Cardiff Metropolitan University | Prifysgol Metropolitan Caerdydd

School of Technologies

Assessment Brief

Module Code	Module Title
CSE5011	Mobile Application Development
Academic Year	**Semester**
2023/24	Semester 03

Module Leader email

shavinduT@icbtcampus.edu.lk

Content

Assessment Details

Assessment title	Abr.	Weighting
"LuxeVista Resort"	WRIT1	100%

Pass marks are 40% for undergraduate work and 50% for postgraduate work unless stated otherwise.

Task/assessment brief:

Version 1:

You are given with the task to develop an interactive mobile application for **"LuxeVista Resort,"** a luxury beachfront hotel that offers premium accommodations and exclusive services. LuxeVista Resort wants to enhance the guest experience by providing an all-in-one mobile app for their guests to easily browse room options, book activities and spa treatments, and manage their stay seamlessly.

The primary goal of the app is to allow guests to:

- Browse and book rooms based on their preferences (e.g., ocean view suites, deluxe rooms).
- Reserve in-house services, such as spa appointments, fine dining reservations, and poolside cabanas.
- Manage their bookings efficiently while receiving notifications for upcoming bookings and promotions.

The app will also include information about the hotel's exclusive offers and nearby attractions, making it a convenient digital concierge for guests.

Key Functions to Implement:

1. **User Authentication and Profiles:**
    - Allow guests to register and log in using their email and other relevant user authentication credentials.
    - Guests can manage their profile with preferences, travel dates, and booking history, allowing for personalized recommendations and promotions.
2. **Room Booking:**
    - Display available rooms at LuxeVista Resort, including detailed descriptions (e.g., ocean view suites, deluxe rooms), photos, and price per night.
    - Allow guests to filter and sort rooms based on criteria such as room type, availability, and price range.
3. **Service Reservation:**
    - Enable guests to reserve exclusive in-house services such as spa treatments, fine dining, poolside cabanas, and guided beach tours.
    - Provide a service booking calendar to check availability and manage reservations.
4. **Local Attractions and Hotel Information:**

- Include a section highlighting LuxeVista's exclusive offers and nearby attractions, such as beach tours, water sports, and dining recommendations.
- Guests can receive notifications for special hotel events, discounts, and service updates.

Note: *Please note that Android Studio can be used as the development environment. However, the use of cross-platform frameworks such as Flutter, React Native, or Ionic is not permitted. All app development must be conducted using native technologies only.*

Tasks

LO1: Task A) Critically compare mobile operating systems, development tools, and technologies for the above-mentioned application. (Word count: 1000) (10 Marks)

LO1: Task B) Create the system design and database design by providing UML diagrams & database design diagrams for the given problem with clear explanations on the design decisions. (Use case/Class/Activity/ER Diagram with Normalized Relational Schemas) (10 Marks)

LO2: Task C) Design attractive user interfaces for the given scenario. (20 Marks)

LO3: Task D) Develop an interactive mobile application with database integration for the given scenario. Ensure to implement proper validation mechanisms to restrict invalid entries. (40 Marks)

LO4: Task E) Include a test plan, test data, and proper application of the test plan. Test your mobile application according to the test plan. (10 Marks)

LO4: Task F) Create user and technical documentation for the developed solution. (10 Marks)

Word count (or equivalent): 3000

This a reflection of the effort required for the assessment. Word counts will normally include any text, tables, calculations, figures, subtitles and citations. Reference lists and contents of appendices are excluded from the word count. Contents of appendices are not usually considered when determining your final assessment grade.

Academic or technical terms explained:

Submission Details

Submission Deadline:	This will be provided on the Moodle submission point.	**Estimated Feedback Return Date**	This will normally be 20 working days after initial submission.
Submission Time:	By 2.00pm on the deadline day.		

Moodle/Turnitin:

Any assessments submitted after the deadline will not be marked and will be recorded as a non-attempt unless you have had an extension request agreed or have approved mitigating circumstances. See the School Moodle pages for more information on extensions and mitigating circumstances.

