



MODULE NAME:	MODULE CODE:
SYSTEMS ANALYSIS AND DESIGN	SAND6221

ASSESSMENT TYPE: ASSIGNMENT 2 (PAPER ONLY)

TOTAL MARK ALLOCATION: 100 MARKS

TOTAL HOURS: 10 HOURS

By submitting this assignment, you acknowledge that you have read and understood all the rules as per the terms in the registration contract, in particular the assignment and assessment rules in The IIE Assessment Strategy and Policy (IIE009), the intellectual integrity and plagiarism rules in the Intellectual Integrity and Property Rights Policy (IIE023), as well as any rules and regulations published in the student portal.

INSTRUCTIONS:

1. ***No material may be copied from original sources, even if referenced correctly, unless it is a direct quote indicated with quotation marks. No more than 10% of the assignment may consist of direct quotes.***
2. ***Your assignment must be submitted through SafeAssign.***
3. ***Save a copy of your assignment before submitting it.***
4. ***Assignments must be typed unless otherwise specified.***
5. ***All work must be adequately and correctly referenced.***
6. ***This is an individual assignment.***

Referencing Rubric

Providing evidence based on valid and referenced academic sources is a fundamental educational principle and the cornerstone of high-quality academic work. Hence, The IIE considers it essential to develop the referencing skills of our students in our commitment to achieve high academic standards. Part of achieving these high standards is referencing in a way that is consistent, technically correct and congruent. This is not plagiarism, which is handled differently.

Poor quality formatting in your referencing will result in a penalty **of** according to the following guidelines **a maximum of ten percent being deducted from the overall percentage**. Please note, however, that **evidence of plagiarism in the form of copied or uncited work (not referenced), absent reference lists, or exceptionally poor referencing, may result in action being taken in accordance with The IIE's Intellectual Integrity Policy (0023).**

Markers are required to provide feedback to students by indicating **(circling/underlining) the information that best describes the student's work.**

Minor technical referencing errors: 5% deduction from the overall percentage. – the student's work contains **five or more errors** listed in the minor errors column in the table below.

Major technical referencing errors: 10% deduction from the overall percentage. – the student's work contains **five or more errors** listed in the major errors column in the table below.

If both minor and major errors are indicated, **then 10% only** (and not 5% or 15%) is deducted from the overall percentage. The examples provided below are not exhaustive but are provided to illustrate the error.

Required: Technically correct referencing style	Minor errors in technical correctness of referencing style Deduct 5% from overall percentage. Example: if the response receives 70%, deduct 5%. The final mark is 65%.	Major errors in technical correctness of referencing style Deduct 10% from the overall percentage. Example: if the response receives 70%, deduct 10%. The final mark is 60%.
Consistency <ul style="list-style-type: none"> The same referencing format has been used for all in-text references and in the bibliography/reference list. 	Minor inconsistencies. <ul style="list-style-type: none"> The referencing style is generally consistent, but there are one or two changes in the format of in-text referencing and/or in the bibliography. For example, page numbers for direct quotes (in-text) have been provided for one source, but not in another instance. Two book chapters (bibliography) have been referenced in the bibliography in two different formats. 	Major inconsistencies. <ul style="list-style-type: none"> Poor and inconsistent referencing style used in-text and/or in the bibliography/reference list. Multiple formats for the same type of referencing have been used. For example, the format for direct quotes (in-text) and/or book chapters (bibliography/reference list) is different across multiple instances.
Technical correctness <ul style="list-style-type: none"> Referencing format is technically correct throughout the submission. The correct referencing format for the discipline has been used, i.e., either APA, OR Harvard OR Law Position of the reference: a reference is directly associated with every concept or idea. For example, quotation marks, page numbers, years, etc. are applied correctly, sources in the bibliography/reference list are correctly presented. 	Generally, technically correct with some minor errors. <ul style="list-style-type: none"> The correct referencing format has been consistently used, but there are one or two errors. Concepts and ideas are typically referenced, but a reference is missing from one small section of the work. Position of the references: references are only given at the beginning or end of every paragraph. For example, the student has incorrectly presented direct quotes (in-text) and/or book chapters (bibliography/reference list). 	Technically incorrect. <ul style="list-style-type: none"> The referencing format is incorrect. Concepts and ideas are typically referenced, but a reference is missing from small sections of the work. Position of the references: references are only given at the beginning or end of large sections of work. For example, incorrect author information is provided, no year of publication is provided, quotation marks and/or page numbers for direct quotes missing, page numbers are provided for paraphrased material, the incorrect punctuation is used (in-text); the bibliography/reference list is not in alphabetical order, the incorrect format for a book chapter/journal article is used, information is missing e.g. no place of publication had been provided (bibliography); repeated sources on the reference list.
Congruence between in-text referencing and bibliography/reference list <ul style="list-style-type: none"> All sources are accurately reflected and are all accurately included in the bibliography/reference list. 	Generally, congruence between the in-text referencing and the bibliography/reference list with one or two errors. <ul style="list-style-type: none"> There is largely a match between the sources presented in-text and the bibliography. For example, a source appears in the text, but not in the bibliography/reference list or vice versa. 	A lack of congruence between the in-text referencing and the bibliography. <ul style="list-style-type: none"> No relationship/several incongruities between the in-text referencing and the bibliography/reference list. For example, sources are included in-text, but not in the bibliography and vice versa, a link, rather than the actual reference is provided in the bibliography.
In summary: the recording of references is accurate and complete.	In summary, at least 80% of the sources are correctly reflected and included in a reference list.	In summary, at least 60% of the sources are incorrectly reflected and/or not included in reference list.

