Middlesex University Dubai

**Chinnu Mary George**

Computer Engineering and Informatics

# Web-Based Mobile App Development

CST3145

Module Leader(Hendon): Luca Piras

Module Coordinator ( Dubai): Chinnu Mary George

Autumn 2023 – 2024

24 weeks

Document Version 1

**Online location of handbook**

This handbook can also be accessed via My Learning at: *http://unihub.mdx.ac.uk*

**Other formats available**

This handbook is available in a large print format. If you would like a large print copy or have other requirements for the handbook, please contact

Campus Central-

**AskMDX service:** https://askmdx.mdx.ac.ae

We can supply sections from this publication as:

- a Word document with enlarged type — sent by email or Onedrive
- printed copy with enlarged type
- printed copy on non-white paper

Other formats may be possible. We will do our best to respond promptly. To help us, please be as specific as you can about the information you require and include details of your disability.

**Disclaimer**

The material in this handbook is as accurate as possible at the date of production. You will be notified of any minor changes promptly. If there are any major changes to the module, you will be consulted prior to the changes being confirmed. Please check the version number on the front page of this handbook to ensure that you are using the most accurate information.

**Other documents**

Your module handbook should be read and used alongside your programme handbook and the information available to all students on My Learning and UniHub, including the Academic Regulations. Your programme handbook can be found on the My Learning programme page for your course. The Dubai Campus Guide can be found at mdx.ac.ae/life-at-university/current-students/campus-guide

# Table of Contents

## 1. Welcome

*This module teaches you how to build an app that run online and iOS or Android devices using the web technologies that you started in the second year. The student will be expected to pursue the latest progress in the Web app development through group discussions and self-study.*

## 2. The module teaching team

Please see below the details of the teaching team for this module.

| ***Module leader: Chinnu Mary George*** | | |
|---|---|---|
|  | Room number: | Room 302 , Block 16 |
| | Email: | c.m.george@mdx.ac.ae |
| | Telephone number: | 04 367 8100 |
| | Office hours: | 8:30am to 9:30am<br>3pm to 4pm |

## 3. Communication with the teaching team

*You are welcome to reserve an appointment during my office hours for timings that might suit us both.*

*Please email me your appointment request along with your inquiry from your university email account / use this appointment booking link: insert a link from Calendly or Microsoft Bookings, etc. Don't forget to state your student ID number and module code and name in your email/online booking request.*

*If you turn up at the door unannounced or phone at an unsuitable time, then you are far less likely to make contact.*

*I will send urgent and/or individual messages about the module to you by email and/or the Microsoft Teams platform, so it is important that you read your university email and check your MS Teams notifications regularly.*

*I recommend that you check your email and MS Teams accounts at least three times a week. I will also use these accounts to tell you about events (guest lectures or academic enrichment sessions, for example) and career opportunities (employability workshops, internships, job offers and so on) that will help enhance your learning.*

*If you have any queries, please send an email and I will respond to you within 3-5 working days. If the matter is urgent, please put the word 'URGENT' in the subject line and I will try and get back to you. Use your Middlesex email address when contacting members of staff to avoid emails being caught in University spam filters. Please also always include your student number when contacting staff.*

*For all queries that don't relate to your programme of study (e.g. fees, wellbeing, accommodation, IT issues, etc.) you should directly contact Campus Central AskMDX (https://askmdx.mdx.ac.ae/) rather than your module tutors. This will help ensure you get a response more quickly.*

*Check the Middlesex Dubai website, UniHub and MDX Central App regularly during term-time for any other notifications or announcements. Attempt to look for basic answers to questions (e.g. by using UniHub, Dubai Campus Guide or MDX Central App) before contacting staff.*

*Take time to write polite emails (as you would in professional employment) in all communications with staff. This should include use of a clear subject line to indicate the subject of your message including module/programme name or code.*

*Respond to emails from staff within three working days (i.e. not including weekends, public holidays or University closure days) and allow staff the same period of time (three working days) to respond to your queries. Whilst staff may occasionally choose to respond to emails outside of normal working hours (Monday – Friday, 9am – 5pm), this should not be expected as standard. If you don't hear back from a member of staff within the three working days timeframe, then sending a reminder email is encouraged. You can also try raising the question with a different member of staff – e.g. your Campus Programme Coordinator. You can find contact details for these members of staff within MDX Central App. If a staff member is away from work, they may have set up an 'out of office' automated email that will provide instructions of how you can get your query answered in their absence – so make sure that you carefully read any such messages.*

*Contact your Module Coordinator(s) and / or the Campus Programme Coordinator if you are absent for any period and cannot attend scheduled teaching.*

*It is essential that you have access and regularly check your Middlesex email address. Your module leader will use that address to send announcements.*

## 4. Module overview

***All classes, lab sessions, seminars, and tutorials will be taught in person***

**Aims**

This module aims to develop a good understanding of the latest app programming languages, frameworks, and tools to develop modern software that can be deployed on platforms including desktop, web, and mobile devices (both Android and iOS). The module will cover the latest programming language standards that are fundamental to app development. Modern programming frameworks will be introduced to simply the otherwise complex development workflow and introduce the ability to target multiple platforms such as Android and iOS. The module will cover the three most important components of a complete mobile app: front end, back end, and system administration.

**5.2 Learning Outcomes**

5.2.1 Knowledge

On completion of this module, the successful student will be able to:
1. Understand the latest programming standard required for advanced app development;
2. Understand the latest app development frameworks and their strength and weakness;
3. Understand the back end server and database technologies that provide data access and storage;
4. Understand essential app development tools such as version control and dependency management, transpiling, and behaviour-driven development.
5. Understand the methodology of developing platform-independent mobile app and the strength and weakness of existing libraries.

5.2.2 Skills

This module will call for the successful student to demonstrate:
6. Ability to develop efficient and robust app following the latest programming standard.
7. Ability to design and implement modern app utilising the latest software frameworks.
8. Ability to host app online and design/manage serverless data storage;
9. Ability to efficiently deploy, config, and administrate essential tools required for advanced web app development workflow such as version control, dependency management, transpiling, and behaviour-driven development.
10. Ability to develop platform-independent mobile apps using Web-based technologies.
11. Ability to design and evaluate cross-platform mobile apps based on customer specifications.

**5.3 Syllabus**

- Object-oriented programming in functional language such as JavaScript;
- Advanced features in the latest programming language standard such as ECMAScript 6;
- Version control and issue tracking with Git and Github.com;
- Software testing library such as Jest;

- Project dependency and compile tools such as NPM and Webpack.
- Full-stack software framework such as Vue.js:
    - UI Component;
    - User registration and authentication;
    - Serverless data storage and sharing (such as Firebase);
    - Messaging;
    - Web APIs (such as Facebook and Google Maps);
    - Hardware APIs (such as camera, gps, and other sensors);
- Platform-independent mobile app development with framework such as NativeScript;

**5.4 Learning and Teaching Strategy**

The focus of teaching will be a mixture of lectures and lab-based practical work. Besides introducing core concepts, the lectures will include live coding to demonstrate the new concepts and introduce practical coding skills. Various tools, such as Git, NPM, and Postman will be introduced as they become necessary.

***Assessment scheme***

The module will be assessed by coursework only, and there is no exam. **Students must get overall at least 40% to pass the module. It is not required to pass each coursework to pass the module.**

The coursework gives students the opportunity to put into practice all the theories, frameworks, and libraries covered in the module. The three pieces of coursework focus on the three aspects of a complete mobile app: front end (coursework 1), back end (coursework 2), and administration (coursework 3). Each coursework is built upon the one(s) before it.

