CISC 498: Information Technology Project

Some Important Information

2022-23
About the Instructor

- **Instructor**
  - Dr. Mohammad Zulkerneine
  - Professor and Graduate Chair, School of Computing
  - Contact: 540 Goodwin Hall, mz@queensu.ca
  - More information: http://cs.queensu.ca/~mzulker

- **Teaching Assistant**
  - Anika Anwar
  - Senior Doctoral Student, School of Computing
  - Contact: anika.anwar@queensu.ca
CISC 498

- Capstone course of the Software Design program (SODE)
- Format – no lectures, presentations and report only
- Objective
  - Application of software engineering techniques to the development of a substantial software system
  - Communicate with a customer to define and deliver a system that meets the customer’s needs
  - Collaborate with colleagues to develop a software system (group work, oral presentation, participation software artifact review meetings)
  - Deliver software requirements specification and design, quality assurance plan, and a working software
Stakeholders

- **Coordinator – Mohammad Zulkernine (email)**
  - to organize and oversee a number of meetings and presentations
  - assist you in finding a supervisor
  - help you in accessing to the resources you need
  - evaluate your work (together with the customers and supervisors)

- **Teaching Assistant – Anika Anwar (OnQ and email)**
  - primary contact person for the submissions

- **Group members**
  - registered for this course
  - 4-5 members
Stakeholders – contd

- **Customer**
  - Suggested a project already
  - Meet customers to develop requirements (contact info available on the website)
  - It is your responsibility to inform the customer about your presentation
  - Advise customer to become familiar with the customer related information on the course website

- **Supervisor**
  - School of computing (or cross-appointed) faculty members
  - First choice: software engineering faculty members
  - Start contacting potential supervisors
  - It is your responsibility to inform the supervisor about your presentations and deadlines
Software Engineering

- **Software engineering (definitions from various sources)**
  - Software development is not only programming
  - Multi-person construction of multi-version software
  - Engineering techniques and methods for building large software systems by several people in a systematic way
  - Each software process model includes a set of steps to build a software product - software life cycle model
Software Process Models

- **Most software life cycle models include the following steps**
  - Requirements
  - Specification
  - Design
  - Programming
  - Integration
  - Testing (may be attached to any steps?)
  - Operation and Maintenance

- **Some most commonly used models**
  - Waterfall Model
  - Prototyping model
  - Spiral model
Waterfall Model

- System Eng.
  - Informal Specification
  - Requirements
    - Formal Requirements Specification
    - Design
      - Software Design Document
      - Implementation
        - Code
          - Operation

Waterfall with Feedback?
Waterfall – Advantages and Disadvantages

- **Advantages**
  - Prescribes a strict disciplined approach following well-defined tasks
  - Separation of phases and transitions among them – separation of tasks
  - Documentation helps reduce maintenance

- **Disadvantages**
  - Client: “I know this is what I asked for, but this is not what I really wanted”
  - Heavily documentation dependent – too much overhead for small software
# Important Dates

## Fall, Winter: Wed 11:30AM - 2:30PM, MACINTOSH-CORRY RM D214

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Contract plus initial project plan</td>
<td>21 September, 2022 (23:59:59 EST, by email to TA and supervisor)</td>
<td>5%</td>
</tr>
<tr>
<td>Requirements document</td>
<td>19 October, 2022 (23:59:59 EST, by email to TA and supervisor)</td>
<td>10%</td>
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<tr>
<td>Requirements presentation</td>
<td>19 October, 2022</td>
<td>5%</td>
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<tr>
<td>Design document</td>
<td>23 November, 2022 (23:59:59 EST, by email to TA and supervisor)</td>
<td>10%</td>
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<tr>
<td>Design presentation</td>
<td>23 November, 2022</td>
<td>5%</td>
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<tr>
<td>Quality assurance and deployment plan document</td>
<td>25 January, 2023 (23:59:59 EST, by email to TA and supervisor)</td>
<td>10%</td>
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<tr>
<td>Quality assurance and deployment plan presentation</td>
<td>25 January, 2023</td>
<td>5%</td>
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<tr>
<td>Weekly progress reports (email to supervisor &amp; customer)</td>
<td>By email, each Thursday, starting January 12, 2022</td>
<td>5%</td>
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<tr>
<td>Final project documentation</td>
<td>March 29, 2023 (23:59:59 EST, by email to TA and supervisor)</td>
<td>15%</td>
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<tr>
<td>Final project presentation (delivered system to customer)</td>
<td>March 29, 2023 (demo, software and documentation delivery)</td>
<td>25%</td>
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<tr>
<td>Final poster submission/presentation</td>
<td>Creative Computing Showcase, TBD</td>
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<td><strong>Total</strong></td>
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Next Tasks and Submission

- Form the group
- Submit your group information to the TA (identify a team lead) by September 14, 2022
- Choose and contact the customer
- Find a supervisor
- Finalize the project plan
- Sign and submit the contract (Wednesday, September 21, 2022)
- Check the resource page for example documents and guidelines
Some Important Points

- Documents not submitted by the due date will face a penalty of 10%
- All members of the group are expected to cover a part of each presentation
- Attendance at meetings/presentations is mandatory
- Who did what? Each submitted document and email reports should explicitly identify the contributions of each group member
- Next Deadline: Contract plus initial project plan, Wednesday, September 21, 2022
Some Important Points – contd.

- If you cannot find a group by next week, please contact the TA.
- If you cannot find a supervisor by the deadline, please contact me.
- If you sense any problem in the group, please contact your supervisor and me ASAP.

- Any questions? Please email me or the TA.
- For detail information: http://cs.queensu.ca/home/cisc498/