File Format:

The assessment must be submitted as a pdf document (save the document as a pdf in your software) and submit through the Turnitin submission point in Moodle.

Your assessment should be titled with your:

student ID number, module code and assessment ID,
e.g. st12345678 BHL5007 WRIT1

Feedback

Feedback for the assessment will be provided electronically via Moodle. Feedback will be provided with comments on your strengths and the areas which you can improve. View the guidance on how to access your feedback.

All marks are provisional and are subject to quality assurance processes and confirmation at the programme Examination Board.

Assessment Criteria

Learning outcomes assessed

- Explain mobile operating systems, development tools and technologies for the mobile application development.
- Design mobile application solutions.
- Develop mobile application solutions.
- Test mobile application solutions.

Other skills/attributes developed

This includes elements of the Cardiff Met EDGE (Ethical, Digital, Global and Entrepreneurial skills) and other attributes developed in students through the completion of the module and assessment. These will also be highlighted in the module guidance, which should be read by all students completing the

module. Assessments are not just a way of auditing student knowledge. They are a process which provides additional learning and development through the preparation for and completion of the assessment.

Marking/Assessment Criteria

Task	Poor	Satisfactory	Good	Excellent
Task A: Critically compare mobile operating systems, development tools, and technologies (10 Marks)	Inadequate comparison, lacking understanding of mobile OS, tools, and technologies. Very limited discussion or irrelevant content. (0-2)	Basic comparison of mobile OS and tools with minimal depth. Lacks clear justification for design decisions, limited analysis. (3-5)	Good comparison with appropriate analysis. Covers most relevant technologies and tools but lacks critical insight. (6-8)	Excellent comparison, with detailed, well-justified insights into mobile OS, tools, and technologies. Clear and critical evaluation of choices. (9-10)
Task B: System design and database design (UML & ER diagrams) (10 Marks)	Diagrams incomplete, unclear, or incorrect. Poor understanding of design concepts and little to no explanation provided. (0-2)	Basic design provided but lacks clarity or details in diagrams. Explanations are vague, with some incorrect assumptions or missed design decisions. (3-5)	Clear and mostly accurate diagrams (Use Case/Class/Activity/ER). Reasonable explanations with minor gaps in justification of design decisions. (6-8)	Highly detailed and accurate diagrams, with clear explanations of design choices. Strong justification for design decisions, addressing key aspects of the problem. (9-10)
Task C: Design attractive user interfaces (20 Marks)	UI lacks attractiveness and usability. Poor layout, inconsistent design elements, and limited attention to user experience. (0-5)	Basic UI design with minimal attention to detail. Functional but lacks consistency and creativity in design. Limited appeal to users. (6-10)	Good UI design that is mostly consistent, user-friendly, and visually appealing. Minor improvements could enhance user experience. (11-15)	Excellent UI design that is visually appealing, intuitive, and fully functional. Great attention to detail, consistency, and user experience. (16-20)
Task D: Develop an interactive mobile application with database integration (40 Marks)	Incomplete or non-functional application. No database integration, validation mechanisms missing	Basic application with minimal interactivity and some functionality. Database integration exists but with errors.	Functional application with good interactivity and proper database integration. Validation mechanisms work well	Fully functional and interactive application with seamless database integration and robust validation mechanisms.