**Coursework 1** (individual) will allow students to apply the knowledge and features in the latest programming standard to design and build the front-end of an app using one of the architecture framework (Outcomes 1, 2, 5, 6, 7, 10, and 11).

Tasks shall include the design of the app architecture and the implementation of its features with the advanced features in the latest programming standard. Through the challenges such as understanding modern architecture and implementing advance web features, students will improve their knowledge and skills for industrial software development.

The format of this coursework **will consist of a formal report and a demonstration of the resulting app front end.**

**Coursework 2 (Individual)** will allow students to design and implement the back end of the app, including the user management, data storage, and messaging. **(Outcomes 3, 4, 5, 8, 9, 10, and 11).**

Tasks include create user registration and login with both email/password and social login such as Google+ and Facebook; hosting mobile app online so it can be distributed and accessed remotely; design and the create the serverless storage that records all the user data.

The format of this coursework will consist of a formal report and a demonstration of the resulting app back end.

**Coursework 3 (Individual)** will require students to create the app administration system that allows the app administrator to manage app settings, user, and data **(Outcomes 2, 3, 5, 7, 8, 10, and 11).**

This coursework requires the students to design and develop the management/administration system that allow system users to monitor and adjust the app. The work will include the design and implementation of a series of visual analysis functions for the understanding the system status and making sense of its user behaviours. This will be built upon the front and back end work completed in the first two coursework.

The format of this coursework will consist of a formal report which demonstrates the design and development process and a demonstration of all the features.

### Assessment Weighting

Coursework 1 (40%)
Coursework 2 (30%)
Coursework 3 (30%)

**All the coursework has to be demonstrated. Coursework submission that is not demon-strated by the deadline will receive zero mark. During the demonstrate, part of the work will receive zero mark if it cannot be explained satisfactorily during the demonstration.**

## 6. Learning resources

This module has a variety of learning resources available for you to use to support your learning. These include recorded lecture, lecture slides, feedback, and key reading materials. These can be accessed online via the module page. Please visit the module page regularly to make use of these.

6.1 Reading List

Your online reading list can be accessed from the My Study area of UniHub (http://readinglists.mdx.ac.uk/lists/78D0F586-A45D-60DB-32A7-5D5EC274302B). This highlights recommended reading for this module. The course website has many links to other online resources.

## 7. Expectations of studying this module

### 7.1 Attendance and Engagement

The University's formal regulations about attendance are located in (section C2 in the 'University Regulations' section available here: www.mdx.ac.uk/about-us/policies. The main points are:

You should attend and engage with all scheduled classes and prescribed activities. Studies have shown that a good student engagement has a positive impact on performance and therefore is an important factor in helping you to fulfill your academic potential. In addition, for those who are on student visas, Dubai's regulatory authorities require attendance to be monitored.

Your lecturers will maintain attendance records during scheduled teaching sessions using the MDX Central app. You are expected to follow any guidelines and instructions provided for proper recording of your attendance for your learning sessions.

The MDXapp (available on iOS and Android) allows students to register their attendance at timetabled classes with a click of a button. All you need to do is:

1. Connect to the internet using the #mdxDUBAI Wi-Fi network
2. Open your MDXApp
3. Log-in via your Campus User ID (M00xxxxx) and password
4. Ensure that you have given permission to the MDXApp to access your smartphone's location and camera settings
5. Find the correct module and timetabled class via the Calendar
6. When the tutor puts up the class QR code, use the scanner provided within the MDXApp to scan the QR code.
7. You will get an automated notification onscreen within the App saying your attendance has been recorded

Middlesex University Dubai supports students, enabling them to achieve their full potential. We provide this support through a number of strategies, all of which provide our students with a supportive learning environment . Online support material on MyUniHub is provided as a guide to the content of the class but is no substitute for interaction with your tutor and classmates. In accordance with University Regulation C2.1 for taught programmes of study, it is the responsibility of students to attend scheduled classes and prescribed activities for the modules on which they are registered.

Further information on engaging with your programme will be available at your Induction.

If you experience difficulties beyond your control, which prevents you from engaging with your module, you should notify your tutor and CampusCentral, who may be able to offer support and guidance.

Where your attendance and engagement fail to meet the minimum levels required (normally 75% of scheduled learning sessions and activities but could be higher) to attain the learning outcomes of the module, you may be excluded from the assessment. You may have the opportunity of taking the whole module again with permission from the Programme Leader, without grade penalty, though you will have to pay the relevant tuition fee for the module. (Lecturers should only remove this if not applicable)

for those who are on student visas, Dubai's regulatory authorities require attendance to be
monitored.

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Further information on engaging with your programme will be available at your Induction and updates online at UniHub at https://unihub.mdx.ac.uk/study/assessment/attendance

Your lecturers will maintain attendance records during scheduled teaching sessions using a variety of tools such as Microsoft Teams lists. You are expected to follow any guidelines and instructions provided for proper recording of your attendance for your learning sessions.

If you experience difficulties beyond your control, which prevents you from engaging withyour module, you should notify your tutor and Campus Central, who may be able to offer support and guidance.

Where your attendance and engagement fail to meet the minimum levels required (normally 75% of scheduled learning sessions and activities but could be higher) to attain the learning outcomes of the module, you may be excluded from the assessment.

**7.2 Professional behaviour**

The programme of study you are undertaking is underpinned by developing professional behaviour and attitude. You are expected to behave in a professional, supportive manner to your peers and teachers – and the same applies to your anyone the University comes in contact with related to your study. The Student Code of Conduct and Discipline Rules are available here: www.mdx.ac.ae/about-us/university-regulations/student-conduct-and-discipline-rules.

You must come to sessions prepared and ready to contribute where appropriate.

Please remember that when you are on campus, your University ID should be carried with

you always and you must be able to identify yourself if asked to do so. You must also comply with community health precautions, and other health and safety protocols.

Please conduct your email communication with fellow students, tutors and all relevant staff in a formal and courteous manner.

Unacceptable Behaviours in Face-to-Face Interactions

- Aggressive or abusive behaviour, including shouting, bullying behaviour, physical violence, rudeness, and making threats, inappropriate gestures, or indecent comments
- Persistently interrupting or disrupting events
- Engaging in antisocial behaviour that impacts others
- Making derogatory or discriminatory remarks about others
- Using offensive language or engaging in personal verbal attacks
- Discussing sensitive matters in public settings
- Making unsupported claims that the University or individual staff have committed criminal, corrupt, biased or perverse conduct without any evidence
- Demanding that staff set aside or make an exception to University regulations
- Demanding responses within an unreasonable timescale or insisting on seeing specific staff members when not feasible
- Refusing to accept outcomes or solutions offered or repeatedly seeking further explanations without new information or evidence

Actions to be taken by the University or Staff

- Highlight the unacceptable behaviour(s) and explain why and what effect it is having
- Pause or end the discussion or interaction if the unacceptable behaviour remains persistent
- In serious cases, ask for removal of individuals from University facilities and report the incident to relevant Dubai authorities
- Restrict personal contact and require communication via email or written channels and/or through third parties
- Referral to appropriate disciplinary procedures

For more information, refer to the Middlesex University Dubai Regulations: www.mdx.ac.ae/about-us/university-regulations/

### 7.3 Laptops, Mobile phones and other devices

There are many advantages of using technology in higher education as long as we are able to address the associated challenges. You are encouraged to use your laptops, mobile phones,

tablets and other communication devices as part of learning activities and for some sessions, your tutor may even require them. You must ensure that your devices do not disrupt your learning or that of other students or your tutors. Unless you are using technology together with your tutor as part of a learning activity, all mobile phones and other communication devices must be switched to silent. Calls, texts and social media activities should be avoided during the taught session unless agreed with the tutor before the start of the session. Disruptive use of devices during class can lead to students being asked to leave and face disciplinary action.