Overall Feedback about the consistency, technical correctness and congruence between in-text referencing and bibliography:

At the end of this specific assignment, students should be able to:

- *LU1 – LO4: Identify key documents used when planning a project;*
- *LU2 – LO2: Explain the difference between functional and non-functional requirements;*
- *LU2 - LO9: Interpret and create an entity relationship diagram;*
- *LU3 - LO5: Explain the concepts of user interface, User Experience and Usability;*
- *LU3 - LO7: Discuss the impact of visibility and affordance on usability;*
- *LU4 - LO3: Describe the key features of Agile development;*
- *LU4 - LO5: Describe the Agile approach to the project management knowledge areas;*

Assignment Scenario

Read the following scenario. Then, answer all questions in this assignment based on the information contained in the scenario. If you make any assumptions when answering a question, please state them clearly.

Scenario: Airport Customer Relations Management System

A local airport has recently upgraded its infrastructure to be able to accommodate international flights. Airport management is expecting an influx of tourists. To ensure the all-round success of this new endeavour, a heavy emphasis is being placed on keeping visitors to the airport as satisfied with the airport and its amenities as possible. To aid in maintaining good customer relations, the airport has decided to invest in the development of a new Customer Relations Management System, which would be accessible online via kiosks strategically placed around the airport as well as a downloadable mobile application.

The new system is envisioned to offer customers the following:

1. Information: updates on flights, airport amenities and services available at the airport;
2. Navigation capability: GPS navigation to various amenities and boarding gates;
3. Instant connection to medical and ambulatory services for any medical emergency.

You have been awarded the contract for the development of the Airport Customer Relations Management System. At the contract signing, you heard a rumour that one of the executives is known for being indecisive and therefore changes his mind frequently. He is also responsible for ultimately signing the new system into operation, so as far as possible, you will need to accommodate his changes. In the same breath, you have been told that should you deliver this system earlier than anticipated, you will receive a sizable bonus. The one thing, though, that has been constant in all of your communications with the various stakeholders is that due to the size of the investment in the project, there is no room for failure, and the system has to be at the top of its class.

Question 1**(Marks: 45)**

Q.1.1	<p>Discuss the Agile approach to development and motivate whether this methodology will be suitable for the development of the Airport Customer Relationship Management System or not.</p> <p>Your discussion has to address the following:</p> <ol style="list-style-type: none"> 1. A description of the key features of the Agile development approach. 2. A description of how an Agile development approach will impact your project management approach. 3. A motivation as to whether the Agile approach will be a suitable approach for developing the Airport Customer Relationship Management System. <p>Each component of your answer needs to be related to the scenario.</p>	(40)
Q.1.2	Create a System Vision Document for the Airport Customer Relationship Management System.	(5)

Question 2**(Marks: 10)**

Q.2.1	Identify three functional requirements for the Airport Customer Relationship Management System.	(6)
Q.2.2	Propose two non-functional requirements for the Airport Customer Relationship Management System.	(4)

Question 3**(Marks: 45)**

Assume that the following business rules are in place:

- One passenger can request the location of one and only one amenity at a time.
- It is possible for a passenger to have multiple flights departing from the same airport and, as such, can view multiple flight bookings.
- One passenger can experience multiple medical emergencies and, as such, can request medical assistance multiple times.

Q.3.1	Create an Entity Relationship Diagram that will represent the business rules presented at the beginning of the question. Include at least three attributes for every entity. Also, indicate the primary keys for each entity.	(23)
Q.3.2	<p><u>Select one functionality</u> offered by the Airport Customer Relationship Management System. Then, <u>propose interfaces</u> for the use of that functionality. Any software can be used to create the interfaces. <u>Include screenshots</u> of the interfaces in your design.</p> <p>Once you have designed the interfaces, discuss how you addressed the following concepts in your designs:</p> <ul style="list-style-type: none"> • Usability • Visibility • Affordance 	(22)

[TOTAL MARKS: 100]