

## 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 : <del>Odd</del>/Even/<del>Short</del> *)</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 :</b> <b>2019 / 2020</b>	
Faculty / Dept. : School of Computer Science		Deadline	Day / Date : Tuesday / 14 April 2020 Time : 13:00
Code - Course : COMP6115 – Object Oriented Analysis & Design		Class :	
Lecturer : Team		Exam Type : Online	
*) <i>Strikethrough the unnecessary items</i>			
<b><i>The penalty for CHEATING is DROP OUT!!!</i></b>			

### I. Essay (30%)

1. During the interview process, there are the terms of closed questions and open-ended questions, explain the differences and give examples! (**weight 10%**)
2. When selecting a software project, describe in detail the issues that are considered when evaluating a project's technical feasibility. (**weight 10%**)
3. In the behavioral models, describe the different elements of the sequence diagrams. (**weight 10%**)

### II. Cases (70%)

An entertainment company "UBINUS Enterprise" builds an online application. The application is called Video Online Apps. With this application, the company expect to be able to deliver better services to customers, that customers can subscribe the Videos or Films by online. The application consists of several business activities as follows:

#### a) Membership

- i) To use the application, customers must register, with the user profile data consisting of: username, password, nik(ssn), name, email, telephone number, and choice of membership type.
- ii) The application will check whether the username is already registered or not. If the user name is already used, a notification will be sent that the username is already in use and the user will be asked to enter another username. If the registration entry is successful, the user will be given a virtual account to be used for subscription payments.
- iii) There are 2 types of membership, Regular or Premium. Regular membership is the default membership, without any payment, but the customers can only watch the old videos of previous episodes of the running month, of course with interlude advertisements. Regular membership can only watch at maximum of 60 films per month. Whereas for premium membership customers must pay a certain fee every month, and the payment done by

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money transfer through a debit card or by using a credit card. With premium membership customers can watch the latest videos without advertisements. And for premium membership, the number of videos that can be watched is unlimited.

**b) Setting Selection**

- i) The setting option is used to select the language that the customer want to use in the application. There are 3 language choices, namely Indonesian, English or Mandarin. The default language option is English.
- ii) The setting can also selects the subtitle preferences (the text displayed at the bottom of the film). Choices also consist of the three languages mentioned above.
- iii) Channel selection, allows customers to choose three video channels or TV series. The choices are Indonesian, Asian, Korean, Japanese, Indian, Arabic and European films

**c) Film Searching**

- i) Customers can search (browse) movies, based on the channel selection settings above.
- ii) To display the movie title to be watched, customers simply click on the movie icon displayed when browsing. Or, customers can also used the "Search" box and fill in the keywords that the film database might recognize.
- iii) While the user watching a movie, he or she can change the subtitle settings.

**d) Customer Payment.**

- i) For Premium membership, payment is made by the customer every month, not later than one week after the registration date (if the registration date is 1<sup>st</sup> day of the month, then the monthly payment cannot be later then the 8<sup>th</sup> day of the following month). Late payment will cause a Premium membership account to be blocked and its status to become a regular membership.
- ii) Payment can be made by cash transferring using debit card into the virtual account provided at the time of registration. Whereas customers with a credit card must send data including the credit card number, cardholder's name, valid date, and CCV number which will then the payment be processed to the bank. The credit card payment is displayed on the payment menu of the application.
- iii) For each payment, a notification will be sent to the customer in the form of a receipt via the user's email.
- iv) At the end of each month Binus Enterprise's financial manager will receive the income reports, the reports on the number of the premium type new users, and the number of regular members.

**Your Task:**

In order to develop the application system (may add assumptions that you think is needed), you are asked to arrange an object-oriented system modeling:

- 1) Develop the **use case diagram** based on the requirements outlined above. **(weight 10%)**
- 2) Develop **use case description** for each use case showing step by step of actor activity. **(weight 20%)**
- 3) Develop the **class diagram** to show structural model. **(weight 20%)**
- 4) Develop a **sequence diagram** for each use case. **(weight 20%)**

-- 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>.

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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>.