



CARDIFF UNIVERSITY SCHOOL OF COMPUTER SCIENCE AND INFORMATICS

# INITIAL PLAN – ASSESSMENT TIMETABLE AND SCHEDULING SYSTEM

CM3203 – ONE SEMESTER INDIVIDUAL PROJECT  
40 CREDITS

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# Project Description

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The School of Computer Science and Informatics at Cardiff University currently provides students with a coursework timetable that is developed by each year tutor. Since the timetables are produced by multiple people, the timetables take time for staff members to produce and are often inconsistent. The timetables are generally just an excel spreadsheet and are not dynamic, meaning alteration to coursework hand in and hand out dates etc have to be manually altered and the timetable produced again.

Students are currently able to access their corresponding year's timetable via Learning Central and download the PDF however there is no way for them to link this information to their calendars and it is often hard to understand due to the limited information on the timetable.

This project involves the creation of a more dynamic system that generates a coursework timetable automatically so that it is consistent, understandable and usable across all the year groups. This will be achieved by the system producing a timetable PDF that is consistent in its layout across all year groups and can be easily accessed and downloaded by both staff and students. Additionally, it will allow the assessment and feedback lead and examination officer(s) to monitor that coursework is being handed out on time and the time frames for the coursework within each year are suitable. This system will also allow the alteration of coursework dates to be more easily managed and updated on the timetable.

# Project Aims and Objectives

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This project can be split up into smaller aims and objectives that when completed fulfil the requirements of the system and address how the system will be used once it has been created. These aims and objectives are as follows:

- Implement a system that is able to produce a coursework timetable in the form of a PDF document that is consistent across all years.
  - > The system allows the input of relevant coursework information; such as hand in, hand out and feedback dates etc in the form of a CSV.
- The system is made to consider times when the university is closed for the feedback dates and calculate the feedback date based off work days only.
  - > For example, over the Easter break, Easter Monday and Good Friday are not counted as working days and therefore affect the week number in which the feedback is required to be returned by.
- Implementation of the system expanded so that multiple formats of the timetable can be produced.
  - > The system can provide a simple timetable with just the essential information (coursework module name/code, hand out date, hand in date and feedback date) and provide the option of a more detailed timetable (all of the essential information, plus name of staff member that set the coursework, the weighting of it and any other relevant additional information).
- Additional functionality of the system in being able to be linked to change request form implemented.
  - > Linking the change request form to the system allows changes in coursework dates during the academic year to be easily updated in the timetable.
- Conduct user testing with a small group of users to ensure that the timetable output is easy to understand and that the system is easy and self-explanatory to use.
  - > Since human participation will be required for the usability testing of the finished system, ethical approval from the university will be

required. Following the submission of the initial plan, whether or not this is needed will be confirmed with my supervisor and if needed then the approval will be obtained.

# Work Plan

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<b>Week 1: 28/01/2019 – 03/02/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>• Meeting with supervisor</li> <li>• Clarify general requirements for project</li> <li>• Write and submit initial plan</li> </ul>	<ul style="list-style-type: none"> <li>• Finalised initial plan</li> </ul>
<b>MILESTONE: Completion and submission of initial plan</b>	
<b>Week 2: 04/02/2019 – 10/02/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>• Meeting with supervisor</li> <li>• Identify the functional and non-functional system requirements</li> <li>• Design a timetable layout that the system should follow when producing the PDF</li> <li>• Finalise if ethics approval is needed</li> </ul>	<ul style="list-style-type: none"> <li>• Initial functional and non-functional requirements</li> <li>• First draft of timetable design</li> </ul>
<b>Week 3: 11/02/2019 – 17/02/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>• Meeting with supervisor</li> <li>• Take feedback on requirements and timetable design and make appropriate adjustments</li> <li>• Design test cases based on requirements</li> <li>• Break requirements down into coding tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Finalised timetable PDF design</li> <li>• Finalised functional and non-functional requirements</li> <li>• Initial unit tests that the system must pass upon completion</li> </ul>
<b>MILESTONE: Requirements of the system finalised</b>	
<b>Week 4: 18/02/2019 – 24/02/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>• Meeting with supervisor</li> <li>• If ethics approval needed submit the appropriate forms</li> <li>• Create the system so that it can read in data from a csv file</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation started</li> <li>• Ethical approval forms submitted</li> </ul>

