit Descriptors** | * **Indicative Characteristics** | * **Contextualised Grade Guidance** |
| * **identify and apply strategies to find appropriate solutions** | * **effective judgements have been made** * **an effective approach to study and research has been applied** | * **an effective approach to study and research has been applied** * **The Harvard Reference System has been used with inline referencing and an accurate Bibliography** |
| * **select/design and apply appropriate methods/techniques** | * **a range of methods and techniques have been applied** * **the selection of methods and techniques/sources has been justified** | * **a range of methods and techniques have been applied** * **A range of technical diagrams has been used accurately and consistently used to produce a working design suitable for production implementation without further substantial input from the analyst.** |
| * **present and communicate appropriate findings** | * **the appropriate structure and approach has been used** * **a range of methods of presentation have been used and technical language has been accurately used** | * **a range of methods of presentation have been used and technical language has been accurately used** * **The feasibility study has used a wide range of tools and techniques to obtain a clear and comprehensive view of the project, using both planning and reporting techniques.** |

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| * **Distinction Descriptors** | * **Indicative characteristics** | * **Contextualised Grade Guidance** |
| * **use critical reflection to evaluate own work and justify valid conclusions** | * **conclusions have been arrived at through synthesis of ideas and have been justified** * **the validity of results has been evaluated using defined criteria** | * **realistic improvements have been proposed against defined characteristics for success** * **The design incorporates realistic improvements to enable the business objectives to be met** |
| * **take responsibility for managing and organising activities** | * **autonomy/independence has been demonstrated** * **activities have been managed** | * **the importance of interdependence has been recognised and achieved** * **Attendance meets the criteria set by LCUCK** |
| * **demonstrate convergent/lateral/ creative thinking** | * **self-evaluation has taken place** * **problems have been solved** * **innovation and creative thought have been applied** | * **innovation and creative thought have been applied** * **A clear and consistent design has been produced suitable for implementation** |