### 7.4 Academic Integrity and Misconduct

Academic misconduct is a breach of the values of academic integrity. It can occur when a student cheats in an assessment or attempts to deliberately mislead an examiner that the work presented is their own when it is not. Academic misconduct is a corrosive force in the university's academic life; it jeopardises the quality of education and devalues the degrees and qualifications of the University. It includes, but is not limited to, plagiarism, self-plagiarism, commissioning or buying work from a third party or copying the work of others, and breach of examination rules.

Students who attempt to gain an unfair advantage over others through academic misconduct will be penalised by sanctions according to the severity of the offence, which can include exclusion from the University. Taking unfair advantage over other students in assessment is considered a serious offence by the University. Action will be taken against any student who contravenes the regulations through negligence, foolishness or deliberate intent. Academic misconduct takes several forms, in particular:

Plagiarism – using extensive unacknowledged quotations from, or direct copying of, another person's work and presenting it for assessment as if it were your own effort. This includes the use of third party essay writing services.

Collusion – working with other students (without the tutor's permission) and presenting similar or identical work for assessment.

Infringement of Exam Room Rules – Communication with another candidate, taking notes to your table in the exam room and/or referring to notes during the examination.

Self-Plagiarism – including any material which is identical or substantially similar to material that has already been submitted by you for another assessment in the University or elsewhere.

Purchasing or Commissioning - attempting to purchase or purchasing work for an assessment including, for example from the internet, or attempting to commission, or commissioning someone else to complete an assessment. Essay mills are now illegal entities, and use of them is facilitating an illegal activity.

Unauthorised use of Generative Artificial Intelligence (AI) - You cannot use Generative AI tools in your assessments unless specified by the module leader. Where the use of Generative AI is allowed you must provide as a minimum

- Written acknowledgment of the use of generative artificial intelligence, the extent of use, and how generated materials were used.
- Descriptions of how the information was generated (including the prompts used).
- Where generated material has not been adapted, citing and referencing using closest source types in the relevant referencing style (e.g. “artificial intelligence” or “non-recoverable sources”)

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Links to the relevant University Regulations and additional support resources can be found here:
Section F: Academic Integrity and Misconduct:
https://www.mdx.ac.uk/about-us/policies

Referencing & Plagiarism: Suspected of plagiarism?:
http://libguides.mdx.ac.uk/c.php?g=322119&p=2155601

Referencing and avoiding plagiarism:
https://unihub.mdx.ac.uk/study/writing-numeracy/awl-resources/writing

Student Success Essentials (previously called Becoming a successful student) Course which includes Academic Integrity
Access to course: You will have to log into to MyUniHub and then MyLearning to access the course

Full details on academic integrity and misconduct and the support available can be found at Academic Integrity | UniHub (mdx.ac.uk) as well as on the Campus Guide at www.mdx.ac.ae/life-at-university/campus-guide.

Our Library and Centre for Academic Success (CAS) runs workshops and clinics to help you learn how to avoid plagiarism and how to reference correctly.To get support and guidance on academic writing techniques that meet our expectations of Academic Integrity, please contact a staff member in the Centre for Academic Success (cas@mdx.ac.ae).

### 7.5 Extenuating circumstances

There may be difficult circumstances in your life that affect your ability to meet an assessment deadline or affect your performance in an assessment. These are known as Extenuating Circumstances or ‘ECs’. Extenuating Circumstances are exceptional, seriously adverse and outside of your control.

As a student, it's your responsibility to let the University know about any extenuating

circumstances that have affected your work at the time they occur. You can request a deferral of assessment to the next assessment period, or your circumstances can be taken into account by the Programme Assessment Board when making its progression/finalist decision. If you are requesting a deferral of an assessment, you should submit an application by the deadline for completion of the assessment. If you are unable to do this, evidence must be provided which demonstrates the reason for not being able to meet the deadline, in addition to the evidence for the claim.

Extenuating Circumstances can only be requested for summative assessment, not for formative assessment. For example, only for assessment that counts towards your overall module grade.

You MUST provide evidence/supporting statement with any request for extenuating circumstances to be considered (except in cases of self-certification*) for a deferral to the next assessment opportunity, or for Extenuating Circumstances to be noted at the Programme Assessment board.

*Self-certification can only be used when an extenuating circumstance has affected you for period of 7 days or less, i.e. a short illness that occurs at the point of assessment submission. You can apply for the following outcomes due to your Extenuating Circumstances. Please note the outcome of any Extenuating Circumstances application may be different from what has been requested:

Deferral
Your circumstances have impacted on your ability to sit your exam or complete and/or submit your assessment. You are requesting an opportunity to sit the exam or submit the work at the next assessment opportunity

ECs noted for the board only
Your circumstances may have affected your performance on other assessments for one or more modules and, although you have sat the exam or submitted the assessments, you wish the Programme Assessment Board to be aware of this in case there is a borderline decision to be made regarding your progression/finalist decision.

Deferral & ECs noted for the board
Your circumstances have impacted on your ability to sit your exam or complete and/or submit your assessment. You are requesting an opportunity to sit the exam or submit the work at the next assessment opportunity.

There could be progression (i.e. additional year(s) of study), financial (tuition fees and scholarships) and student visa implications as a result of deferring your assessment.

For information about how to apply for Extenuating Circumstances please see information available on https://unihub.mdx.ac.uk/study/assessment/extenuating-circumstances.

### 7.6 Recording of Lectures

As per section C16 of Middlesex University Regulations unauthorised audio recording, video recording or photography of lectures, or other forms of learning activities by students, is prohibited.

Limited recording by students may be permitted under exceptional circumstances only (for example, for an individual student as a "reasonable adjustment", within the meaning of the UK's Equalities Act), upon explicit permission provided by the tutor and, where appropriate, by everyone else involved. Permission for recording does not imply permission for publication (e.g. on Facebook, YouTube, or other Social Media), or distribution to others. Unauthorised recording of such activities violates the privacy of persons involved, may infringe on copyrights and intellectual property rights of others and can be intrusive and disruptive in a learning environment. In all cases, violation of this regulation will be managed under the student disciplinary procedures.

In addition to a violation of University Regulations, unauthorised recordings may expose students to other unintended consequences, as per UAE law. The United Arab Emirates has several laws (for example, Federal Law No. 5 of 2012 on Combatting Cybercrimes and its amendment by the Federal Law No. 12 of 2016) for the protection of privacy and reputation and defamation. Some of the acts that could amount to a criminal offence are:

- possessing on an electronic device a photo taken without the subject's consent
- posting other people's pictures or videos online or on social media (including WhatsApp) without their consent
- tagging a person without their consent
- threatening or insulting people online
- spreading information via social media, that is not verified by the official sources
- gossiping about people or maligning them.

Further guidance is available within the University Regulations and via the Quality Office (qualityoffice@mdx.ac.ae)

## 8. Assessment

### 8.1 Formative assessment

Formative assessment is completed during your year of study and provides the opportunity to evaluate your progress with your learning. Formative assessments help show you and us that you are learning and understanding the material covered in this course and allow us to monitor your progress towards achieving the learning outcomes for module. Although formative assessments do not directly contribute to the overall module mark they do provide an important opportunity to receive feedback on your learning.important opportunity to receive feedback on your learning.

| Formative assessment | Deadline |
|---|---|
| Coursework 1 (week 7): Web App with Vue.js(40%) | *Week 7* |
| Coursework 2 (week 15): Node.js server and Express.js API(30%) | *Week15* |
| Coursework 3 (week 22): Progressive and Mobile App (30%) . | *Week22* |

### 8.2 Summative assessment

Summative assessment is used to check the level of learning at the end of the course. It is summative because it is based on accumulated learning during the course. The point is to ensure that students have met the learning outcomes for the CST3145 course and are at the appropriate level. It is the summative assessment that determines the grade that you are awarded for the module. There are 3 assessment components in this module :

The table below specifies the associated deadlines:

| Summative assessment | Weighting | Deadline | Feedback |
|---|---|---|---|
| Coursework 1 (week 8): Web App with Vue.js | *40%* | *Week 8* | *Week 7* |
| Coursework 2 (week 15): Node.js server and Express.js API | *30%* | *Week16* | *Week15* |
| Coursework 3 (week 22): Progressive and Mobile App (30%). | *30%* | *Week 22* | *Week22* |

**The module will be assessed by coursework only, and there is no exam. Students must get overall at least 40% to pass the module. It is not required to pass each coursework to pass the module**.

