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CSU22041: Information Management I

Assignment Overview
2020-2021

Gaye Stephens gaye.stephens@tcd.ie

Assessment

Coursework (20%)- Coursework will consist of a Group project with two parts

Examination(80%)- More information will be given about the exam throughout the module



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Group Project 2020/21

Rationale: Group Project

- Start thinking about uses of information **in the real world**, including ethical considerations
- Practice team-work, particularly teamwork online this year.
- Practice modeling of information using UML
- Discover no “one way” to design
- Practice implementation of info designs using XML/XPath/Xquery
- Preparation for the exam

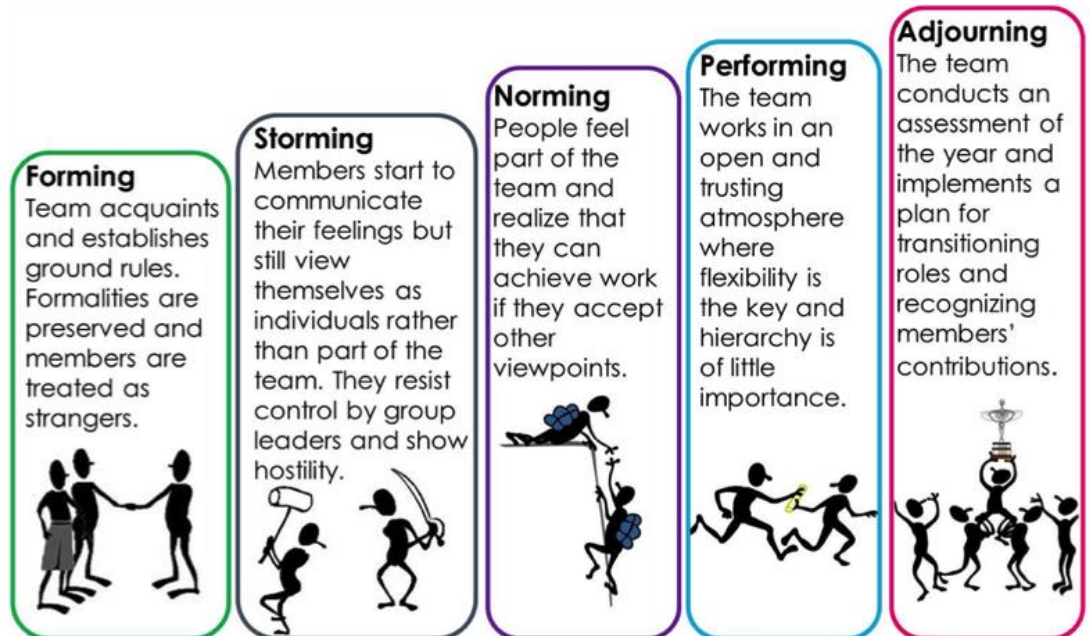
This is the first time this module/assignment is being run online so patience is asked for from my side and yours. If there are any difficulties let me know.

Real World Application Domains: Information Modelling for an ICT system to support some aspect of operations for...

1. Irish Red Cross
2. Bord Gais
3. Trade Union (e.g. SIPTU, ASTI etc.)
4. Fast Food delivery service, e.g. deliveroo
5. Car Insurance broker (e.g. AA)
6. Event ticket seller (e.g. Ticketmaster)
7. Scouting Ireland
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16. Streaming Service e.g. Spotify
17. Car Rental e.g. Hertz
18. National Art Gallery

Working in Groups

1. There are advantages and challenges.
 - Conceiving of the idea
 - Carrying out the work
 - Collaborative reporting of the work
2. Stages of group formation (Tuckman 1965)
3. Roles in the group – e.g. Originator, energizer, finisher, shaper, coordinator, collaborator, critic, recorder... etc (see paper on Blackboard)
4. Encourage respectful discourse.