<ul style="list-style-type: none"> <li>Research into how to create a pdf file from a python program</li> </ul>	
<b>Week 5: 25/02/2019 – 03/03/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>Meeting with supervisor</li> <li>Implement functionality of the program creating the PDF timetable</li> <li>Start implementation of taking into account days the university is closed</li> </ul>	<ul style="list-style-type: none"> <li>Basic functionality of the system completed – system produces the basic timetable</li> </ul>
<b>Week 6: 04/03/2019 – 10/03/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>Meeting with supervisor</li> <li>Implementation of holiday days completed</li> <li>Implementation of multiple formats of timetable started (timetable with additional information)</li> </ul>	<ul style="list-style-type: none"> <li>Core functionality of the system completed – system produces the basic timetable with dates altered where needed due to holidays.</li> </ul>
<b>MILESTONE: First phase of implementation completed</b>	
<b>Week 7: 11/03/2019 – 17/03/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>Meeting with supervisor</li> <li>Start implementation of linking change request form to the system</li> </ul>	<ul style="list-style-type: none"> <li>Additional functionality added to the system – system provides an output of multiple formats of the timetable</li> </ul>
<b>Week 8: 18/03/2019 – 24/03/2019</b>	<b>Deliverables</b>
<ul style="list-style-type: none"> <li>Meeting with supervisor</li> <li>Complete linking to change request forms</li> <li>Identify and fix any issues within the final system that have been revealed</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of the system complete</li> </ul>

MILESTONE: Implementation of the system completed	
Week 9: 25/03/2019 – 31/03/2019	Deliverables
<ul style="list-style-type: none"> <li>Review meeting with supervisor (26/03/2019)</li> <li>Complete test cases that were created at the beginning of the project</li> <li>Additional checks/changes to the system (if necessary, from review meeting)</li> <li>Create plan for final report and code documentation (i.e. what sections the report needs and what they consist of)</li> </ul>	<ul style="list-style-type: none"> <li>Test cases completed and documented</li> <li>Groundwork for final plan and code documentation laid down</li> </ul>
Week 10: 01/04/2019 – 07/04/2019	Deliverables
<ul style="list-style-type: none"> <li>Meeting with supervisor</li> <li>Conduct focus group testing</li> <li>Begin first draft of the final report and code documentation</li> </ul>	<ul style="list-style-type: none"> <li>User testing completed</li> <li>Code documentation complete and majority of first draft of final report completed</li> </ul>
MILESTONE: All testing completed	
Week 11: 08/04/2019 – 14/04/2019	Deliverables
<ul style="list-style-type: none"> <li>First draft of final report completed</li> <li>Review meeting with supervisor (09/04/2019)</li> </ul>	<ul style="list-style-type: none"> <li>First draft of final report completed</li> </ul>
MILESTONE: First draft of final report completed	
Week 12-14: 15/04/2019 – 05/05/2019 (Easter Break)	Deliverables
<ul style="list-style-type: none"> <li>Feedback from review meeting used to start final draft of final report</li> <li>Ensure all relevant parts of the report included and check for any grammatical or spelling errors</li> </ul>	<ul style="list-style-type: none"> <li>Final draft of final report completed</li> </ul>

Week 15: 06/05/2019 – 12/05/2019	Deliverables
<ul style="list-style-type: none"> <li>• Final review with supervisor (07/05/2019)</li> <li>• Any last-minute improvements made</li> <li>• Submit final report by 10/05/2019</li> <li>• Prepare for project viva</li> </ul>	<ul style="list-style-type: none"> <li>• Final report completed and submitted</li> </ul>
<p style="text-align: center;">MILESTONE: Final report completed and submitted</p>	