Before you submit your work for final grading, please ensure that you have accurately referenced the work. It is your responsibility to check spelling and grammar. If you have submitted a formative or draftassessment, you will receive feedback but no grade. The

comments should inform you about how well you have done or tell you about the areas for improvement. All assignments should be submitted online unless specified in the assessment briefs.

Reassessment for this module normally takes place in the following way:

If students fail the module (fail grades are 17, 18, 19, 20 with an overall mark between 0% and 39%) they are eligible for a re-sit. Students will be re-examined in the assessed component(s), which they have failed (please note that this can be a different assessment task). Information on what element to re-sit will be made available on the module's myUniHub page approximately two weeks after the module results have been published on myUniHub. Reassessment will take place in July/August. Normally you would be entitled to only one reassessment opportunity if you don't pass.

Further information is available athttps://unihub.mdx.ac.uk/study/assessment/regulations

**Mapping of numerical grades and % marks**

## MDX 20-point conversion

| 20-point scale | General scale | General scale (full ranges) |
|---|---|---|
| 1 | 80% - 100% | 79.50% - 100% |
| 2 | 76% - 79% | 75.50% - 79.49% |
| 3 | 73% - 75% | 72.50% - 75.49% |
| 4 | 70% - 72% | 69.50% - 72.49% |
| 5 | 67% - 69% | 66.50% - 69.49% |
| 6 | 65% - 66% | 64.50% - 66.49% |
| 7 | 62% - 64% | 61.50% - 64.49% |
| 8 | 60% - 61% | 59.50% - 61.49% |
| 9 | 57% - 59% | 56.50% - 59.49% |
| 10 | 55% - 56% | 54.50% - 56.49% |
| 11 | 52% - 54% | 51.50% - 54.49% |
| 12 | 50% - 51% | 49.50% - 51.49% |
| 13 | 47% - 49% | 46.50% - 49.49% |
| 14 | 45% - 46% | 44.50% - 46.49% |
| 15 | 42% - 44% | 41.50% - 44.49% |
| 16 | 40% - 41% | 39.50% - 41.49% |
| 17 | 35% - 39% | 34.50% - 39.49% |
| 18 | 30% - 34% | 29.50% - 34.49% |
| 19 | 0% - 29% | 0.01% - 29.49% |
| 20 | Non-participation | 0% |

We now look at each component of the assessment for this module in detail.Each of the following tables providesan overview of the requirements for each component.The support provided for each component along with the feedback arrangements, is also detailed below.

### 8.2.1. Assessment 1(Web App with Vue.js)

| Web App with Vue.js | |
|---|---|
| **Module code** | ***CST3145*** |
| **Module title** | Web-Based Mobile App Development. |
| **Submission deadline date, time** | Week 8 (to be marked at LAB) |
| **Feedback type &date** | Students will be given feedback and marked by the lab tutor. |
| **Task** | For this coursework, you need to create the Front-End of a fictitious web app, which allows students and their parents to buy after school classes and activities.<br><br>The second coursework will add the Back-End and make the app to work offline, and the third coursework will turn it into a Mobile App. |
| **Assignment type** | The web app must be demonstrated |
| **Requirements** | **Submission**<br><br>Instructions for the text area to compile when uploading your submission:<br><br>please, indicate the same information requested below for the README file<br><br>Instructions for the zip file, it must contain the following elements, and must be no more than 10MB:<br><br>your code.<br>a README file with the following 2 links:<br>[Vue.js App] the link to your GitHub Repository.<br>[Vue.js App] the link to your GitHub Pages from where the app can directly run.<br><br>Overall Requirements and Instructions<br><br>The coursework does not require any backend storage such as a (MongoDB) database. For this CW it is not required to store data related to completion of orders.<br>You can use an external CSS library such as Bootstrap. Make sure the library file or online link is included in the submission. |

| | |
|---|---|
| | A submission could receive zero marks if it fails any of the following requirements:<br><br>the App must be implemented by using Vue.js framework. Other frameworks or related technologies (e.g., React, AngularJS, Svelte, Apache, XAMPP) are NOT allowed.<br>Any JavaScript library is NOT allowed if it duplicates or replaces features provided by Vue.js framework. Check with the tutor if not sure. |
| **Assessed learning outcome (s)** | *1,2* |
| **Assessmentweighting %** | *40%* |
| **Key reading and learning resources** | This module has a variety of learning resources available for you to use to support your learning. These include recorded lecture, lecture slides, feedback, and key reading mate-rials. These can be accessed online via the module page. Please visit the module page regularly to make use of these.<br>Your online reading list can be accessed from the My Study area of UniHub (http:// readinglists.mdx.ac.uk/lists/78D0F586-A45D-60DB-32A7-5D5EC274302B). This highlights recommended reading for this module. The course website has many links to other online resources. |

