

Web Programming 1

| Web Programming 1 (WEPR1) | |
|-------------------------------|---|
| Assignment Number | 1 |
| Assignment Name | Formative Assessment |
| NQF Level | N/A |
| Credits | N/A |
| Due Date | |
| Marks | Total marks = 190 Formative assessments through the semester contribute towards the student's module mark and are used to assess progress and identify areas for improvement. This formative assessment will contribute 25% towards final mark. Take note of the following with regards to late submissions: a. One (1) day late (-5%) b. Two (2) days late (-10%) c. Three (3) days late (-15%) |
| Individual / Group Assignment | Individual |
| Lecturer Information | |
| Lecturer | |
| Lecturer E-mail | |

Learning Objective:

Formative assessment 1 will cover the following concepts:

- JavaScript with React.JS

Attributes/Competencies Assessed:

Unit standards:

- 115367 - Demonstrate logical problem solving and error detection techniques
- 115392 - Apply principles of creating computer software by developing a complete programme to meet given business specifications

Scope:

The scope of this formative assessment is based on a solid knowledge of coding techniques used in JavaScript and React.JS supported by theoretical components..

Technical Aspects:

The number of pages for this formative assessment is 15 and the following font and size should be used in your report:

- Font: Arial
- Size: 12 and 14 for headings
- Font colour: Black

Save and upload the report as a .PDF (**No backgrounds**) with the following naming convention:

- a. Student no_StudentName_StudentSurname_ModuleCode_FA1 (**Only ZIP folder uploads**)

Ensure adequate referencing is used when using information from either books or internet. Plagiarism is a serious offence and can result in 0% for the assessment when excessive work is copied without proper referencing.

Please complete the following and sign as requested for Portfolio of Evidence (POE)

- a. Save code with screenshots of each question and upload when completed
- b. Pre-Assessment agreement (Save, sign and submit as PDF)
- c. Assessment Feedback Agreement (Save, sign and submit as PDF)

Mark allocation for report

See Mark allocation sheet below

Question 1

(20)

| <i>Unit standard</i> | <i>Specific outcome</i> | <i>Assessment criterion</i> |
|----------------------|-------------------------|-----------------------------|
| 115367 | 1 | 1 |
| | 1 | 2 |
| | 1 | 3 |
| | 1 | 4 |

1. Identify and discuss in short the different problem solving techniques. (8)
2. Identify and discuss situations where specific problem solving techniques would be more suitable than others. (6)
3. Considering question 1 (a) and the problem-solving techniques you have identified, create a visual representation or diagram for each of the problem-solving techniques mentioned. (6)

Question 2

(40)

| <i>Unit standard</i> | <i>Specific outcome</i> | <i>Assessment criterion</i> |
|----------------------|-------------------------|-----------------------------|
| 115367 | 4 | 1 |
| | 4 | 2 |
| | 4 | 3 |

1. Identify and discuss the three (3) types of errors. (17)
2. Identify and discuss in short "Error Isolation Techniques". (5)
3. Identify and discuss the various testing techniques. (18)

Question 3

(66)

| <i>Unit standard</i> | <i>Specific outcome</i> | <i>Assessment criterion</i> |
|----------------------|-------------------------|-----------------------------|
| 115392 | 1 | 1 |
| | 1 | 2 |
| | 1 | 3 |

| | | |
|--|---|---|
| | 1 | 4 |
| | 2 | 1 |
| | 2 | 2 |

1. Tic-tac-toe is a classic game played on a 3x3 grid. The objective is to be the first to form a line of three of your symbols (X or O) either horizontally, vertically, or diagonally. (50)
 - a. Here's a step-by-step description of how the game works:
 - i. The game begins with an empty 3x3 grid.
 - ii. Two players take turns, one using X and the other using O.
 - iii. A player selects an empty cell on their turn and places their symbol (X or O) in that cell.
 - iv. The turn then passes to the other player.
 - v. Steps iii and iv are repeated until a player wins or the game ends in a draw.
 - vi. A player wins if they have three of their symbols in a row, column, or diagonal.
 - vii. If all cells are filled and no player has won, the game ends in a draw.
 - b. Write the game using JavaScript and React.JS. (Paste your code below and also upload the working file that contains your code.
2. Do white-box testing for the above solution. (16)

Question 4 (64)

| <i>Unit standard</i> | <i>Specific outcome</i> | <i>Assessment criterion</i> |
|----------------------|-------------------------|-----------------------------|
| 115392 | 2 | 3 |
| | 2 | 4 |
| | 3 | 1 |
| | 3 | 2 |
| | 3 | 3 |
| | 4 | 1 |
| | 4 | 2 |
| | 4 | 3 |
| | 5 | 1 |

| | | |
|--|---|---|
| | 5 | 2 |
| | 5 | 3 |
| | 6 | 1 |
| | 6 | 2 |
| | 6 | 3 |
| | 6 | 4 |

