**Software Development Unit 3**

**U302 SAT: Analysis and Design**

**Name:** Garv Shah

**Feedback**

You successfully identified appropriate tasks and documented these tasks according to the four phases of the Problem-Solving Methodology. Some tasks were not actions - such as ‘Context Diagram’ and ‘Data Flow Diagram’. Some tasks do look like headings (E.g., ‘SRS’, ‘Analysis’) but it is unclear if they are headings. Your Gantt chart included key milestones and dependencies and it was good to see an example of concurrent tasks on the plan.

You have been able to outline the features of your preferred development model. Your explanation and justification of your choice was excellent.

Your research was very well-executed. You included both primary and secondary data collection and used this information to guide your project. This research showed a deep understanding of the relationship between data collection and the scope and constraints of your project. You have taken into consideration the outcome of your data collection to assist you with determining the functional requirements of your solution, and at the same time being aware of the constraints you face while building the solution. This has allowed you to commit to something achievable within the given timeframe and still produce an appropriate solution for your client.

Your SRS documentation was excellent, with clear definitions of your solution, including not only what you are building but also why you are building the solution and giving your project a clear context for its existence.

Your analytical diagrams were well-documented with clear processes and use cases. It was good to see that you took on advice regarding the use case diagram and simplified the use cases. Your data flow diagrams were excellent and demonstrated a sound understanding of the concepts around processes and process flows. Hopefully, these diagrams will be of use to you when you begin coding.

Your design folio was excellent. You have carefully looked at the SAT rubric for design and elaborated on all the elements of this phase. You have provided detailed evaluation of your options and concluded with a very good justification of your choice of design. It was interesting to read about Cupertino Design versus Material Design. Saying this however, it was a little confusing when you were evaluating the two designs. It was as if you assumed that readers would immediately understand the grid design of one and the bubbles of the other design. This part took a couple of tries to see where you were heading with regards to evaluation of the designs. Following this, your detailed UI/UX design were outstanding with relevant and clear information however, considering that the quiz database is a significant part of your solution, I think that a data dictionary was a bit of an omission, whether it be table definitions, a JSON or XML file.

**Grade:** A+

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| **VCE Software Development: School-assessed Task 2022** | | | | | | | |
| **Assessment Criteria** | **Levels of Performance** | | | | | | |
| **Indicators** | **Not shown** | **1–2 (very low)** | **3–4 (low)** | **5–6 (medium)** | **7–8 (high)** | **9–10 (very high)** |
| **Unit 3 Outcome 2**  **1. Skills in project management.** | * Prepares a Gantt chart using software that documents all stages and activities of the problem-solving methodology for U3 O2 and  U4 O1. | Insufficient evidence | Prepares a plan using software that documents some of the stages and/or activities of the problem-solving methodology. | Prepares a plan or Gantt chart using software that documents most stages and some activities of the problem-solving methodology for U3 O2 and U4 O1. | Prepares a Gantt chart using software that documents all the stages and some activities of the problem-solving methodology for U3 O2 and U4 O1. | Prepares a Gantt chart using software that documents in detail all the stages and most of the activities of the problem-solving methodology for U3 O2 and U4 O1. | Prepares a Gantt chart using software that comprehensively documents all the stages and activities of the problem-solving methodology for U3 O2 and U4 O1. |
| * Documents all the relevant tasks, sequencing, time allocations, milestones, dependencies and critical path. | Identifies a limited number of relevant tasks, sequencing and time allocations. | Identifies some relevant tasks, sequencing and time allocations. | Documents a range of relevant tasks, sequencing, time allocations, milestones and dependencies. | Documents in detail most of the relevant tasks, sequencing, time allocations, milestones, dependencies and the critical path for the project. | Documents comprehensively all relevant tasks, sequencing, time allocations, milestones, dependencies and the critical path for the project. |
|  | 0 ❑ | 1 ❑ 2 ❑ | 3 ❑ 4 ❑ | 5 ❑ 6 ❑ | 7 ❑ 8 ❑ | 9 ❑ 10 ❑ |

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| **Unit 3 Outcome 2**  **2. Skills in the selection and justification of a development model.** | * Documents the use of the selected development model approach. | Insufficient evidence | Lists some features of the selected development model. | Outlines some features of the selected development model. | Documents a range of features of the selected development model. | Documents in detail most of the features of the selected development model. | Documents comprehensively all the features of the selected development model. |
| * Documents the justification of the selected development model approach. | Identifies limited justification for the use of the selected development model approach. | Outlines a brief justification for the use of the selected development model approach. | Documents a sound justification for the use of the selected development model approach. | Documents a detailed justification for the use of the selected development model approach. | Documents a comprehensive justification for the use of the selected development model approach. |
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| **Indicators** | **Not shown** | **1–2 (very low)** | **3–4 (low)** | **5–6 (medium)** | **7–8 (high)** | **9–10 (very high)** |
| **Unit 3 Outcome 2**  **3. Skills in using analytical  tools and techniques.** | * Documents data for analysis using appropriate data collection methods. | Insufficient evidence | Identifies limited relevant data for analysis using one data collection method. | Outlines some relevant data for analysis using some data collection methods and techniques. | Documents a range of relevant data for analysis using a range of appropriate data collection methods and techniques. | Documents in detail a wide range of relevant data for analysis using a range of appropriate data collection methods and techniques. | Documents a comprehensive set of relevant data for analysis using a wide range of appropriate data collection methods and techniques. |
| * Uses all the appropriate features of the selected analytical tools. | Uses limited features of the selected analytical tools. | Uses some of the features of the selected analytical tools. | Uses accurately a range of the features of the selected analytical tools. | Uses accurately most of the features of the selected analytical tools. | Uses accurately all the features of the selected analytical tools. |
| * Depicts all the relationships between data, users and digital systems. | Depicts limited relationships between the data, users and digital systems in the analytical tools used. | Depicts some of the relationships between the data, users and digital systems in the analytical tools used. | Depicts a range of the relationships between the data, users and digital systems in the analytical tools used. | Depicts most of the relationships between the data, users and digital systems in all analytical tools used. | Depicts accurately all the relationships between the data, users and digital systems in all analytical tools used. |
| * Documents evidence of critical and creative thinking through the identification, clarification and critical analysis of the data collected. | Lists some evidence of critical and creative thinking through the identification of the data collected. | Outlines some evidence of critical and creative thinking through the identification and analysis of the data collected. | Documents evidence of critical and creative thinking through the identification, clarification and analysis of the data collected. | Documents detailed evidence of critical and creative thinking through the identification, clarification and critical analysis of the data collected. | Documents comprehensively evidence of critical and creative thinking through the identification, clarification and critical analysis of the data collected to determine its reliability. |
|  | 0 ❑ | 1 ❑ 2 ❑ | 3 ❑ 4 ❑ | 5 ❑ 6 ❑ | 7 ❑ 8 ❑ | 9 ❑ 10 ❑ |

