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| No | Points (out of 25) | Due date | Homework |
| 1 | 2 | 19.10.2018, Friday, 16.30, Lab 134 | Posted 04.10.2018. Updated 06.10.20181. Select 3 out of 20 famous software failures <http://www.devtopics.com/20-famous-software-disasters/> and survey them

For each case, give answers on the following four questions1. Project aim2. Project budget, human resources, developing organization3. Disaster4, Causes of the disasterSelect 1 (one) article from <http://catless.ncl.ac.uk/Risks/30/85#subj1> , The RISKS Digest, Forum on Risks to the Public in Computers and Related Systems, [*ACM*](http://www.acm.org/)*Committee on Computers and Public Policy,*[*Peter G. Neumann*](http://www.csl.sri.com/neumann/neumann.html)*, moderator,* Volume 30 Issue 85, Tuesday 2 October 2018Prepare a 3-page essay on the subject selected explaining 1. Paper data: Author(s), title, where published (journal, newspaper, etc, volume, number, pages), date of publication, DOI, URL
2. The system under consideration
3. Causes of the risks
4. How risks were recognized
5. What methods are proposed to resolve the risks

Report must be **printed** (handwritten reports will not be considered) and contain a cover page (University, Department, Program, Course, Subject, Student(s), Instructor, Time, Place), problem definition, ***team work descriptions (day, time of the the team meetings conducted, attendees, work breakdown in graph form showing work dependences, team members’ responsibilities (who is responsible for what tasks)),*** answers on the posed above 4 questions on the famous 3 out of 20 software disasters (Part A) and 5 questions on the Risks (Part B), list of references (including may be additional sources). Each case description shall take at least 1/2 page. Reports shall be prepared by teams of 5-6 people. Copies are not allowed and will deserve 0 points. |
| 2 | 3 | 26.10.2018 | Posted 14.10.2018. [Lab 2 Task](https://staff.emu.edu.tr/alexanderchefranov/Documents/CMSE201/Lab%202%20MS%20Project%2014102018.docx) |
| 3 | 3 | 9.11.2018, Friday, 16.30, Lab 134 | Posted 23.10.2018. Prepare User and System Requirements Specification (both functional and non-functional requirements) for the Online Library System (OLS) intended for use by the following actors: 1) Student, 2) Teacher, 3) Librarian, 4) Library manager, and 5) OLS administrator. Each actor shall have at least **3** (**three**) responsibilities (functional requirements). Responsibilties of any two different actors shall differ in at least **one** responsibility. Specify at least **three** non-functional requirements.The work is to be done by teams. The teams will continue the work on OLS in the following home-works.Report must contain: 1) cover page, 2) outline, 3) problem definition, 4) information on the team work (meetings conducted ***(day, time of the the team meetings conducted, attendees, work breakdown in graph form showing work dependences, team members’ responsibilities (who is responsible for what tasks))***, 5) functional requirements specification (structured by Actors, requirement types), 6) non-functional requirements, 7) list of references (if necessary). Reports shall be prepared by teams. Copies are not allowed and will deserve 0 points |
| 4 | 8 | 7.12.2018, Friday, 16.30, Lab 134 | Posted 08.11.2018Using User and System Requirements Specification for the OLS defined in HW3, 1. Draw ORAS Context diagram (specifying the system and interacting with it actors, see Ch. 8, slide 7)2. For each of the **5 actors** of OLS  1) Student, 2) Teacher, 3) Librarian, 4) Library manager, and 5) OLS administrator, and for each out of three its functionalities (services), draw a Data Flow diagram (see Ch. 8, slides 9, 12, 14) with not more than 7-10 nodes in each of them. **Have at least one Dataflow diagram in two levels of hierarchy**.4. For **each** Dataflow diagram developed, draw a Statechart diagram (see Ch. 8, slides 17-20) with not more than 7-10 nodes in each of them. **Have at least one Statechart diagram in two levels of hierarchy**.5. Draw Semantic E-R diagram for OLS (Ch. 8. System Models, slide 22) and Data Dictionary (Ch. 8, System Models, slide 24), Report must contain: 1) cover page, 2) outline, 3) problem definition, 4) information on the team work (meetings conducted (at least two), specify 4.1) day, 4.2) time, 4.3) duration of a meeting, 4.4) attendees, 4.5) questions discussed, 4.6) decisions made, 4.7) team members responsibilities (actual work carried out by each student)), 5) **diagrams developed,** 7) list of references (if necessary). Reports shall be prepared by teams. Copies are not allowed and will deserve 0 points |
| 5 | 9 | 28.12.2018, Friday, 16.30, Lab 134 | Posted 14.12.2018. For the OLS using results of the HW4, do the following 7 tasks:1. Draw Use-case diagram (Ch. 14, Object-Oriented Design, slide 32; <https://en.wikipedia.org/wiki/Use_Case_Diagram>)
2. Define classes (Ch. 14 Object-Oriented Design, slide 11),
3. Draw Inheritance diagram (Ch. 14, Object-Oriented  Design, slide 15),
4. Draw Aggregation diagram (Ch. 8, System Models, Slide 34)
5. Specify system architecture having at **least three levels** of hierarchy (Ch. 14 Object-Oriented Design, slides 29,30, 35, 45),
6. Using the system architecture, specify work break down into a number of related tasks. Each task shall have understandable meaning (e.g., develop Book Order subsystem) related with the architecture. Do not forget such tasks as testing and integration! Use **MS Project** to specify activity network (Ch. 5 Project Management) in tabular form (Ch. 5, Slide 20) and in graphical form (Ch. 5, Slide 21). Durations of the tasks shall be specified in work days.
7. For the activity network, specify Activity timeline (Ch. 5, Slide 22) and Staff allocation (Ch. 5, Slide 23) for **four** software engineers (Richard, Mary, Hasan, Mohammed). Assume that start time of the project is 14.12.2018. Use EMU Academic calendar <https://www.emu.edu.tr/en/academics/calendar/academic-calendar-2018-2019/1528> when building the diagrams.

Report must contain: 1) cover page, 2) outline, 3) problem definition, 4) information on the team work (meetings conducted ***(day, time of the the team meetings conducted, attendees, work breakdown in graph form showing work dependences, team members’ responsibilities (who is responsible for what tasks))***, 5) **tasks 1-7 solutions,** 6) team members responsibilities (actual work carried out by each student), 7) list of references (if necessary). Reports shall be prepared by teams. Copies are not allowed and will deserve 0 points |