TA01	**Team Project Assignment #1 : Find a Team, Find a Project (3 weeks)** The heart of this course is a semester-long project, in which you will design, implement, and evaluate a user interface. User interface design is an iterative process, so you will build your UI not just once, but four times, as successively higher-fidelity and more complete prototypes. In order to have time for these iterations, we need to get started on the project as early as possible. Project teams may consist of **3-5 people**. Teams will primarily be formed based on the results on the first brainstorming exercise and in-class discussion. You can also use the Directory or informal networking to find teammates. One member of the team should set up a team online drive (Google Drive/One Drive) on which you will post the results of team assignments. Ensure the names and email addresses of the team members are at the top of the page and post them to a server. Organize the file/folder so the lecturer can quickly find your assignments each week. Email the names of the team members, a name for your team, and a URL team online drive to your lecturer. Group project will involve the design of a Website or Mobile application interface with a topic guide from a lecturer. Here are some guidelines to help you develop your project proposal. - Your project must have a **substantial** user interface. A health screening system that simply administers a questionnaire is not enough. - The user interface must be **interactive**. A patient education system that simply displays a page of text or sequences through a series of pages would not be acceptable. - **Creative, original** projects are preferred (within the constraints set by the lecturer). The results of your project should be implemented up to High Fidelity prototyping. You are free to use any means to create high fidelity prototyping, but must be able to run on a variety of PC/Mobiles.

	What to Post Your proposal should be about min one page, and include the following parts: **1. Problem.** Describe the problem you chose and how the system will help users. **2. Target users.** Characterize the user population. **3. Solution.** Describe a possible solution to the problem --- i.e., the interface that you envision, and how it will address the problem. You aren't absolutely committed to your solution, since you may find after building and evaluating some prototypes that a wholly different solution will work better. Please answer the following questions and attach them to the proposal to help find problems and solutions.: - Are there problems with an existing product or user experience? If so, what are they? - Why do you think there are problems? - What evidence do you have to support the existence of these problems? - How do you think your proposed design ideas might overcome these problems?
TA02	**Team Project Assignment #2 : Data Gathering (1 week)** In this team assignment, you will start the design of your term project by doing the following: **Do data gathering for requirements.** Please select the data collection technique used and can use more than 1 data gathering technique (see the material slide "Establish Requirements"). **Product Requirement Document (PRD)**, after collecting the data requirements, please write it in the Product Requirement Document. PRD examples can be downloaded at the following link: http://bit.ly/examplePRD **What to Post:** - **Product Requirement Document**

TA03	**Team Project Assignment #3 : User & Task Analysis (1 week)** In this team assignment, you will start the design of your term project by doing the following: **User analysis**. Based on the **Product Requirements Document** that your team has created, do a more in-depth analysis of the stakeholders that have been written down. Exam each existing stakeholder, determine the stakeholders who are directly involved in using the system, then they will be called **Users**. **Task analysis**. From the specified user, create tasks for each user. Perform a more in-depth analysis of all the tasks a user can perform to achieve their goals using the system. Therefore specify in advance the goal of every user in order to analyze its task. **Use Case Diagram** : Make a use case diagram based on the results of the User & Task Analysis that has been done. Use case diagrams can be made at the following link: draw.io Example & Guideline Use Case Diagram & Use Case Description: - http://www.waskhas.com/2017/11/contoh-use-case.html - https://sis.binus.ac.id/2020/03/16/use-case-description-components/ **What to Post.** Your report should be at least 4 pages long. Include the following parts: • **Title**. Give your project a title, if you haven't already. • **Problem**. Briefly restate your problem. • **Users**. Describe each of your user classes and other stakeholders. • **Tasks**. Write down at least 5 (or more) tasks for each identified user.. Every task should have a goal. • **Use Case**. Make a use case diagram based on the results of the User & Task Analysis that has been done. Create **use case description** for each use case.
TA04	**Team Project Assignment #4 : Activity Design & Paper Prototyping (2 week)** In this team assignment, you will continue your term project design by creating activity and low fidelity prototyping designs.

	Activity Design : Transform each of your Use case into an activity design in form **Activity Diagram**. If in your Use case diagram there are 3 use case, then 3 activity diagrams must be made. The following is a guide link for making an activity diagram https://creately.com/blog/diagrams/activity-diagram-tutorial/ **Interface Methaphor** : Make a list of possible interaction metaphors for your interface. For each of your use case at least one for interaction metaphors that encompass some or all of the task, why you think they are appropriate, and some of the implications of your choice. **Paper Prototyping** : Build your prototype. Draw the static background, menus, dialog boxes, and other windows. Decide how to implement the dynamic parts of your interface. Using Figma tools is preferred. Your paper prototype should be able to handle **at least 3 of your Use Cases**. Every activity from prototyping must follow the flow of the activity diagram that is made. **What to Post :** You should post a report with the following parts: - **Activity Diagram** in the form of images, give numbering on each activity diagram to represent a use case in question. - **List of possible interaction metaphors** - **Prototyping**. Present each of your Use Cases in Paper Prototyping form.
TA05	**Team Project Assignment #5 : High Fidelity Prototyping (2 week)** In this group assignment, you will do the first computer-based implementation of your term project. **Your computer prototype should be**: - **High fidelity in look**. Use this prototype to explore the graphic design of your final implementation. Lay out screens as you want them to appear in your final implementation. Make choices about colors, fonts, alignment, icons, and white space. Your prototype need not be pixel-for-pixel identical to your final implementation, however. - **Medium fidelity in feel**. This prototype will run on a desktop computer with a mouse and a keyboard. Also, your prototype may not support some advanced interactions with high fidelity, such as drag & drop. That's OK. You can simulate these interactions with a little animation, or at least with a popup that describes in Indonesia/English what would happen. - **Medium fidelity in breadth**. Your prototype should include every major screen or dialog you expect to have in your final implementation.