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| **Unit 3 Outcome 2**  **4. Skills in documenting  a software requirements specification.** | * Documents the functional and  non-functional requirements, constraints and scope as part of  the SRS. | Insufficient evidence | Lists a limited set of solution requirements. | Outlines some appropriate functional requirements and scope. | Documents an appropriate range of functional requirements, constraints and scope. | Documents detailed functional and non-functional requirements, constraints and scope. | Documents comprehensively all functional and non-functional requirements, constraints and scope. |
| * Documents the technical environment and the intended audience of the solution as part of the SRS. | Lists some details of the technical environment of the solution or the intended audience. | Outlines some aspects of the technical environment and the intended audience of the solution. | Documents the technical environment and the intended audience of the solution. | Documents in detail the technical environment and the intended audience of the solution. | Documents comprehensively the technical environment and the intended audience of the solution. |
| * Documents evidence of critical and creative thinking through the use of questions and strategies to critically analyse solution requirements. | Lists some evidence of critical and creative thinking through the use of questions to identify solution requirements. | Outlines some evidence of critical and creative thinking through the use of questions to analyse solution requirements. | Documents evidence of critical and creative thinking through the use of questions and strategies to analyse solution requirements. | Documents detailed evidence of critical and creative thinking through the use of questions and strategies to critically analyse solution requirements. | Documents comprehensively evidence of critical and creative thinking through the use of effective questions and strategies to critically analyse solution requirements. |
|  | 0 ❑ | 1 ❑ 2 ❑ | 3 ❑ 4 ❑ | 5 ❑ 6 ❑ | 7 ❑ 8 ❑ | 9 ❑ 10 ❑ |

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| **Unit 3 Outcome 2**  **5. Skills in designing  the software solution.** | * Generates alternative design ideas. | Insufficient evidence | Generates two design ideas with limited differences in appearance or functionality. | Generates two design ideas with some modifications in appearance and functionality. | Generates two or three design ideas that represent sound alternatives to appearance and functionality. | Generates two or three design ideas that are feasible alternatives and clearly differ in appearance and functionality. | Generates two or three distinctive design ideas that are feasible and original representations of appearance and functionality. |
| * Develops evaluation criteria with reference to design ideas and the efficiency and effectiveness of the software solution. | Lists some criteria for evaluating design ideas and some aspects of the software solution. | Outlines some criteria for evaluating design ideas and the efficiency and effectiveness of the software solution. | Develops a range of criteria for evaluating alternative design ideas and the efficiency and effectiveness of the software solution. | Develops a detailed set of criteria for evaluating alternative design ideas and the efficiency and effectiveness of the software solution. | Develops a comprehensive set of criteria for evaluating alternative design ideas and the efficiency and effectiveness of the software solution. |
| * Produces preferred design for the software solution. | Produces the preferred design using limited and incomplete methods. | Produces and justifies the preferred design using some appropriate methods and limited reference to the evaluation criteria. | Produces and justifies the preferred design using a range of appropriate methods and design factors with reference to some evaluation criteria. | Produces and justifies the preferred design in detail using appropriate methods and design factors with detailed reference to most evaluation criteria. | Produces and justifies the preferred design comprehensively using appropriate methods and design factors with detailed reference to all evaluation criteria. |
| * Documents evidence of critical and creative thinking through design ideas, solution requirements and justification of preferred designs. | Lists some evidence of critical and creative thinking through the development of connections between ideas and solution requirements. | Outlines some evidence of critical and creative thinking through the development of connections between design ideas and solution requirements. | Documents evidence of critical and creative thinking through the development of connections between design ideas and solution requirements and the justification of the preferred designs. | Documents detailed evidence of critical and creative thinking through the connection of ideas, design ideas and solution requirements and the justification of the preferred designs. | Documents comprehensively evidence of critical and creative thinking through the connection of ideas, the generation of design ideas and solution requirements and the justification of preferred designs. |
|  | 0 ❑ | 1 ❑ 2 ❑ | 3 ❑ 4 ❑ | 5 ❑ 6 ❑ | 7 ❑ 8 ❑ | 9 ❑ 10 ❑ |