1. Write the pseudocode for the Tic-Tac-Toe game: (23)
2. Draw a program flowchart for the above pseudocode. (18)
3. As part of your testing, create a trace table from your program flowchart. (13)
4. Create a short testing plan on how the users must use your program with appropriate screenshots for the user. (10)

| Mark allocation for student | | | |
|-----------------------------|--------------|--------------|--------------|
| Section | Sub-section | Maximum Mark | Learner mark |
| Body of the report | Question 1.1 | 8 | |
| | Question 1.2 | 6 | |
| | Question 1.3 | 6 | |
| | | | |
| | Question 2.1 | 17 | |
| | Question 2.2 | 5 | |
| | Question 2.3 | 18 | |
| | | | |
| | Question 3.1 | 50 | |
| | Question 3.2 | 16 | |
| | | | |
| | Question 4.1 | 23 | |
| | Question 4.2 | 18 | |
| | Question 4.3 | 13 | |
| | Question 4.4 | 10 | |
| | | | |
| Deductions | 1 day late | -5 | |
| | 2 days late | -10 | |
| | 3 days late | -15 | |
| Total: | | 190 | |

PRE-ASSESSMENT AGREEMENT

Assessment Preparation: Preparing the Candidate

| Student name and surname | | Date | |
|--|--|--------------|-----------------|
| | | Time | |
| Assessor name and surname | | Venue | |
| How to prepare the candidate | Document Requirements | Agree (tick) | Action Required |
| Explain to the candidate why you are meeting and the purpose of the assessment. | Assessment Policy Assessment process | | |
| Discuss the assessment plan in detail. | Assessment strategy | | |
| Explain assessment process, show assessment instruments to candidate and describe assessment conditions. | Assessment instruments | | |
| Identify the role-players during assessment. | Assessors Moderator | | |
| Describe the evidence required to be declared competent. | Examples of evidence | | |
| Explain how evidence will be judged. | Mark allocation explained | | |
| Explain to the candidate how to prepare: Give candidate assessment task description. | Assessment task description | | |
| Confirm with the candidate what he/she should bring to the assessment. | Detailed briefing on exact requirements to be given to candidate in writing | | |
| Ensure that candidate understands the procedures of all assessment practices. | Appeals Policy Appeals procedure Assessment Policy Assessment Procedure Moderation Policy Moderation procedure Verification Policy Verification Procedure | | |

| | | | |
|--|------------|--|--|
| Ask the candidate if he/she foresees any problems or identify any special needs. | List needs | | |
|--|------------|--|--|

| Agreed Assessment Plan | | | |
|---|-------------------------|------------------------|---------------------------------|
| Student name and surname: | | | |
| Assessor name and surname: | | | |
| Module name: | | Web Programming 1 | |
| Unit Standard/s: | | US115367 US115392 | |
| Type of Assessment i.e. Formative assignment, Formative test, Formative Practical, Summative etc. | | Formative Assessment 1 | |
| Special Assessment Requirements: | | N/A | |
| Event | Date, time and location | Resources required | Evidence to be generated |
| Assessments due date | | Assessments | Completed documentation |
| Complete activity on MyAIE and upload to MyAIE | | | Completed Portfolio of Evidence |
| Submit Portfolio of Evidence | | | |

| Assessor Roles and Responsibility | |
|-----------------------------------|--|
| Roles | Assessor Guide Feedback Agent Reviewer |
| Responsibilities | Consult candidate re-assessment, assessment process and plan. Agree assessment process and plan with candidate. Forward documentation to candidate: plan, guide and assessment instruments. Assess candidate with the use of different instruments. Provide feedback on assessment findings. Support candidate through assessment process. Source feedback from candidate on assessment process. |

| | |
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| | <p>Review assessment process and outcome.</p> <p>Use assessment process as opportunity to transform assessment activities and outcomes.</p> |
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| Candidate Roles and Responsibility | |
|------------------------------------|---|
| Roles | <ul style="list-style-type: none"> • Leaner • Feedback agent • Reviewer |
| Responsibilities | <ul style="list-style-type: none"> • Be available for assessment. • Be actively involved in the consultative process. • Learn from the assessment process. • Provide feedback to the assessor in terms of the assessment as learning activity. • Provide feedback to the assessor on the efficacy of the assessment process. • Review own role and assessor role in the assessment process. |
| Assessment Instruments | <ul style="list-style-type: none"> • Portfolio of Evidence • Questionnaire • Report • Presentation • Reflexive questions • Work sample • Practical's • Group Activity • Research activities |

| Assessment Process | |
|--|--|
| <ul style="list-style-type: none"> • Evaluation of POE addressing Essential Embedded Knowledge in unit standards. • Evaluation of Research Projects and other evidence addressing specific unit standards. • Consultation: assessment plan and assessment activities and instruments. Pre-assessment moderation and interviews conducted at this stage. • Observation: feedback on assessment against specific outcomes, critical outcomes in unit standards. • Feedback: to candidate regarding sufficiency of evidence and possible interview to gain supplementary evidence. • Feedback to candidate regarding assessment findings as well as review process. | |