**Assessmentmarking criteria rubric (CW1)**

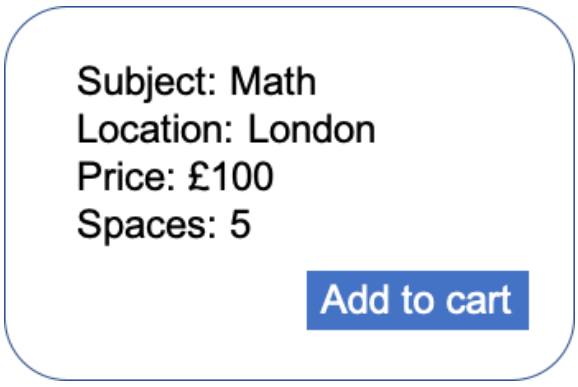



Figure 1. A Lesson element of the App

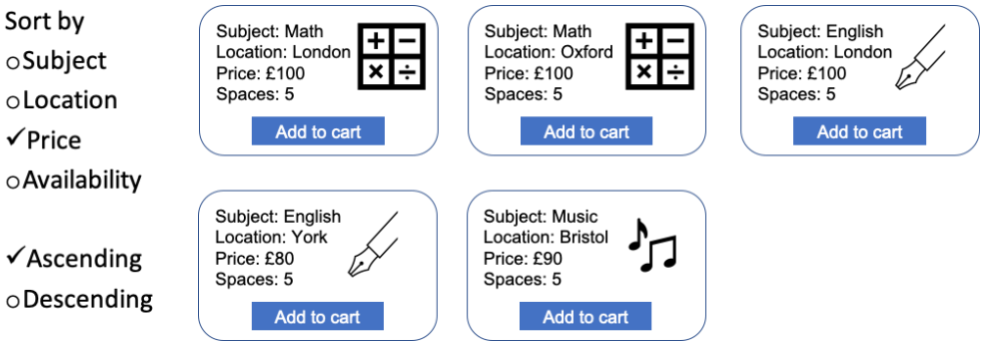



Figure 2. Sort functionality and List of Lessons

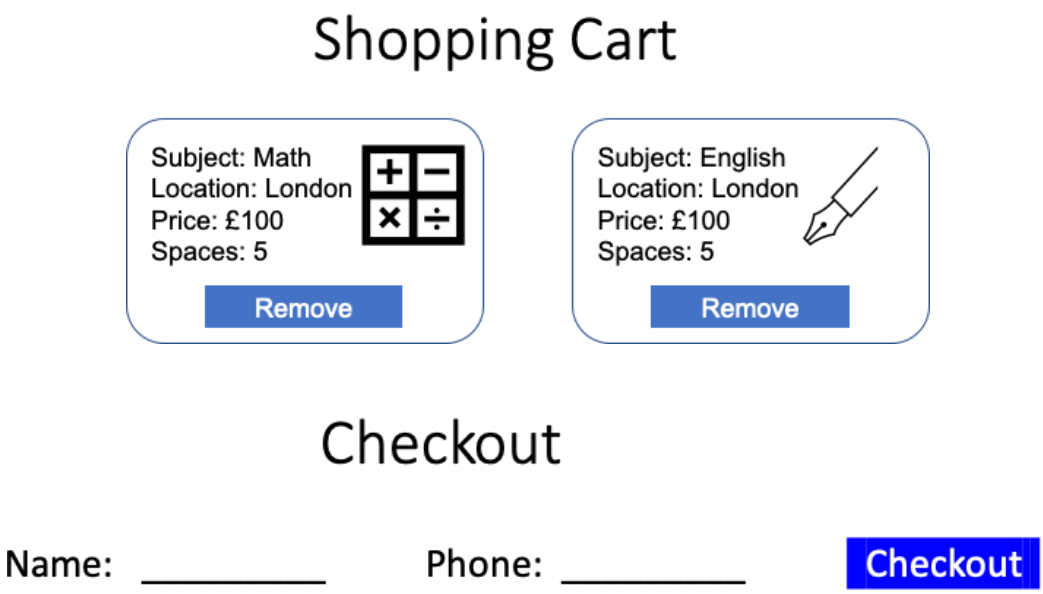



*Figure 3. Shopping Cart and Checkout*

## Marking criteria

- **General Requirements (10%):**

  A. [GitHub Repository] the code of the Vue.js App must be hosted in aGitHub repository, with at least 10 commits (2%).
  B. [GitHub Pages] the Vue.js App must be hosted and demonstrated on/via GitHub Pages (3% if requirement is fully covered, 1% if app isrunning locally).
  C. [Vue.js framework, but NOT SFC] the App must be implemented using Vue.js framework, but not using Single File Component

(SFC) (SFC will be covered in the last part of the module) (5% if requirement is fullycovered, 0% if app is implemented with SFC).

- **"Display List of Lessons" functionality (5%):**

  A. there should be at least 10 lessons, and each lesson should have 5spaces (or availability) (1%).
  B. each lesson should have at least (2%): Subject, Location, Price, Spaces (or availability: this indicates how many spaces are left), a FontAwesome icon (or an Image).
  C. the list of lessons must be stored as an array of JSON objects, one object for each lesson, in a separate JavaScript file, such as lessons.jsor lessons.json (1%).
  D. v-for must be used for the display of the lesson list (1%).

- **Sort functionality (5%):**

  A. the user can choose to sort the lessons by one of the following attributes (4%): subject (1%), location (1%), price (1%), or spaces (i.e.availability) (1%).
  B. there must be an option to sort in ascending or descending order (orderdependent on the sorting attribute selected), which should work for each of the attributes (1%).

- **"Add to Cart" functionality (5%):**

  A. each lesson must have an "Add to Cart" button (1%).
  B. the button is always visible, and only enabled when space is largerthan 0 (1%).
  C. clicking the button once (related interactions implemented by using v-on) will add one space to the shopping cart, reducing the remaining space by one (2%).
  D. once there is no more space, i.e. space = 0, the "Add to cart" button should be disabled but still visible, i.e. clicking it will not further reduce"space" nor add lessons to the cart (1%).

- **"Shopping Cart" functionality (5%):**

  A. the shopping cart button should only be enabled after at least onelesson is added to cart (1%).
  B. clicking the shopping cart button should show the cart page, andclicking the button again goes back to the

lesson page (1%).

C. the shopping cart, in the cart page, should show all the lessons added(1%).
D. in the shopping cart page, the user should be able to remove lessonsfrom the shopping cart; the removed lesson is added back to the lesson list (in the lesson page) (2%).

- **Checkout functionality (5%):**

A. the checkout is part of the shopping cart page (1%).
B. a user must provide “Name” and “Phone number” before can click onthe “checkout” button (1%).
C. the “Name” must be letters only and the “Phone” must be numbers only; the check must be done using JavaScript (suggestion: regularexpressions) (1%).
D. the “checkout” button is always visible and only enabled after valid“Name” and “Phone” are provided (1%).
E. clicking the “checkout” button should display a message confirming theorder has been submitted (1%); it is not required to save the order, in fact displaying the message completes the process, which is enough for this CW.

- **Search Functionality (5%):**

  - [Intro] this is the challenge component of this coursework, and it is not expected that everyone can complete it. The solution is not covered in thelecture or lab, so you need to research it.

  - [Feature Description] the goal is to add a full-text search feature,
  - The user can search for a lesson without specifying which attribute tosearch on.
  - For example, searching for “a” should return all the lessons with “a” in its“title” or “location”.
  - The search should send back results that include both "title" or "location",while it is not required that it works also for “price” and “availability”.

  - Solutions provided are marked as follows.

[Base Marks (provided depending on which following approach is chosen)]

A. [Approach 1] “using existing library” (2%), you can implement this featureusing an existing JavaScript library (does not have to be a Vue.js library),in which case you receive maximum 2 marks.

OR

B. [Approach 2] "writing your own search function" (4%), you will receive maximum 4 marks if you write your own search function, which, again,does not have to use Vue.js.

[Further Mark]

C. "search as you type" (1%), there is also this mark if the search supports "search as you type", i.e. the search starts when user types the first letter(displaying all the lessons containing that letter), and the result list is filtered as more search letters are entered (similar to Google Search).

**Extension and Late Penalty**

**All extension must be applied through the Extenuating circumstances service** (see Section 7.6 for more details). Please do not contact the module leader for extension.**The late penalty is 5% for each day after the deadline.** It is the 5% of your final mark. For example, if you receive 30 for your coursework and are two days late, you coursework mark will be 30 (1 0:5 2) = 27.

### 8.2.2. Assessment 2 ( Node.js Server and Express API (30%))

| Node.js Server and Express API (30%) | |
|---|---|
| **Module code** | *CST3145* |
| **Module title** | Web-Based Mobile App Development. |
| **Submission date, time** | CW 2 – Week16 (to be marked at LAB) |
| **Feedback type & date** | Students will be given feedback and marked by the lab tutor. |
| **Task** | The goal of this coursework is to build the Back-End for the app created in the first coursework. MongoDB will be used for storing the data, and data exchange between the app and the database will be done through REST API implemented using Express.js. The Back-End will run on a Node.js server. |