	or poorly implemented. (0-15)	Validation mechanisms are limited. (16-25)	but could be improved in certain areas. (26-32)	Excellent user experience and smooth performance. (33-40)
Task E: Test plan, test data, and application of the test plan (10 Marks)	No test plan provided or the plan is incomplete. Little to no test data and poorly applied testing. (0-2)	Basic test plan with limited test cases and test data. Some testing applied but lacks thoroughness. (3-5)	Good test plan with relevant test cases and data. Adequate testing with most scenarios covered. (6-8)	Comprehensive test plan with detailed test cases and test data. Thorough application of testing, covering all necessary scenarios. (9-10)
Task F: Create user and technical documentation (10 Marks)	Documentation is incomplete, poorly written, or lacks detail. Little to no explanation of app functionality or technical design. (0-2)	Basic documentation with limited detail. Some sections are missing or lack clarity in explaining the functionality and technical design. (3-5)	Good documentation that covers most user and technical aspects. Clear explanation but with minor gaps or areas that need further detail. (6-8)	Comprehensive and well-structured documentation that clearly explains both user and technical aspects. Excellent detail and clarity in explaining functionality and design. (9-10)

Further Information

Who can answer questions about my assessment?

Questions about the assessment should be directed to the staff member who has set the task/assessment brief. This will usually be the Module Leader. They will be happy to answer any queries you have.

Staff members can often provide feedback on an assignment plan but cannot review any drafts of your work prior to submission. The only exception to this rule is for Dissertation Supervisors to provide feedback on a draft of your dissertation.

Referencing and independent learning

Please ensure you reference a range of credible sources, with due attention to the academic literature in the area. The time spent on research and reading from good quality sources will be reflected in the quality of your submitted work.

Remember that what you get out of university depends on what you put in. Your teaching sessions typically represent between 10% and 30% of the time you are expected to study for your degree. A 20-credit module represents 200 hours of study time. The rest of your time should be taken up by self-directed study.

Unless stated otherwise you must use the **HARVARD** referencing system. Further guidance on referencing can be found in the Study Smart area on Moodle and at www.citethemrightonline.com (use your university login details to access the site). Correct referencing is an easy way to improve your marks and essential in achieving higher grades on most assessments.

Technical submission problems

It is strongly advised that you submit your work at least 24 hours before the deadline to allow time to resolve any last minute problems you might have. If you are having issues with IT or Turnitin you should contact the IT Helpdesk on (+44) 2920 417000. You may require evidence of the Helpdesk call if you are trying to demonstrate that a fault with Moodle or Turnitin was the cause of a late submission.

Extensions and mitigating circumstances

Short extensions on assessment deadlines can be requested in specific circumstances. If you are encountering particular hardship which has been affecting your studies, then you may be able to apply for mitigating circumstances. This can give the teachers on your programme more scope to adapt the assessment requirements to support your needs. Extensions and mitigating circumstances policies and procedures are regularly updated. You should refer to your degree programme or school Moodle pages for information on extensions and mitigating circumstances.

Unfair academic practice

Cardiff Met takes issues of unfair practice **extremely seriously.** The University has procedures and penalties for dealing with unfair academic practice. These are explained in full in the University's Unfair Practice regulations and procedures under Volume 1, Section 8 of the Academic Handbook. The Module Leader reserves the right to interview students regarding any aspect of their work submitted for assessment.

Types of Unfair Practice, include:

Plagiarism, which can be defined as using without acknowledgement another person's words or ideas and submitting them for assessment as though it were one's own work, for instance by copying, translating from one language to another or unacknowledged paraphrasing. Further examples include:

- Use of any quotation(s) from the published or unpublished work of other persons, whether published in textbooks, articles, the Web, or in any other format, where quotations have not been clearly identified as such by being placed in quotation marks and acknowledged.
- Use of another person's words or ideas that have been slightly changed or paraphrased to make it look different from the original.
- Summarising another person's ideas, judgments, diagrams, figures, or computer programmes without reference to that person in the text and the source in a bibliography/reference list.
- Use of assessment writing services, essay banks and/or any other similar agencies (NB. Students are commonly being blackmailed after using essay mills).
- Use of unacknowledged material downloaded from the Internet.
- Re-use of one's own material except as authorised by your degree programme.

Collusion, which can be defined as when work that that has been undertaken with others is submitted and passed off as solely the work of one person. Modules will clearly identify where joint preparation and joint submission are permitted, in all other cases they are not.