Group Project has 2 Parts

Part 1: Group Project - Information Modeling (UML)

1. A recorded* **5 minute** presentation by the group on either Use Cases or Class Diagram or Activity Diagrams or Ethics Canvas) of your interim design, **including** strengths and weaknesses of the aspect of design. Each group can decide which aspect they would like to present. * Assuming you have access to facilities to do this.
2. A group UML Report

Part 2: Group Project- eXtensible Markup Language (XML)

1. Demonstrate your XQueries during online sessions.
 2. A group XML/Xquery Report
-

Part 1: Group Project Information Modeling(UML) Report

Develop an Information Model design to support an IT system for your application domain.

- a) Background Research undertaken- Introduction to system, how you went about researching the domain and how you went about undertaking the task (including choice of tools to support group communication and drawing the diagrams)
 - b) Description of Ethical Consideration for your system (using Ethics Canvas)
 - c) Eight fully described UML Use Cases (ovals). Including for each UC/oval text descriptions for normal scenario and an error scenario
 - d) A UML Class diagram comprising: at least 15 classes with each class having at least 2 data attributes (with types), Associations to be named and include role and cardinality information, No more than 2 subclass or aggregations, description of design decisions made.
 - e) Two detailed UML Activity diagrams with descriptions for two selected use cases/ovals.
 - f) **Listing of who did what**
 - g) **Discussion of Strengths and Weaknesses of the overall UML Design**
-

Part 1: Group Project Information Modeling (UML) Deliverables

1. A recorded* **5 minute** presentation by the group on either Use Cases or Class Diagram or Activity Diagrams or Ethics Canvas) of your interim design, **including** strengths and weaknesses of the aspect of design. Each group can decide which aspect they would like to present. * Assuming you have access to facilities to do this.
 2. A UML report from the group including all seven sections described on the previous slide.
-

Part 2: Group Project eXtensible Markup Language (XML)

XML DESIGN

From your group's UML Class diagram, pick at least 6 classes and for each create a different XML document. Include the following characteristics for each XML document:

- At least 6 different XML elements/tags are used.
- At least 1 of the XML elements should have 1 XML attribute
- Interlinks between some of the documents (reflecting the associations/relationships between the classes within the UML design), with enough information to allow for interesting cross document XML Queries to be designed

For each XML document create a DTD

Part 2: Group Project eXtensible Markup Language (XML)

XML QUERY DESIGN

Design and Document **at minimum 8** interesting **XQuery** queries that support some of your UML use cases. Present these queries during online sessions.

- At least 3 of the queries should retrieve information from two or more interlinked XML documents, using the WHERE clause

- At least 2 of the queries should use the FOR clause

- At least 1 of the queries should use the LET clause

- At least 2 of the queries should use a Built-in XQuery function

- At least 2 of the queries should use User Defined Functions

Part 2: Group Project eXtensible Markup Language (XML) Deliverables

Demonstrate your XQueries during online sessions.

Present your XML, DTD and XQueries in a group report which also includes the following.

- What (if anything) did you need to change in going from UML design to XML implementation? - Include revised diagrams/ethics canvas, if appropriate.
 - **List who did what in the group for XML implementation**
 - Strengths and Weaknesses of the XML design and XQueries design
 - **For the XML and DTD documents- Use comments to clearly state what is the purpose of the document, and comments describing purpose of each element and for each attribute, and why certain cardinality (*, + etc.) is used.**
 - For each Xquery include: identification of the UML use case that it supports, description of the purpose of the query and provide example outputs that you expect when query is executed.
-

Group-Project Evaluation and Marking

Team mark, allocated to each team member

Project Criteria

- Adherence to the criteria (see earlier slides)
- Quality of the designs, demos, reports

Presentations

- Quality of presentations made

Marking

Practical Tasks

Part 1.- Presentation (20% marks)

Part 2.- XML-based Implementation- X- Queries (10% marks)

Design-Report Tasks

Part 1.- UML Design Report (40% marks)