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| Feedback | Written feedback to be given to all stakeholders at the end of the assessment process, as well as verbal feedback to the candidate during assessment activities. |
| Recording Process | Process and findings to be recorded and submitted for record keeping purposes as well as moderation and verification. |
| Review Process | The review process is the responsibility of the assessor and the candidate. Joint reviewing will take place after feedback has been given to the candidate. |
| Right to appeal | The candidate must be advised of the right to appeal. |
| Resources Required | Assignments • POE • Assessments • Guides |
| I confirm that: <ul style="list-style-type: none"> • I have been consulted on and have agreed to the training and assessment process as detailed in the assessment guide. • I have been advised of my right to appeal against any assessment that is unfair, unreliable, invalid or impracticable. • I have read and understood the appeal procedure. • I know that assessments may be moderated or verified by an external party. • The purpose of the assessment has been clearly explained to me. • The criteria have been discussed with me, and I know I will be assessed against these criteria. • I know when and where I will be assessed, and I was given fair notice. • I know how the assessment will be done, and any other requirements related to the assessment. | |

Signed: _____

Date: _____

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|-----------------------------|-----------|--|-------------------|--|
| Overall Assessment Decision | Competent | | Not yet competent | |
| Student's Signature | | | Date: | |
| Assessor's Signature | | | Date: | |
| Moderator's Signature | | | Date: | |

ASSESSMENT FEEDBACK AGREEMENT

Assessment feedback: Feedback to learner

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|----------------------------|------------------------|
| Qualification Name: | |
| Qualification SAQA Number: | |
| Subject Name: | Web Programming 1 |
| Subject Code: | WEPR1 |
| Assessment Name: | Formative Assessment 1 |
| Assessment Code: | WEPR1_FA1 |
| Assessment Type: | Formative |

| Feedback report | 1st Attempt | | 2nd Attempt | |
|-------------------------|-------------|-----|-------------|-----|
| | C | NYC | C | NYC |
| Unit standard Number(s) | | | | |
| US115367: | | | | |
| SO1;AC1 | | | | |
| SO1;AC2 | | | | |
| SO1;AC3 | | | | |
| SO1;AC4 | | | | |
| SO4;AC1 | | | | |
| SO4;AC2 | | | | |
| SO4;AC3 | | | | |
| | | | | |
| US115392: | | | | |

| | | | | |
|---------|--|--|--|--|
| SO1;AC1 | | | | |
| SO1;AC2 | | | | |
| SO1;AC3 | | | | |
| SO1;AC4 | | | | |
| SO2;AC1 | | | | |
| SO2;AC2 | | | | |
| SO2;AC3 | | | | |
| SO2;AC4 | | | | |
| SO3;AC1 | | | | |
| SO3;AC2 | | | | |
| SO3;AC3 | | | | |
| SO4;AC1 | | | | |
| SO4;AC2 | | | | |
| SO4;AC3 | | | | |
| SO5;AC1 | | | | |
| SO5;AC2 | | | | |
| SO5;AC3 | | | | |
| SO6;AC1 | | | | |
| SO6;AC2 | | | | |
| SO6;AC3 | | | | |
| SO6;AC4 | | | | |
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| General feedback to learner (Attempt 1) |
| Supply comprehensive feedback why learner is found NYC |
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|-----------------------------|--|-------|--|
| Learner Number: | | | |
| Learner name and surname: | | Date: | |
| Learner Signature: | | | |
| Lecturer name and surname: | | Date: | |
| Lecturer Signature: | | | |
| Assessor name and surname: | | Date: | |
| Assessor Signature: | | | |
| Moderator name and surname: | | Date: | |
| Moderator Signature: | | | |

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| Note to learner |
| <p>Review the feedback provided by your lecturer to check that you have been found competent in this assessment. If there are any areas where you have been found not yet competent, you must redo those parts of the assessment and resubmit within the stipulated time frame.</p> <p>The section below will only be completed in cases where the learner was asked to</p> |

resubmit parts of the assessment where they were found not yet competent.

General feedback to learner (Attempt 2)

Supply comprehensive feedback why learner is found NYC

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|-----------------------------|--|-------|--|
| Learner Number: | | | |
| Learner name and surname: | | Date: | |
| Learner Signature: | | | |
| Lecturer name and surname: | | Date: | |
| Lecturer Signature: | | | |
| Assessor name and surname: | | Date: | |
| Assessor Signature: | | | |
| Moderator name and surname: | | Date: | |
| Moderator Signature: | | | |