Fabrication of data, making false claims to have carried out experiments, observations, interviews or other forms of data collection and analysis, or acting dishonestly in any other way.

How is my work graded?

Assessment grading is subject to thorough quality control processes. You can view a summary of these processes on the Assessment Explained Infographic.

Grading of work at each level of Cardiff Met degree courses is benchmarked against a set of general requirements set out in Volume 1, Section 4.3 of our Academic Handbook. A simplified version of these Grade Band Descriptors (GBDs) with short videos explaining some of the academic terminology used can be accessed via the Facilitation of Learning resource page.

We would strongly recommend looking at the Study Smart area of Moodle to find out more about assessments and key academic skills which can have a significant impact on your grades. Always check your work thoroughly before submission.

CARDIFF SCHOOL OF TECHNOLOGY : VERIFICATION OF INTERNAL MODERATION OF ASSESSMENT **IV2**

Module Number: CSE5011	**Module Name:** Mobile application development	**Module Leader:** Sanaka surange		**Year/Term:** 2023/24

MODULE ASSESSMENT STRATEGY		**BRIEFING INCLUDES:**	**X**	**IV's COMMENTS / RECOMMENDATIONS**	**MODULE LEADER'S ACTION TAKEN**
WRIT1	***100%***	**Description of Task/Problem/Topic**		**Learning outcome have been covered by given task list.**	
		Hand in Details			
		Guidance Notes			
		Learning Outcomes			
Total	***100%***	**Assessment Criteria**			
ASSESSMENT DETAILS		**Mark/Grade Criteria**			
"LuxeVista Resort"		**Marking Scheme**			
		Feedback Sheet			
Assessment type: **Writ1**		**Referencing Requirements Given**			

Nominated IV: ***Chatura***	**IV Signature:** **Chatura**	**Date:** ***15/09/2024***

CARDIFF METROPOLITAN LINK TUTOR COMMENTS:		**EXTERNAL EXAMINER COMMENTS:**	
	Please check appropriate box below		**Please check appropriate box below**
	I confirm that I have considered the above draft assignment/exam and I am happy to approve the content. <u>Assessment can now be forwarded to the External Examiner for approval.</u>		**I confirm that I have considered the above draft assignment/exam and I am happy to approve the content. <u>Assessment can now be released to the students.</u>**
	I confirm that I have considered the above draft assignment/exam and I am happy to approve the content subject to the above amendments. <u>Assessment can be forwarded to the External Examiner once these changes have been implemented and verified.</u>		**I confirm that I have considered the above draft assignment/exam and I am happy to approve the content subject to the above amendments.**

				Assessment can be released to students once these changes have been implemented and verified.	
	I confirm that I have considered the above draft assignment/exam and suggest the above amendments. I would like to see the final amended version before I confirm approval.			**I confirm that I have considered the above draft assignment/exam and suggest the above amendments. I would like to see the final amended version before I confirm approval.**	
Cardiff Metropolitan Link Tutor:	**Link tutor signature:**	**Date:**	**External Examiner:**	**EE Signature:**	**Date:**

Module Title	Module Number	JACS Subject Code(s) and % of each subject	ASC Category(ies)
Mobile Application Development	CSE5011	I320	6

Level (3 to 8)	Credits	ECTS Credit	Module Value (1=20 credits)	% Taught in Welsh	Module Type
5	15	7.5	0.75	0%	Taught

Teaching Period (Term/Semester)	Pre-requisites
Semester 3	CSE4006

Module Leader	School(s)	Campus
Sanaka Perera	Cardiff School of Technologies	ICBT Campus

Assessment Methods

Assessment Code and Method	Duration/Length of Assessment Metho	Weighting of Assessment	Threshold	Approximate Date of Submission
WRIT1-Coursework	3000 word equivalent	100%	1	End Semester

Rationale for Assessment and Opportunity for Feedback – This field is optional.