| | |
|---|---|
| **Assignment type** | Web App with backend to be demonstrated |
| **Requirements** | ***Submission***<br><br>*Instructions for the text area to compile when uploading your submission:*<br><br>*- please, indicate the same information requested below for the README file*<br><br>*Instructions for the zip file, it must contain the following elements, and must be no more than 10MB:*<br><br>• *your code in 2 folders respectively related to your Vue.js App.*<br><br>*o your Express.js App (do not include the 'node_modules' folder, otherwise, the zip will be too big to submit).*<br>• *a README file with the following links:*<br>*o [Vue.js App] the link to your GitHub Repository.*<br>*o [Vue.js App] the link to your GitHub Pages from where the app can directly run.*<br>*o [Express.js App] the link to your GitHub Repository.*<br>*o [AWS Express.js App] the link to the AWS route that returns all the lessons.*<br>• *the 'lesson' and the 'order' collections exported from your MongoDB Atlas. See here for how to export collection in MongoDB Compass (https://docs.mongodb.com/compass/current/import-export#export-data-from- a-collection).*<br>• *the requests you created in Postman. See here for how to export requests in Postman (https://learning.postman.com/docs/getting-started/importing-and- exporting-data/#exporting-collections).*<br><br>**Overall Requirements**<br><br>**A submission could receive zero marks if it fails any of the following requirements:**<br><br>• the Back-End server must use "Node.js"; others such as Apache or Xamppare not allowed.<br>• in relation to hosting the Back-End server, it not allowed to use AWS S3, norAWS EC2, |

| | |
|---|---|
| | nor other cloud-based hosting solutions (e.g., Heroku). The only allowed one is AWS with the technologies covered in the related Lecture.<br>• the REST API must be developed with "Express.js".<br>• the Front-End data access must be achieved with "promise" using "fetch" function; "XMLHttpRequest" or library such as axios:js are not allowed.<br>• the data must be stored in "MongoDB Atlas" and retrieved via your Express.jsApp; local MongoDB or any other databases are not allowed.<br>• connection to MongoDB (in your Express.js App) must use the native Node.jsdriver only; libraries like Mongoose are not allowed. |
| **Assessed learning outcome (s)** | 1,2,3 |
| **Module weighting %** | *30 %* |
| **Key reading and learning resources** | This module has a variety of learning resources available for you to use to support your learning. These include recorded lecture, lecture slides, feedback, and key reading mate-rials. These can be accessed online via the module page. Please visit the module page regularly to make use of these.<br>Your online reading list can be accessed from the My Study area of UniHub (http:// readinglists.mdx.ac.uk/lists/78D0F586-A45D-60DB-32A7-5D5EC274302B). This highlights recommended reading for this module. The course website has many links to other online resources. |
| **Assignment marking criteria rubric**<br><br>**Marking criteria**<br><br>• General Requirements (8%):<br><br>A. [GitHub Repositories] the code of the Vue.js App must be hosted in a GitHub repository (if you want, you can continue using the one of CW1), and the code of the Express.js App must be hosted in another GitHub | |

repository (2% if 2 separated repositories are used, 1% if only 1 repository is used).
B. [GitHub Pages] the Vue.js App must be hosted and demonstrated on/via GitHub Pages and connected (via Fetch) to your AWS

Express.js App (3% if requirement is fully covered, 1% if app is running locally).
C. [AWS] the Node/Express server must be hosted on Amazon AWS ( https://aws.amazon.com/ ) (3% if requirement is fully covered, 1% if the server is run locally, 0% if the server is hosted in another cloud-based solution).

- MongoDB should have (4%):

A. a collection for lesson information (minimal fields: topic, price, location, and space) (2%).
B. a collection for order information (minimal fields: name, phone number, lesson IDs, and number of space) (2%). Suggestion: the element lessonIDs can contain 1 or more lesson IDs, depending on how many different kinds of lessons you have in your order. Other solutions could be accepted: in fact, how you design this is not the primary aspect of this module, therefore it is up to you to find a reasonable solution that works satisfactorily.

- Middleware Functions implemented in the Express.js Server should include (4%):

A. a “logger” middleware that outputs all requests to the server console (2%).
B. a static file middleware that returns lesson images, or an error message if the image file does not exist (2%).

- REST API implemented in the Express.js Server should include (6%):

A. one GET route /lessons that returns all the lessons as a json (1%). Example:
[
{‘ topic’: ‘math’, ‘location’: ‘Hendon’, ‘price’: 100, ‘space’: 5},
{‘ topic’: ‘math’, ‘location’: ‘Colindale’, ‘price’: 80, ‘space’: 2},
{‘ topic’: ‘math’, ‘location’: ‘Brent Cross’, ‘price’: 90, ‘space’: 6},
{‘ topic’: ‘math’, ‘location’: ‘Golders Green’, ‘price’: 95, ‘space’: 7},
]
B. one POST route that saves a new order to the “order” collection (2%).
C. one PUT route that updates the number of available spaces in the “lesson” collection after an order is submitted (1%).

D. at least one Postman request is created for each route, and the student is able to test all of them properly and explain them (2%).

- Fetch Functions implemented in the Front-End should include (3%):

A. one fetch that retrieves all the lessons with GET (1%).
B. one fetch that saves a new order with POST after it is submitted (1%).
C. one fetch that updates the available lesson space with PUT after an order is submitted (1%).

- Search Functionality (5%):

- [Intro] this is the challenge component of this coursework, and it is not expected that everyone can complete it. The solution is not covered in the lecture or lab, so you need to research it.
- [Feature Description] The goal is to add a full-text search feature, similarly to the challenge component of the Coursework 1.
- The user can search for a lesson without specifying which attribute to search on.
- The search should send back results that include both "title" or "location", while it is not required that it works also for “price” and “availability”.
- [Difference with CW1 Search Functionality and Development Strategy/Constraints] The difference with “CW1 Search” is that the search here needs to be performed in the Back-End (Express + MongoDB), not in the Front-End as in CW1 (where it was implemented via Vue + JavaScript). You will not receive any mark, for this part, if the search is performed in the Front-End.
- You cannot use any existing library to implement this function. Otherwise, you will not receive any mark for this part.
- Solutions provided are marked as follows.

A. “Fetch” (2%), in the front end, a “fetch” request should be created to send the search information to the Back-End.
B. “Express API” (2%), an Express.js route should be created to handle the search request, and to return the search results from the MongoDB. The student should implement this as a GET route (“/search”), and should be able to test it also without using the Front-End.
C. [Further Point] “search as you type” (1%), similarly to Coursework 1, there is also this mark if the search supports “search as you type”, i.e. the search starts when user types the first letter (displaying all the lessons containing that letter), and the result list is filtered as more search letters are entered (similar to Google Search).

**Extension and Late Penalty**

| |
|---|
| **All extension must be applied through the Extenuating circumstances service** (see Section 7.6 for more details). Please do not contact the module leader for extension.**The late penalty is 5% for each day after the deadline.** It is the 5% of your final mark. For example, if you receive 30 for your coursework and are two days late, you coursework mark will be 30 (1 0:5 2) = 27 |

