Bachelor of Information Technology

**IT5182: Fundamentals of Data Models and Databases**

**Assignment 1**

**Analyse the Requirements for a Database System**

**Due date and time**

**Friday 26th September at 5pm**

**Submission details**

Submit using the drop box feature in Moodle. Ensure your Name and Student ID are written on your deliverables.

**Extensions**

Extensions of time will be granted for students who have an acceptable documented reason for not completing the assessment by the specified due date. When applying for an extension please email the lecturer before the due date with your reasons. An extension is not granted unless you receive written word from the lecturer. Late submissions, without an extension, will have 10% deducted for each day the assessment is late.

**Grading**

This assignment is worth 30% of the total module.

The assignment will be marked out of 100.

To pass this module an average mark of 50% must be achieved across all assessments.

**Purpose**

The purpose of this assignment is to document the requirements for a database system using models that you will create in Visio and Visual Paradigm. The requirements of the system are described in the Dream Getaways Case Study, which can be found in the Assignments section on Moodle.

**This is an individual assignment only – not group work.**

**Deliverables**

Use Visio and/or Visual Paradigm to construct the models described below. The models you build should then be copied and pasted into a Database Specification Report that you should write using MS Word. The structure and content of this Word document should be as follows:

* 1. A title page that includes the name of the report and the students (including each student’s ID) within your group.
  2. A contents page that lists all the sections in the report and page number where each section can be found.
  3. An executive summary that briefly describes the content of the report and the models you have created.
  4. A **list of assumptions** about the system that cannot be reasonably deduced from the case study. If you believe you have made no assumptions then simply state this in your report.
  5. Two **business process models** that document the processing requirements of the following activities in Dream Getaways; recording resorts and booking customers on vacations. The process models should include swim lanes, triggers, process steps, data stores, decisions, sequence flows and outcomes using appropriate symbols.
  6. A single **entity relationship diagram** (ERD) that captures the data requirements of Dream Getaways’ system. The ERD should include all of the required attributes (including their optionality details) in each entity, the primary keys, foreign keys and the relationships between the entities (which should be named). Your ERD should be constructed in Visual Paradigm.
  7. A single **functional hierarchy diagram** (FHD) that identifies which process step(s) in each of your business process models that require or generate data.
  8. A list of any unresolved questions or problems that have come about from the analysis of this system’s requirements. If you have none, then state this in your report.

**Software Support**

Produce all your models in Visio (except the ERD, which should be created in Visual Paradigm) and create the Database Specification Report using MS Word. Copy and paste your models from Visio and Visual Paradigm into your report.

**JAD Session**

JAD sessions will be held during class time to help clarify Dream Getaways’ requirements with students as they work through the assignment.

**Marking Schedule**

**Student SID’s:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task** | **Description** | **Max Mark** | **Student Mark** | **Comments** |
| 1 | Executive summary – a very high level description of the content and purpose of the report. | **5** |  |  |
| 2 | Any assumptions that cannot be reasonably deduced from the case study. If none were made, say so. | **5** |  |  |
| 3 | A set of business process models; one for each of the two business processes presented in the case study. | **30** |  |  |
| 4 | An entity relationship diagram that documents the data requirements for supporting the business processes you have described. | **30** |  |  |
| 5 | A single functional hierarchy diagram that identifies which process step(s) in each of your business process models require or generate data. | **15** |  |  |
| 6 | How well the modelling tools in Visio have been used to document the system requirements e.g. the clarity of the models, models appropriately named, symbols used correctly etc. | **5** |  |  |
| 6 | A list of unresolved questions or problems that have come about from the analysis of the system’s requirements. If none were encountered, say so. | **5** |  |  |
| 7 | Quality of report: Table of contents, page numbering, grammar, layout, section headings, etc. | **5** |  |  |
|  | **Total** | **100** |  |  |