

**BINUS University**

<b>Academic Career:</b> <i>Undergraduate / <del>Master</del> / <del>Doctoral</del> *)</i>		<b>Class Program:</b> <i>International/Regular/Smart Program/Global Class*)</i>	
<input checked="" type="checkbox"/> Mid Exam <input type="checkbox"/> Final Exam <input type="checkbox"/> Short Term Exam <input type="checkbox"/> Others Exam : _____		<b>Term : Odd/Even/Short *)</b>	
<input checked="" type="checkbox"/> Kemanggisan <input checked="" type="checkbox"/> Alam Sutera <input type="checkbox"/> Bekasi <input type="checkbox"/> Senayan <input type="checkbox"/> Bandung <input type="checkbox"/> Malang		<b>Academic Year : 2019 / 2020</b>	
Faculty / Dept. : School of Computer Science		Deadline	Day / Date : Monday / 13 April 2020 Time : 13:00
Code - Course : COMP6100 – Software Engineering		Class :	
Lecturer : Team		Exam Type : Online	
*) <i>Strikethrough the unnecessary items</i>			
<p style="text-align: center;"><b><i>The penalty for CHEATING is DROP OUT!!!</i></b></p>			

### I. Essay (50%)

1. **(15%)** On requirement engineering process, the most common activities are inception, elicitation, elaboration, negotiation, specification, and validation. Explain what would happen if the elaboration process is ignored and give at least one example! Provide your answer in less than 100 words.
2. **(15%)** Two of the most commonly used Software Process Models are Waterfall Model and Agile Model. Compare the pros and cons of each process model when the team is faced with a quarantined situation like you are currently facing and must work remotely from home!
3. **(10%)** There are four modelling schemes in requirement modelling that can be chosen upon performing requirement analysis, which are: scenario-based models, class models, behavioral models, and flow models. Explain the justification for choosing each model!
4. **(10%)** Explain your business idea for the final project as detail yet compact as possible, along with your targeted customer segment. Make sure to not exceed 200 words for your explanation.

## II. Case (50%)

PT PopLegal Indonesia is an IT Solution Company based in West Jakarta. Their core business is to provide online legal service in the form of digital legal contract and a marketplace for legal professionals like Advocates and Notaries. Currently they are using a web application as the main channel for their business process.

This company has over 50 staffs ranging from business, marketing, design, to IT professionals. Currently, their IT Product Division has 1 Engineering Manager, 2 System Analyst, 3 Programmer, 3 Senior Programmer, and 1 UI/UX designer. This division is currently using Waterfall Model as the basis for their software engineering process.

The company is looking to expand their platform to Mobile Application. The simple application will be aimed to provide legal consultation between users and legal professionals. The features of this

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application are: (1) choosing legal professionals either Advocate or Notary, (2) approval by the chosen professional, (3) chatting between the two parties, and (4) feedback for both parties.

Past assessment conducted in the end of 2019 by the Engineering Manager before his resignation shows that the company is lacking in performing tasks on time, since 37.21% of their overall tasks were overdue for 3 days or more. They are also lacking in quality assurance, since 100 errors are found for every 1000 lines of code (KLOC), while the common industrial average is 10 to 50 error per KLOC.

You are appointed as the new Engineering Manager for the company. As a new spirit eager in innovation and improvement, you have the opportunity to show your knowledge of software engineering in improving the productivity on the company, especially in the IT Product Division in both assisting with the new product development and with the internal improvement of your company productivity. Your preliminary assessment tells you that there is something wrong with the process model, that is the waterfall model that is currently used by the company.

1. **(20%)** When using the elevator, you met your CEO and you are eager to provide a short presentation on your method in improving the IT Product Division. Due to the limitation of time, you only have less than 5 minutes to pitch your strategy to the CEO. Your goal is to get the CEO to approve changing the software process model. Formulate your elevator pitch in less than 200 words!
2. **(10%)** To show a good example in the spirit of workplace improvement, you want to design the new product as mentioned in the 3rd paragraph above. Design the process with these diagrams: (1) Use Case Diagram and (2) Activity Diagram. Since the goal of this diagram is to be shown to higher-level management, make sure that your diagram is less technical and more conceptual.
3. **(20%)** To provide further understanding to the stakeholder on the new product that will be developed, provide a UI design for every page that you will create. Make sure that you also provide a description for the UI design, so you are able to clearly communicate your design to anyone reading your documentation.

Note: Make sure that your answers for the case section is related to the case provided and **NOT** a normative or general explanation!

-- Good Luck --

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## KETENTUAN PENGUMPULAN BERKAS JAWABAN UTS

Mahasiswa wajib mematuhi ketentuan pengumpulan berkas jawaban UTS berikut ini.

1. Pengumpulan (*submit*) jawaban ujian **tidak melalui BINUSMAYA**, melainkan melalui <http://exam.apps.binus.ac.id>. Akses menggunakan *username* dan *password login* BINUSMAYA.
2. Pastikan *file extension* dan *size file* sesuai ketentuan. File extension yang diperbolehkan adalah 'txt', 'pdf', 'ppt', 'xls', 'doc', 'pptx', 'xlsx', 'docx', 'rar', 'zip', 'jpg', 'jpeg', 'png', 'wav', 'mp3', 'mp4', 'avi', '3gp', 'mkv', 'mov', dan 'flv'. Maksimum *size file* yang diperbolehkan adalah 20 MB.
3. Jika *file* jawaban ujian akan dikumpulkan (*submit*) Mahasiswa berukuran lebih besar dari 20 MB (>20 MB), maka Mahasiswa harus melakukan:
  - a. Menyimpan *file* jawaban ujian pada *Cloud Storage*, seperti *Google Drive*, *Dropbox*, *OneDrive*, dan yang lainnya.
  - b. Membagikan tautan (*share link*) file jawaban ujian dan menyalin tautan (*link*) ke dalam Microsoft Word.
  - c. Mengunggah (*upload*) file Microsoft Word yang telah berisi tautan file jawaban ujian pada <http://exam.apps.binus.ac.id>.

## STUDENT'S GUIDELINES FOR SUBMITTING MID EXAM ANSWER FILE

Students are obliged to follow the following guidelines for submitting mid exam answer file:

1. The answer file is **not to be submitted in BINUSMAYA**, but through the following link: <http://exam.apps.binus.ac.id>. Students can log in by using the username and password as in BINUSMAYA.
2. Please make sure to submit the answer file in one of the following accepted extensions: 'txt', 'pdf', 'ppt', 'xls', 'doc', 'pptx', 'xlsx', 'docx', 'rar', 'zip', 'jpg', 'jpeg', 'png', 'wav', 'mp3', 'mp4', 'avi', '3gp', 'mkv', 'mov', or 'flv'. The file size should not exceed 20 MB.
3. If the answer file size exceeds 20 MB, the student should perform the following procedures:
  - a. Save the answer file in Cloud Storage such as Google Drive, Dropbox, OneDrive, etc.
  - b. Copy the file link and paste it on a blank Microsoft Word document.
  - c. Upload the Microsoft Word document containing the file link through <http://exam.apps.binus.ac.id>.