

COMP3520 Operating Systems Internals

Assignment 3 Discussion Document

Marking Scheme

Each question is allocated a set number of points, reflecting its relative importance. The total number of points that you obtain is your concepts performance score. In addition, a grade is assigned for appropriate use of *Academic English*.

Your concepts performance score and *Academic English* grade collectively determine your Assignment 3 discussion document mark.

Question 1

Criteria	Points
<ul style="list-style-type: none"> Provides a detailed accurate description, in English and pseudocode, of the algorithm that was used to implement MRAD Documents all modifications to the original program that was provided Description is not substantially plagiarized Description does not include substantial near-verbatim or verbatim reproduction of material from either of the following: <ul style="list-style-type: none"> Course material and / or One or more online sources 	6
<ul style="list-style-type: none"> Provides an adequate description, in English and pseudocode, of the algorithm that was used to implement MRAD Documents modifications to the original program that was provided Description is not substantially plagiarized Description does not include substantial near-verbatim or verbatim reproduction of material from either of the following: <ul style="list-style-type: none"> Course material and / or One or more online sources 	5
<ul style="list-style-type: none"> Provides a basic description, in English and / or pseudocode, of the algorithm that was used to implement MRAD Documents some modifications to the original program that was provided Description is not substantially plagiarized Description does not include substantial near-verbatim or verbatim reproduction of material from either of the following: <ul style="list-style-type: none"> Course material and / or One or more online sources 	4
<ul style="list-style-type: none"> Provides a limited description, in English and / or pseudocode, of the algorithm that was used to implement MRAD AND Description is not substantially plagiarized AND Description does not include substantial near-verbatim or verbatim reproduction of material from either of the following: <ul style="list-style-type: none"> Course material and / or One or more online sources <p>OR</p>	3

<ul style="list-style-type: none"> • Improperly and substantially paraphrases course material or online sources to produce a basic description, in English and/or pseudocode, of the algorithm that was used to implement MRAD AND • Documents some modifications to the original program that was provided 	
<ul style="list-style-type: none"> • Outlines, in English and / or pseudocode, some aspects of the algorithm that was used to implement MRAD AND • Outline does not include substantial near-verbatim or verbatim reproduction of material from either of the following: <ul style="list-style-type: none"> ○ Course material and / or ○ One or more online sources <p>OR</p> <ul style="list-style-type: none"> • Improperly and substantially paraphrases course material or online sources to produce a limited description, in English and/or pseudocode, of the algorithm that was used to implement MRAD 	2
<ul style="list-style-type: none"> • Makes general statements about MRAD <p>OR</p> <ul style="list-style-type: none"> • Substantially repeats material near-verbatim or verbatim from either of the following: <ul style="list-style-type: none"> ○ Course material and / or ○ One or more online sources 	1
<ul style="list-style-type: none"> • Performance does not meet the criteria above 	0

Question 2

Test Case Coverage

Criteria	Points
• Provides THREE valid test cases that test a range of MRAD's features including one edge case	2
• Provides THREE valid test cases that test a range of MRAD's features	1
• Performance does not meet the criteria above	0

Explanations

Criteria	Points
• Provides clear and logical explanations for THREE valid test cases	3
• Provides valid explanations for THREE valid test cases OR • Provides clear and logical explanations for TWO valid test cases	2
• Makes a general statement about the purpose of TWO or THREE valid test cases OR • Provides a valid explanation for ONE valid test case	1
• Performance does not meet the criteria above	0

Expected Output

Criteria	Points
• Provides the correct expected output for THREE valid test cases • Correctly states whether the MRAD implementation produces the expected output or not for these test cases	2
• Provides the correct expected output for THREE valid test cases	1
• Performance does not meet the criteria above	0

Note: If three valid test cases have not been provided, then no marks shall be awarded for expected output.

Question 3

Criteria	Points
<ul style="list-style-type: none"> Provides a refined critical evaluation of MRAD Demonstrates thorough understanding of relevant operating systems concepts Presents a logical response using appropriate information and ideas from appropriate sources 	9
<ul style="list-style-type: none"> Provides a well-developed critical evaluation of MRAD Demonstrates in-depth understanding of relevant operating systems concepts Presents a logical response using appropriate information and ideas from appropriate sources 	8
<ul style="list-style-type: none"> Provides a sound evaluation of MRAD Demonstrates well-developed understanding of relevant operating systems concepts Presents a logical response using appropriate information and ideas from appropriate sources 	7
<ul style="list-style-type: none"> Provides an assessment of MRAD AND Justifies this assessment with an in-depth discussion of MRAD in terms of advantages and disadvantages Demonstrates well-developed understanding of relevant operating systems concepts Presents a logical response using appropriate information and ideas from appropriate sources 	6
<ul style="list-style-type: none"> Provides a substantial discussion of MRAD in terms of a range of advantages and disadvantages May attempt to provide an unconvincing assessment of MRAD Demonstrates satisfactory understanding of relevant operating systems concepts 	5
<ul style="list-style-type: none"> Discusses MRAD in terms of some advantages and disadvantages May attempt to provide an unconvincing assessment of MRAD Demonstrates basic understanding of relevant operating systems concepts 	4
<ul style="list-style-type: none"> Describes some advantages and / or disadvantages of MRAD Demonstrates limited understanding of relevant operating systems concepts 	3
<ul style="list-style-type: none"> Outlines some advantages and / or disadvantages of MRAD <p>OR</p> <ul style="list-style-type: none"> Describes the components and / or operation of MRAD 	2
<ul style="list-style-type: none"> States an advantage or disadvantage of MRAD <p>OR</p> <ul style="list-style-type: none"> Makes general statements about MRAD 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Note: No more than six points shall be awarded if an assessment of MRAD is provided but the criteria upon which the assessment is based is not described.