### 8.2.3. Assessment 3 (Progressive and Mobile App (30%))

| **Progressive and Mobile App (30%)** | |
|---|---|
| **Module code** | *CST3145* |
| **Module title** | Web-Based Mobile App Development. |
| **Submission date, time** | CW 3 (to be marked at LAB) Week 22 |
| **Feedback type & date** | Students will be given feedback and marked by the lab tutor. |
| **Task** | Make the Front-End of your "After School Lesson" app as a Progressive Web App (PWA), and refactor the Front-End by using Vue.js Single-File-Component (SFC). The refactored Front-End should have all the features required in CW1 individual work.<br><br>The refactored app should have at least three SFCs:<br><br>1.a Parent Component.<br>2.a Lesson Child Component that shows list of lessons.<br>3.a Checkout Child Component that allows users to manage an order. |
| **Assignment type** | mobile app to be demonstrated |
| **Requirements** | **Submission**<br><br>**Instructions for the text area to compile when uploading your submission:**<br><br>- please, indicate the same information requested below for the README file |

| | |
|---|---|
| | **Instructions for the zip file, it must contain the following elements, and mustbe no more than 10MB:**<br><br>• your code related to:<br>  ○ your **PWA** Vue.js SFC App (**do not include the "node_modules"folder**, otherwise, the zip will be too big to submit).<br>• a README file with the following links:<br>  ○ [**PWA** Vue.js SFC App] the link to your GitHub Repository.<br>  ○ [**PWA** Vue.js SFC App] the link to your GitHub Pages from where the app can directly run.<br><br>**IMPORTANT:** do not include any Back-End files, such as those for your Express.jsserver. However, please make sure the server is running on AWS and the MongoDB Atlas is online. |
| **Assessed learning outcome (s)** | *1,2,3,4* |
| **Module weighting %** | *30 %* |
| **Key reading and learning resources** | This module has a variety of learning resources available for you to use to support your learning. These include recorded lecture, lecture slides, feedback, and key reading mate-rials. These can be accessed online via the module page. Please visit the module page regularly to make use of these.<br>Your online reading list can be accessed from the My Study area of UniHub (http:// readinglists.mdx.ac.uk/lists/78D0F586-A45D-60DB-32A7-5D5EC274302B). This highlights recommended reading for this module. The course website has many links to other online resources. |
| **Assignment marking criteria rubric**<br>**Marking criteria**<br>• General Requirements (6%):<br>A. App implemented as a unique App, including refactoring and the PWA behaviour in 1 solution (2%) | |

B. the front end must be refactored with Vue.js Single-File Component (SFC) (2%).

C. the app must be hosted on GitHub Pages and demonstrated via the related GitHub Pages URL (2%).

- [Refactoring] Parent Component (General Aspects) (5%):

A. the Parent Component must import and register Lesson and Checkout as two child components (1%).
B. the Parent Component must have the "cart" button that shows the number of lessons in cart, and switches between the Lesson and Checkout as required in CW1, by using dynamic components switching (2%).
C. the Parent Component must retrieve all the lesson information in MongoDB Atlas through a REST API (exposed by the Back-End), and pass it to Lesson Component with a prop (2% if demonstrated fully, 1% if demonstrated with a local lesson.json file).

- [Refactoring] Lesson Component and Parent Component: Event-Based Communication (5%):

A. the Lesson Component must display a list of lessons as required in CW1 (1%).
B. the Lesson Component, for each lesson, must have an "Add to cart" button as required in CW1. It must emit a custom event "add-item-to- cart" that triggers the Parent Component to add a lesson to cart. It is not allowed to change the shopping cart in the Lesson Component (2%).
C. The Parent Component must respond to the "add-item-to-cart" event (generated from the Lesson Component) by adding the lesson to shopping cart (2%).

- [Refactoring] Checkout Component and Parent Component: Event-Based Communication (6%):

A. the Parent Component must pass the shopping cart to the Checkout Component as a prop (1%).
B. the Checkout Component must show all the lessons that are in the shopping cart (1%).
C. the Checkout Component must allow users to remove lessons from shopping cart, which must be achieved by emitting a custom event "remove-item-from-cart" that triggers the Parent Component to remove the lesson from cart. It is not allowed to change the shopping cart in the Checkout Component (2%).
D. the Parent Component must respond to the removeLesson event "remove-item-from-cart" (generated from the Checkout Component) by removing the lesson from the shopping cart, and increasing the lesson availability accordingly (2%).

- [PWA] The PWA should (5%):

A. include a Web Manifest File with at least basic properties (i.e., name, short_name, icons, start_url and background color) and and use at least two copies of the icon image with resolution 192x192 and 512x512 (1%).
B. be without any errors, installable, and runnable from the installed app (1%).
C. be installed (to be installed during the demo) and demonstrated on a computer, emulator, or mobile phone (3% mobile phone, 2% emulator, 1% computer).

- [PWA] The Service Worker should (3%):

A. cache all the local files needed to run the app offline (this includes html, css, js, images, etc.), and the student should demonstrate the PWA working offline accordingly (1%).
B. use the files from the cache whenever possible, even if the device is online (1%).
C. add automatically and dynamically any required external files, such as the Vue library file, to the cache (1%).

**Extension and Late Penalty**

All extension must be applied through the Extenuating circumstances service (see Section 7.6 for more details). Please do not contact the module leader for extension.The late penalty is 5% for each day after the deadline. It is the 5% of your final mark. For example, if you receive 30 for your coursework and are two days late, you coursework mark will be 30 (1 0:5 2) = 27

The following table details the support you will be receiving for this assignment and the feedback opportunities you will have.

| **Additional Support** |
|---|
| **Additional support**<br>Please use this space to specify any additional support students can utilise. This could refer to:<br>• Lecturer Consultation: can be requested by prior appointment by sending an email to x.yyyy@mdx.ac.ae or provide a booking link<br>• UniHub: the folder on MyUniHub relevant to this assessment task includes the TurnItIn online submission link, sample assignments and template format.<br>• Grammarly: Grammarly's writing app finds and corrects hundreds of (but not ALL) complex writing errors to help you ensure what you type is easy to read, effective, and |

usually mistake-free. As you type, Grammarly checks your text against more than 250 advanced grammar rules. The University offers students access to the premium version of Grammarly: see see https://www.mdx.ac.ae/cas/cite-them-right-grammarly

- CiteThemRight: offers online help for referencing at: http://www.citethemrightonline.com.ezproxy.mdx.ac.uk
- Centre for Academic Success (CAS) Consultation: you have the option to book individual consultations or group appointments with members of the CAS Team. These sessions have been known to help students reach their academic goals through one-on-one consultations with our highly professional and helpful CAS team members. For more information on the services offered by the CAS Team, or to book an individual consultation, you may send an email to CAS@mdx.ac.ae.
- CAS specific sessions (in case you have arranged CAS to be involved in your module)
- Library specific sessions (in case you have arranged the Library to be involved in your module)
- Instructional Resources: The Library offers many instructional resources via their website: https://www.mdx.ac.ae/library where you can learn how to use the Library and its resources by watching videos, using interactive tools, and discovering how to access books, articles, conference proceedings.
- Liaison Librarians – Please contact your Liaison Librarian who can provide expert assistance with finding materials for specific assignments: https://www.mdx.ac.ae/library/liaison-librarians
- An Introduction to the Research Process: This is a free online Library course where the research process and how to improve your skills using our Library resources can be learned.
- SLAs– please specify what students should expect (e.g. help with citations, structure, explanation of jargon etc.)
- Further teaching and learning support materials can be found on the Dubai Teaching and Learning Support Unihub page that includes short videos, tutorials, etc produced by the CAS and Library teams. https://mdx.mrooms.net/course/view.php?id=24990

