Department of Computer Science

CS2002 Software Development and Management
Coursework for 2021/22 [provisional]

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Assessment Title	Coursework for CS2002
Module Leader	Dr Giuseppe Destefanis
Distribution Date	12 October 2021
Submission Deadline	21 January 2022
Feedback by	21 February 2022
Contribution to overall module assessment	50%
Indicative student time working on assessment	30 Hours
Word or Page Limit (if applicable)	NA
Assessment Type (individual or group)	Individual

MAIN OBJECTIVE OF THE ASSESSMENT

The main objective of the assessment is for the student to investigate the key software engineering concepts, software modelling and real-world problem solving using recognised methodologies.

DESCRIPTION OF THE ASSESSMENT

Option 1: You can use the Problem Statement from your Level 2 Group Project (CS2001). In case you decide to do that, the problem statement must be provided in the pdf which you will submit on Wiseflow.

Option 2: You can consider the following Problem Statement:

Problem statement:

The Odeon Cinema needs software for managing bookings made by customers, the screens, the films and the timing of each projection.

The cinema has six screens, and all contain 50 seats, 10 of which are VIP seats (extra room for legs, bigger chair)

For each screen, there are 4 shows per day: 1 in the afternoon, 1 in the evening and 2 at night.

A customer who wants to book a ticket, needs to select the specific show time. The pricing of the shows is different: the afternoon show is the cheapest, the first night show is the most expensive.
Customers can decide to pay using a credit card or cash and may change the date/time of the show, provided there are still seats available for the new selected date.

After the show, customers are able to write a review of the film they watched and provide a numerical rating of the film ranging from 1 to 5. All this information will be recorded in the system.

After each month, the user of the system must print:
- a report containing the number of spectators per film, along with the average rating;

- a report containing the film which generated the highest income.

Your tasks

Extremely important! Pre-condition: *You have to submit a PDF generated by Visual Paradigm **and** the .vpp file to achieve a D- (pass). If one of these two files is missing, your submission will be considered as **fail**.*

Create a UML Use Case Diagram and Use Case descriptions for all the use cases of the system (LO1-2) (35 marks available for this part). *(If you use the Problem statement from the Level 2 Group project (option 1), you have to author at least two non-trivial Use Cases and have to highlight those Use Cases in the submission.)*

Mark breakdown
*- The diagram contains all the possible actors involved in the system **(10 marks)***
*- The diagram contains all the uses cases necessary for the functionality of the system and the relations among actors and use cases are correct **(15 marks)***
*- All the use case description tables are provided **(10 marks)***

Create a UML Class Diagram of the system (LO1-2) (35 marks available for this part)

Mark breakdown
*-The diagram contains all the classes necessary **(10 marks)***
*- The classes contain the fields and the methods **(10 marks)***
*-The relations among classes, cardinalities, type of associations are correct and follow the UML logic **(15 marks)***

Create two UML Sequence Diagrams which describe two Use Cases (LO1-2) (30 marks available for this part) (if you use the Problem Statement from your Level 2 Group Project (option 1), the two Sequence Diagrams must be related with the two Use Cases you have authored).

Mark breakdown
*-The diagram contains all the participants involved in the sequence **(15 marks)***
*-The message exchange sequence among participant is logical and correct **(15 marks)***

Learning Outcomes and Marking Criteria

Learning outcomes for the assessment		Assessment and marking criteria
LO1:	Identify, explain, and evaluate the key concepts in software engineering (including architectural and design methodology)	This coursework contributes to LO1, LO2. The marking scheme is outlined in the above *Description of the Assessment* section.
LO2:	Analyse a real software system from three points of view: the users, the developers and the managers of its development	

Format of the Assessment

You have to develop all the diagrams using Visual Paradigm, and you can download the Enterprise edition at this link: https://ap.visual-paradigm.com/brunel-university-london.

The deliverables which need to be submitted are a .vpp file and a .pdf file (a zip folder containing the two files is allowed).

You have to submit the .vpp file and the .pdf file containing all the diagrams and Use Case descriptions (specified in the **Description of the Assessment** section), generated by Visual Paradigm.

Submission Instructions

You must submit your coursework on WISEflow by the **21st of January 2022 at 11 am**. You can follow the link to Wiseflow through the module's section on Blackboard Learn or login in directly at https://uk.wiseflow.net/brunel. The name of your file should follow the normal convention set out in the student handbook, and must therefore include your student ID number (e.g., 0612345.pdf). It can also include the module code (e.g., CS2002_0612345.pdf).

Avoiding Academic Misconduct

Before working on and then submitting your coursework, please ensure that you understand the meaning of plagiarism, collusion, and cheating (including contract cheating) and the seriousness of these offences. Academic misconduct is serious and being found guilty of it results in penalties that can reduce the class of your degree and may lead to you being expelled from the University. Information on what constitutes academic misconduct and the potential consequences for students can be found in Senate Regulation 6.

You may also find it useful to read this PowerPoint presentation which explains, in plain English, the different kinds of misconduct, how to avoid (even accidently) committing them, how we detect misconduct, and the common reasons that students give for engaging in such activities.

If you are experiencing difficulties with any part of your studies, remember there is always help available:

- Speak to your personal tutor. If you're not sure who your tutor is, please ask the Taught Programmes Office (TPOcomputerscience@brunel.ac.uk).
- Alternatively, if you prefer to speak to someone outside of the Department you can contact the Student Support and Welfare team.

Late Coursework

The clear expectation is that you will submit your coursework by the submission deadline stated in the study guide. In line with the University's policy on the late submission of coursework (revised in July 2016), coursework submitted up to 48 hours late will be accepted, but capped at a threshold pass (D- for undergraduate or C- for postgraduate). Work submitted over 48 hours after the stated deadline will automatically be given a fail grade (F).

Please refer to the Computer Science student information pages and the Coursework Submission Procedure pages for information on submitting late work, penalties applied and procedures in the case of Extenuating circumstances.