Part 2.- XML Report (30% marks)

Groups
Domains

Weekly Online Schedule(not for F2F weeks)

ICS-2-A Groups and Topics

Name	Group	Domain
ADDISON-SMYTH	1	6
ADEBUSUYI	1	
AJAYI-BALOGUN	1	
AKINTOLA	1	
ALARCO CANTOS	1	
BHARDWAJ	2	7
BOGUN	2	
BORSAK	2	
BREATHNACH	2	
BRUCE	2	
CAMPBELL CARROLL	2	
CHANDRA	3	8
CHRISTIANSSON	3	
CICAI	3	
COSGROVE	3	
DEASLEY	3	
DEMPSEY	4	9
DIFALLAH	4	
DIMITROV	4	
DOHERTY	4	
DOLAN	4	
DOUSSOT	4	

Name	Group	Domain
DOWSE	5	10
DOYLE	5	
DUNNE	5	
FENLON	5	
FLYNN	5	
FOGARTY	5	
FOLEY	6	11
GALLAGHER	6	
GATT	6	
GEARY	6	
GROUSE	6	
GUPTA	7	12
GUZOWSKI	7	
HEALION	7	
HRABOWYCH	7	
ILYIN	7	
JINKS	8	13
JOHNSON	8	
JOSEPH	8	
JUNKERMANN	8	
LYNCH	8	

You can change your domain If there is another domain that interests your group. Check suitability with Gaye Stephens- gaye.stephens@tcd.ie

Domains

1. Irish Red Cross
2. Bord Gais
3. Trade Union (e.g. SIPTU, ASTI etc.)
4. Fast Food delivery service, e.g. deliveroo
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7. Scouting Ireland
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12. National Library
13. Waste Management Company (e.g. Greyhound)
14. Online Retailer e.g. AMAZON
15. Toy Store e.g. Smyths
16. Streaming Service e.g. Spotify
17. Car Rental e.g. Hertz
18. National Art Gallery

Weekly On-Line Blackboard group Collaborate sessions- For non-F2F weeks

Sessions Day and Time	Group Numbers
Monday 10:00-11:00	(Groups 1-10)
Monday 11:00-12:00	(Groups 11-21)
Thursday 11:00-12:00	(Groups 22-31)

ICS-2-B Groups and Topics

Name	Group	Domain
KARPE	SANKEERTH	9 14
KASABA HARI GOPAL	SHASHANK	9
KASSIM	AYODEJI MOHAMMED	9
KEANE	AODHAN	9
KELLY	TIM	9
KENNEY	CAITLIN	9
KLEIN	SARAH	10 15
KOMMALA	JOHN WESLEY	10
KOWALSKI	FILIP NORBERT	10
KUBECKA	ARTHUR	10
LANGAN	SEAN	10
LAO	BERNADINE	10
LARSEN	FINN	11 16
LIAO	RAN	11
LIU	HONGJUN	11
LOBODA	DMITRY	11
LYSAGHT	MARK	11
MAC GIOLLA PHADRAIG	CAOLAN	12 17
MACZKA	KACPER	12
MAKANJU AWODOLA	IYAMINTAN DOLLAR	12
MAKARENKO	MICHAEL	12
MAMEDOV	AJCHAN	12

Name	Group	Domain
MAWHINNEY	CIAN JAMES	13 18
MCDONALD	EMMET	13
MCEVOY	HOLLY	13
MCEVOY	JAMIE	13
MCGUINNESS	MATTEO LUCIANO	13
MONTAYNE	DANIEL	14 1
MORRIN	EMMET	14
MULVIHILL	ADAM BEWICK	14
MURPHY	EMER	14
NI DHEORAIN	CAOILFHIONN	14
NA BHRIAIN	ROISIN	15 11
O CALLAGHAN	PATRICK KEVIN	15
O GORMAN	CIAN ANTHONY	15
O GRADY	CIAN	15
O GRIANAIN	EWAN	15
O LEARY-FRAAD	DAVY	16 13
O LIONAIRD	LIAM SAMUEL	16
O TOOLE	CONALL	16
POWER	GARETH	16
WALSH	CIAN	16