	- **Low fidelity in depth**. Don't implement any backend. Write minimal code. Here are some issues you should not worry about in this prototype: **Window resizing**. **Platform independence**. Focus on Windows for now. **Printing**. You might pop up a window showing a mock up of what might be printed in a given situation. Your prototype should be able to handle **at least 3 (main function) of your Activity Diagram** you described in your Use Case **Example Tools for High Fidelity Prototyping** : Using Source Code Front End Development (Recomended : HTML, CSS, Javascript). If you want to use Backend, why not ? It's Optional. **What to Post :** You should post a report with the following parts: 1. A link to your prototype (your prototype must accessible at this location for two weeks after the due date). 2. Startup instructions. Specify the platform and requirements for your prototype. Give any special instructions for starting it up. **Note : Link prototype should be given to the User Evaluator for evaluation. Prepare the target user to evaluate your prototyping.**
TA06	**Team Project Assignment #6 Heuristic Evaluation & Prototype Revision #1 (1 weeks)** At this point you will have about a week to do a heuristic evaluation. After you have carried out a heuristic evaluation, you should assign each of the problems found to a severity rating (cosmetic, minor, major, catastrophic), and brainstorm possible solutions to work with teammates. Modify your system to fix as many problems as it finds (in order of priority), and document how you did it. Template Heuristic Evaluation : https://bit.ly/heuristicevaltemplate Guideline Heuristic Evaluation : https://riyanthisianturi.com/heuristic-evaluation/ **What to Post:** A link to your updated prototype and the report describing how you responded to the heuristic evaluations.

TA07	**Team Project Assignment #7 : User Testing & Prototype Revision #2 (1 week)** In this final group assignment, you will complete enough of the implementation to support user testing, conduct a user test of your interface, and write up the final results of the project. **User Testing**: You will conduct user testing of your system. User testing uses **high fidelity prototyping** that has been made based on **3 main features** that have been selected. User testing is performed by **a minimum of 5 users who use the applications / systems directly**. In user testing, this will test the prototyping made whether it meets elements such as usability and user experience. Usability testing is carried out using the **System Usability Scale (SUS)** and user experience using the **User Experience Questionnaire (UEQ).** - **System Usability Scale (SUS)** Please use the SUS questionnaire at the following link https://bit.ly/QuestionnaireSUS. After collecting data from respondents, then the data is calculated using a calculator at the following link https://bit.ly/CalcSUS. If you need more explanation, you can look at the following website https://www.edisusilo.com/cara-gunakan-system-usability-scale/ - **User Experience Questionnaire (UEQ).** Please use the UEQ at the following link https://bit.ly/QuestionnaireUEQ. After collecting data from respondents, then the data is calculated using a tools at the following link https://bit.ly/UEQAnalysisTool. Conduct an evaluation with each user with the following step: • **Create SUS & UEQ using online questionnaire**. Specifically for SUS, each question with an even number if the user answers 3, 4 & 5 provides a field to provide reasons for the purpose of getting input. For EUQ add 1 field at the bottom for application suggestions. • **Provide a high fidelity prototyping link along with a questionnaire to the user for testing**. Give directions on how to fill out the questionnaire. • **Move the results of the user's response to the measurement tools provided in the link above (SUS & UEQ).** Especially for the UEQ measuring instrument, pay close attention to the commands on the READ_FIRST worksheet, the responses to the questionnaire are placed in the DATA worksheet, and the analysis results are shown in the RESULT worksheet.

	Redesign Collect the usability problems found by your user tests (SUS) into a list. Brainstorm with your teammates possible solutions for the problems. Then, fix your implementation to solve as many problems as you can in the time available. At the last meeting (week 13) your team will give an 8-minute presentation of your project. This talk should include the following: • **Problem**. What user problem are you trying to solve? Who are the users? What are their tasks? • **Demonstration**. Demonstrate your design and implementation via a live demo of your system, working through 1-3 sample tasks. Discuss major design decisions. • **Evaluation**. Discuss the major findings from all your user evaluations (prototyping, heuristic evaluation, and user testing). After your team presentation submit your file presentation to following link : **What to Post:** - The Result of SUS and EUQ Analysis - A link to your updated prototype
TA08	**Final Report** **What to Post** Your final project report should contain the following: • **Problem**. What user problem are you trying to solve? Who are the users? What are their tasks? • **Design**. Describe the final design of your interface, including any redesign you did after user testing. Illustrate with screenshots. Point out important design decisions and discuss the design alternatives that you considered. Particularly, discuss design decisions that were motivated by the three evaluations you did (paper prototyping, heuristic evaluation, and user testing). • **Implementation**. Describe the internals of your implementation, but keep the discussion on a high level. Discuss important design decisions you made in the implementation. Also discuss how implementation problems may have affected the usability of your interface. • **Evaluation**. Describe how you conducted your user test. Describe how you found your users and how representative they are of your target user population. Describe how users were briefed and what tasks they performed. Discuss the critical incidents you observed. Discuss any

	remaining usability problems that you didn't solve in your final design, and suggest solutions. • **Reflection**. Discuss what you learned over the course of the iterative design process. If you did it again, what would you have done differently? Focus in this part not on the specific design decisions of your project (which you already discussed in the Design section), but instead on the meta-level decisions about your design process: what features to prototype, what prototype techniques to use, and how to evaluate the results. **What to Post:** - Final Report min 5 pages - A link to your updated prototype