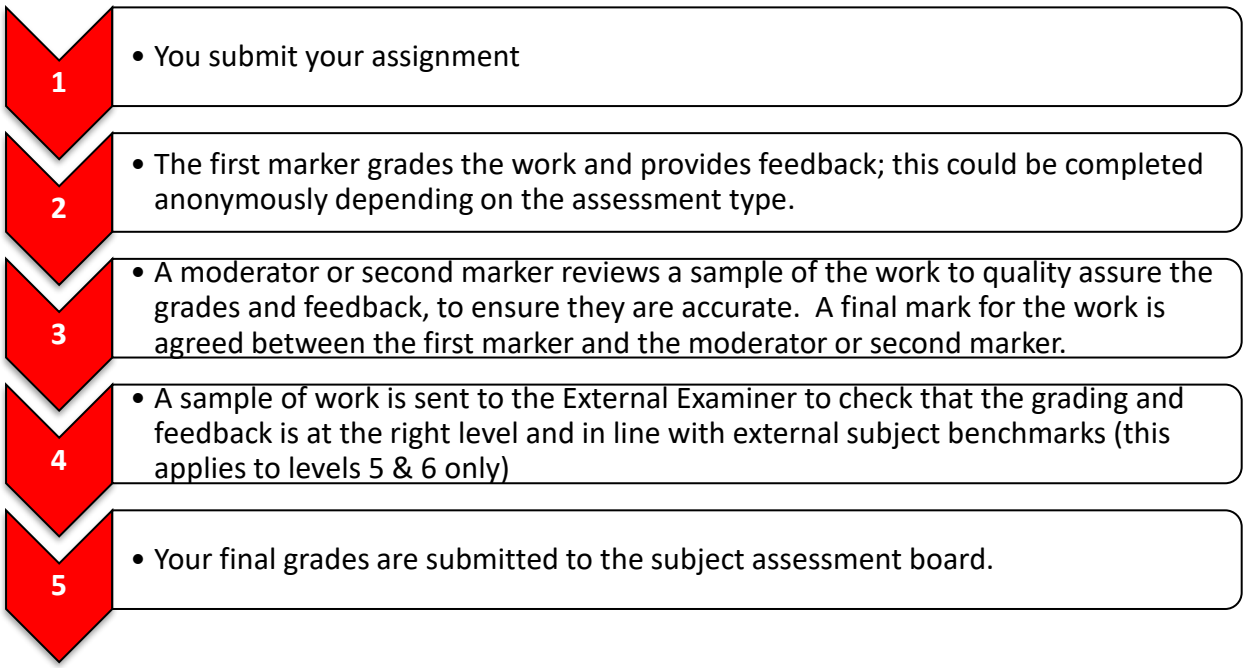
### 8.3 Feedback on your assignments

You will be provided with feedback on all coursework that is helpful and informative, consistent with aiding the learning and development process. The nature of the feedback shall be determined at programme level but may take a variety of forms including written comments; individual and group tutorial feedback; peer feedback; or other forms of effective and efficient feedback.

Feedback will normally be provided within 15 WORKING DAYS of the published coursework component submission date as stated in the programme handbook.

### 8.4 How is your assignment markagreed?

The following diagram provides an overview of the marking process for your module assessment. Further information on the role of external examiners can be found at.http://unihub.mdx.ac.uk/your-study/ensuring-quality/external-examiners




### 8.5 Anonymous Marking Assessment Policy

The University has created an anonymous marking policy in response to student feedback. Anonymous marking ensures that your identity (your name, student number, and other personal/identifiable information) is not made available to academics when they are marking your work. This means that you can have confidence that your assessments will be marked fairly and consistently. However, there are some forms of assessments for which anonymity cannot be guaranteed and these are recognised in the policy. We believe that it is important to provide you with the support and guidance needed to help you develop and prepare for your final assessments (those which count towards your final grades i.e. summative assessments). Therefore, anonymous marking will not apply to learning activities and assessments that do not contribute to your final grades (i.e. formative assessments). If you require further information and support to understand how anonymous marking works in your programme modules, please contact your Module Coordinator for more information.

The Anonymous Marking Assessment Policy is available at:

https://www.mdx.ac.uk/__data/assets/pdf_file/0037/563599/anonymous-marking-assessment-policy.pdf

### 8.6 Reassessment (Re-sit) opportunity

A student has the right to be reassessed once only in any module with an overall grade of 17, 18, 19 or 20. Reassessment will be taken at the next available opportunity (in July / August) unless that reassessment is deferred by the Assessment Board. Where a student repeats a module, any right of reassessment from the original attempt is cancelled. Where compensation is not normally permitted by a Professional Body, a Subject Assessment Board may exercise discretion to allow an exceptional second reassessment attempt. Failure without good reason to undertake reassessment at the next available opportunity will result in failure with the award of a grade of 20 should the required learning outcomes not be met. No second reassessment is permitted.

**All Grades at the Dubai campus are provisional until moderated and confirmed by the London campus.**

- **All Science and Technology resit exams will be held in July/ August, 2024 .**
- **No second reassessment is permitted.**

**MDX 20-point conversion**

| 20-point scale | General scale | General scale (full ranges) |
|---|---|---|
| 1 | 80% - 100% | 79.50% - 100% |
| 2 | 76% - 79% | 75.50% - 79.49% |
| 3 | 73% - 75% | 72.50% - 75.49% |
| 4 | 70% - 72% | 69.50% - 72.49% |
| 5 | 67% - 69% | 66.50% - 69.49% |
| 6 | 65% - 66% | 64.50% - 66.49% |
| 7 | 62% - 64% | 61.50% - 64.49% |
| 8 | 60% - 61% | 59.50% - 61.49% |
| 9 | 57% - 59% | 56.50% - 59.49% |
| 10 | 55% - 56% | 54.50% - 56.49% |
| 11 | 52% - 54% | 51.50% - 54.49% |
| 12 | 50% - 51% | 49.50% - 51.49% |
| 13 | 47% - 49% | 46.50% - 49.49% |
| 14 | 45% - 46% | 44.50% - 46.49% |
| 15 | 42% - 44% | 41.50% - 44.49% |
| 16 | 40% - 41% | 39.50% - 41.49% |
| 17 | 35% - 39% | 34.50% - 39.49% |
| 18 | 30% - 34% | 29.50% - 34.49% |
| 19 | 0% - 29% | 0.01% - 29.49% |
| 20 | Non-participation | 0% |

## 9. Learning Planner

| Week | Lecture | Seminar | Staff | Reading& online activities | Link assessment& Learning Outcome(s) |
|---|---|---|---|---|---|
| 1 | Module overview | | *Chinnu George* | | |
| 2 | JavaScript vs. Vue.js | | *Chinnu George* | | |
| 3 | Vue instance and Chrome tools | | *Chinnu George* | | |
| 4 | Interaction | | *Chinnu George* | | |
| 5 | Version control with Git | | *Chinnu George* | | |
| 6 | Forms and Input | | *Chinnu George* | | |

| Week | Lecture | Seminar | Staff | Reading& online activities | Link assessment& Learning Outcome(s) |
|---|---|---|---|---|---|
| 7 | Rating, Product list, and Sorting | | *Chinnu George* | | |
| 8 | CW1 | | *Chinnu George* | | **Coursework 1 due** |
| 9 | Node.js | | *Chinnu George* | | |
| 10 | Express.js and Middleware | | *Chinnu George* | | |
| 11 | Routing and Fetch | | *Chinnu George* | | |
| 12 | REST API and MongoDB | | *Chinnu George* | | |
| 13 | MongoDB API and Postman | | *Chinnu George* | | |

| Week | Lecture | Seminar | Staff | Reading& online activities | Link assessment& Learning Outcome(s) |
|---|---|---|---|---|---|
| 14 | Amazson AWS more Fetch | | *Chinnu George* | | |
| 15 | CW2 | | *Chinnu George* | | |
| 16 | Progressive Web Apps (PWA) | | *Chinnu George* | | **Coursework 2 due** |
| 17 | Vue Components | | *Chinnu George* | | |
| 18 | Single File Component (SFC) | | *Chinnu George* | | |
| 19 | (TBC) Advanced components and routing | | *Chinnu George* | | |
| 20 | (TBC) Extending Vue | | *Chinnu George* | | |

| Week | Lecture | Seminar | Staff | Reading& online activities | Link assessment& Learning Outcome(s) |
|---|---|---|---|---|---|
| 21 | (TBC) Vuex | | *Chinnu George* | | |
| 22 | CW 3 | | *Chinnu George* | | |
| 23 | CW 3 | | *Chinnu George* | | **Coursework 3 due** |
| 24 | CW 3 | | *Chinnu George* | | |