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Thursday 11:00-12:00	(Groups 22-31)

ICS-2-C Groups and Topics

Name		Group	Domain
OGUNBADEJO	OLUWATUMININU ADENOLA	17	1
OLOWOOKERE	DAVID AYOMIDE	17	
PETRUKHIN	PAVEL	17	
POPOOLA	CHRISTIANA	17	
RAOS	PASCAL	17	
ROBERTS	TOM	18	2
SAI SANKAR	PRATHAMESH	18	
SECKERSON	LUKE	18	
SHARKEY	BRIAN	18	
SHEERAN	APRIL	18	
SHI	MINGWEI	19	3
SKERSONAS	ELIGIJUS	19	
STEPHENS KEHOE	THEO EAMON	19	
SWEENEY	MICHAEL	19	
SWORDS	RALPH	19	
THOMPSON	MATTHEW	20	4
TISCOVSCHI	ANTON	20	
TUCKEY	TIMOTHY DIARMAID	20	
VALIRAMANI	LAKSHYA	20	
WANG	KEVIN	20	
WARSAME	MARWA MAHIR SAEED	20	
WHELAN	BRIAN	21	5
YANG	XIAOWEI	21	
YU	YUNZHE	21	
ZHANG	TIANZE	21	
ZHU	YIFAN	21	
DALY	EMMA RUTH	21	

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CSB-2-A Groups and Topics

Name	Group	domain
BAIRD RYAN	22	1
MERRIMAN AILBHE	22	
MURPHY MICHAEL	22	
MURPHY SEAN	22	
ARAGONES DARREN MIGUEL	22	
BREDICAN BRIAN WALTER	23	2
BYRNE AARON	23	
BYRNE CILLIAN	23	
CAIRNS MARIA	23	
CASHIN STEPHEN	23	
COWAN JAMES KENNETH	24	3
DAVIS STEPHEN	24	
DENEHER DAVID JOHN	24	
DOHERTY ALICE	24	
DOI MASANARI	24	
DONNELLY ROSS GERARD	25	4
FRENCH PHILIP JOHN	25	
GAFFNEY SEAN	25	
GREEN IMOGEN AMY	25	
GUPTA AARYAN RAI	25	

Name	Group	Domain
ICHIM ALEXANDRA	26	5
JAIN KHUSHBOO	26	
KENNY PEADAR	26	
KHAN AOIFE ALENA	26	
KUMAGAI HIROKI	26	
LI HONGLIN	27	6
O BRIEN DERMOT NOEL	27	
O KEEFE DEVIN	27	
O SULLIVAN BARRY	27	
READMAN AARON PAUL	27	
SHEVLIN NEIL	28	7
TING RYAN	28	
VAUGHAN BEN	28	
WHELAN DANIEL PATRICK	28	
BAI ZIHENG EDDIE	28	

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CS-Online Only- Groups and Topics

Name		Group	Domain
BUI	LILLY THI	29	8
KANTH RAYANAPATI	SAI BALA SUBRAHMANYA LAKSHMI	29	
MACBRIDE	LYDIA	29	
MCGRATH	DELIA MARY	29	
PRASAD	MERLIN	30	9
VALIRAMANI	PARV	30	
WANG	HAOYU	30	
ZHANG	XIAOLEI	30	

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Maths- Groups and Domains

Name		Group	Domain
FITZPATRICK	AISLINN	31	10
LYONS	RORY	31	
MAKINDE	OLUWADAMISOLA	31	
O CONNOR	PATRICK FRANK	31	
SLATTERY	CORMAC	31	

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**That's All
Folks
Thank You
for Listening**