WRIT1 practical report - to provide students with experience of design, develop, test and deploy mobile application.

Aim(s)

This unit provides learners with the skills necessary for mobile application development using a modern programming language, along with relevant documentation. It also contrasts mobile applications with other applications so that learners can identify issues that are specific to mobile applications. The unit focuses on all four areas of planning, designing, implementation and testing of a mobile application which therefore provides an overall understanding of the mobile technologies.

Learning Outcomes

On successful completion of this module, students should be able to:

- Explain mobile operating systems, development tools and technologies for the mobile application development
- Design mobile application solutions
- Develop mobile application solutions
- Test mobile application solutions.

Learning and Teaching Delivery Methods

Method	Rationale	Type of Contact (scheduled/ guided independent study/placement)	Total hours
Lecture	Introduction to module - essential information & guidance for students - module guidelines and identification of the learning outcomes associated with the module	SCHEDULED	30
Workshops / Labs	To allow exploration of all aspects of module content (knowledge, understanding, skills & other attributes) in learning and skills gained from practical	SCHEDULED	30
Independent study	Research for assessment – mobile operating system, development	NON-CONTACT	90

	techniques, tools, literature searches, reading, time planning and time management, preparation of WRIT1		
Total			150

Indicative Content

Advantages and Limitations: Mobility, expandability, flexibility, cost saving, technology issues, security issues, infrastructure issues etc....
APIs for mobile devices: e.g. J2ME, .NET, Google Maps.
Operation systems: Operating systems for mobile devices e.g. Android, WinCE, PalmOS, Symbian, MS Smartphone, iOS.
Selection: Identification of mobile programming language, platform (java programming language, Android Studio).
Requirements specification: Overview e.g. inputs, outputs, processing, user interface; constraints e.g. hardware platforms, timescales for development; interaction e.g. data exchange, compliance, compatibility, standards
Program design: Tools e.g. structure diagrams, data flow diagrams, entity relationship models, flow charts, pseudo code, class diagrams, class responsibilities, collaboration cards.
Technical documentation: Requirements specification; others as appropriate to language e.g. UI design, flowcharts, pseudo code,, action charts, data dictionary, class and instance diagrams.
Data: Variables, data types, declaring variables, scope of variables, constants
Programming: Use of methods, use of mobile language commands; use of library classes; Human computer interface; security models
Integrated development tools: e.g. Android Studio, NetBeans, Eclipse, Xamarin Studio, Ionic framework etc…
Complexity: Interface/GUI, Phone service and security, distribution, development
Mechanisms: Methods e.g. valid declarations, debugging code, checking naming conventions, checking functionality against requirements, error detection, error messages, compiler errors, runtime errors, in code response, dry running
Tools: Emulators e.g. Google Android Emulator, Nox Player, Official Android SDK Emulator, iPhoney, BlackBerry Simulator, Genymotion etc..
Feedback: Record feedback, e.g. surveys, questionnaire, interviews; analyse feedback; present Results
Supportive documentation: Test plan; test results; programmer guidance; user guidance
Review: Design against specification requirements, interim reviews

Required Reading

Boyer, R. and Mew, K.,2016. Android Application Development Cookbook - Second Edition. 2nd ed. Packet Publishing.
Annuzzi, J., Conder, S. and Darcey, L.,2015. Advanced Android application development. 4th ed. Upper Saddle River, NJ: Addison-Wesley.
McWherter J., Gowell S., 2012, Professional Mobile Application Development. John Wily and sons. Inc

Recommended Reading

Darcey, L. and Conder, S.,2010. Sams teach yourself Android application development in 24 hours. 1st ed. Indianapolis, Ind.: Sams.
Mehta, N.,2008, Mobile Web Development. PACKT.
Microsoft Press. Mikkonen, T.,2007, Programming Mobile Devices - An Introduction for Practitioners. Wiley.

Access to Specialist Requirements

Android Developers site (available online at https://developer.android.com/)
Video tutorial recourses