Question 4a

Criteria	Points
<ul style="list-style-type: none"> Clearly describes, in detail, TWO possible changes to MRAD that are aimed at improving its performance 	3
<ul style="list-style-type: none"> Describes TWO possible changes to MRAD that are aimed at improving its performance <p>OR</p> <ul style="list-style-type: none"> Clearly describes, in detail, ONE possible change to MRAD that is aimed at improving its performance AND Outlines ONE other possible change to MRAD that is aimed at improving its performance 	2
<ul style="list-style-type: none"> Outlines TWO possible changes to MRAD that are aimed at improving its performance <p>OR</p> <ul style="list-style-type: none"> Describes ONE possible change to MRAD that is aimed at improving its performance 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Question 4b

Criteria	Points
<ul style="list-style-type: none"> Provides an insightful justification of two proposed changes to MRAD Critically considers the potential advantages and potential disadvantages of the proposed changes in justification Demonstrates in-depth understanding of relevant operating systems concepts 	5
<ul style="list-style-type: none"> Provides a detailed justification of two proposed changes to MRAD Considers the potential advantages and potential disadvantages of the proposed changes in justification Demonstrates well-developed understanding of relevant operating systems concepts 	4
<ul style="list-style-type: none"> Describes, in some detail, some potential advantages of one or both proposed changes to MRAD Demonstrates satisfactory understanding of relevant operating systems concepts 	3
<ul style="list-style-type: none"> Outlines some potential advantages of one or both proposed changes to MRAD 	2
<ul style="list-style-type: none"> States a potential advantage of a proposed change to MRAD 	1
<ul style="list-style-type: none"> Performance does not meet the criteria above 	0

Use of Academic English

Criteria	Grade
<ul style="list-style-type: none"> • Demonstrates satisfactory skills in using <i>Academic English</i> • Uses comprehensible language that is mostly or always correct and appropriate to audience, purpose and context • Makes a genuine attempt at questions worth in excess of 50 % of the available points 	Satisfactory
<ul style="list-style-type: none"> • Demonstrates limited skills in using <i>Academic English</i> AND • Uses mostly comprehensible language that is not always appropriate to audience, purpose and context due to ONE or more of the following issues: <ul style="list-style-type: none"> ○ Substantial spelling errors; ○ Substantial grammatical errors; ○ Frequent use of colloquialisms; ○ Frequent instances of inappropriate tone; OR ○ Infrequent inappropriate use of non-English words <p>OR</p> <ul style="list-style-type: none"> • Demonstrates basic skills in using <i>Academic English</i> AND • Uses comprehensible language that is mostly or always correct and appropriate to audience, purpose and context AND • Fails to make a genuine attempt at questions worth in excess of 50 % of the available points 	Unsatisfactory
<ul style="list-style-type: none"> • Demonstrates elementary skills in using <i>Academic English</i> • Uses language that is frequently confusing and inappropriate to audience, purpose and context due to spelling errors, grammatical errors, inappropriate tone, and/or use of colloquialisms and/or inappropriate use of non-English words to an extent that it substantially impedes understanding 	Highly Unsatisfactory
<ul style="list-style-type: none"> • Refused credit by the COMP3520 examiner due to persistent failure to make a serious attempt at using <i>Academic English</i>, e.g. by very frequent use of colloquialisms, deliberate repeated use of offensive language, excessive use of hybridized forms of English that are substantially influenced by non-English grammar, or frequently and blatantly inappropriate use of non-English words 	Non-serious

Discussion Document Mark Calculation Scheme

The discussion document mark y is calculated as follows where x is the concepts performance score:

- If the Academic English grade is “Satisfactory”, then $y = x$.
- If the Academic English grade is “Unsatisfactory”, then $y = \min(x, 7.5 + 0.5 * x, 21)$.
- If the Academic English grade is “High Unsatisfactory”, then $y = \min(x, 12)$.
- If the Academic English grade is “Non-serious”, then $y = 0$.

- Notwithstanding the above statements, in the event of disqualification from the assignment, $y = 0$.