



**UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM)**

**BITP2223 SOFTWARE REQUIREMENT AND DESIGN**

**BITD, SEM 2 2023/2024**

**DUE DATE : 25/04/2024**

<b>Bil</b>	<b>Matric No.</b>	<b>Full Name</b>	<b>Section/Group</b>
1	B032220041	MUHAMMAD IKHWAN BIN CHE ROSS	S1G1
2	B032220037	MOHD HAZIQ HAKIMI BIN SUHAIMI	S1G1
3	B032220038	MUHAMMAD AKMAL BIN MOHD NASIR	S1G1

**NAMA PENSYARAH:**

DR. EMALIANA BINTI KASMURI

# Project Name: TimeIman : Al-'Asr

## List of Sources

1. Wyche, S. P., Caine, K. E., Davison, B., Arteaga, M., & Grinter, R. E. (2008). Sun Dial. *CHI '08 Extended Abstracts on Human Factors in Computing Systems*.  
<https://doi.org/10.1145/1358628.1358866>
2. Malaysia, E. (n.d.). *TheNoor*. Ethis Malaysia. <https://myethis.com/campaigns/thenoor>
3. Zafar, S. (2023, November 20). *The significance of Hadith in Islam: A guiding light for humanity*. The Muslim Vibe.  
<https://themuslimvibe.com/faith-islam/the-significance-of-hadith-in-islam-a-guiding-light-for-humanity>
4. Islamweb, & Islamweb. (n.d.). *A praying person reciting the Quran while listening to Quran audio*.  
<https://islamweb.net/en/fatwa/127409/a-praying-person-reciting-the-quran-while-listening-to-quran-audio>

# List of Functional Requirements

No	Requirement Statement	Source
1.	TimeIman : Al -'Asr must provide accurate prayer time reminder based on user current location and allows users customize their reminder setting.	Wyche, S. P., Caine, K. E., Davison, B., Arteaga, M., & Grinter, R. E. (2008). Sun Dial. <i>CHI '08 Extended Abstracts on Human Factors in Computing Systems</i> . <a href="https://doi.org/10.1145/1358628.1358866">https://doi.org/10.1145/1358628.1358866</a>
2.	Users should be able to track their Quran recitation progress which includes the number of verses recited, and the ability to set daily goals.	Malaysia, E. (n.d.). <i>TheNoor</i> . Ethis Malaysia. <a href="https://myethis.com/campaigns/thenoor">https://myethis.com/campaigns/thenoor</a>
3.	TimeIman : Al -'Asr should have a collection of hadith and motivational content, organized by topics like faith, patience, and perseverance. Users can search, read, and bookmark their favorite hadith.	Zafar, S. (2023, November 20). <i>The significance of Hadith in Islam: A guiding light for humanity</i> . The Muslim Vibe. <a href="https://themuslimvibe.com/faith-islam/the-significance-">https://themuslimvibe.com/faith-islam/the-significance-</a>

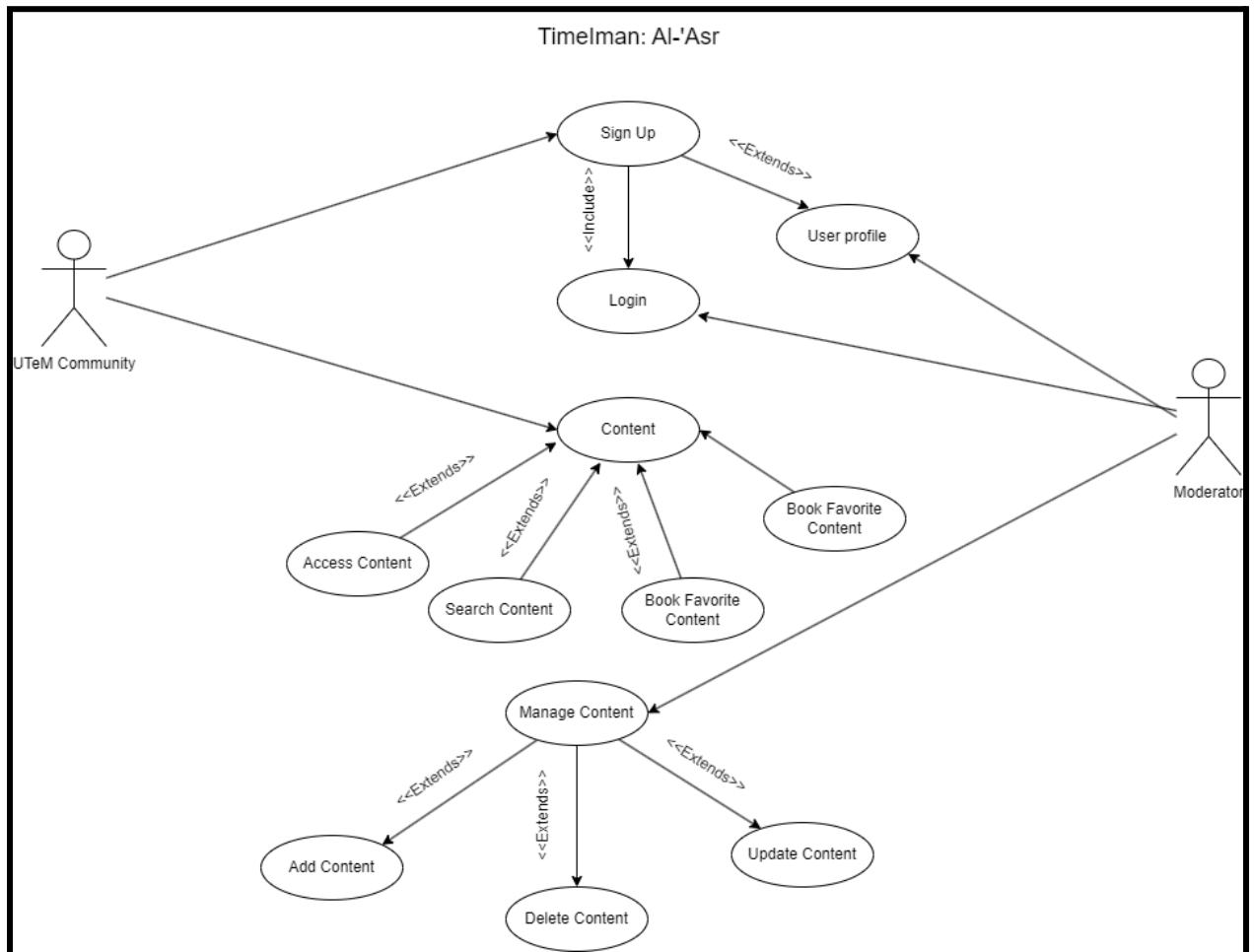
		<a href="#">of-hadith-in-islam-a-guiding-light-for-humanity</a>
4.	Users should have an ability to create and manage their profiles, including personal information, prayer preferences, and notification settings.	Malaysia, E. (n.d.). <i>TheNoor</i> . Ethis Malaysia. <a href="https://myethis.com/campaigns/thenoor">https://myethis.com/campaigns/thenoor</a>
5.	TimeIman : Al -'Asr shall allow users to share their Quran recitation progress, join study groups, and chat with others in the community.	Islamweb, & Islamweb. (n.d.). <i>A praying person reciting the Quran while listening to Quran audio.</i> <a href="https://islamweb.net/en/fatwa/127409/a-praying-person-reciting-the-quran-while-listening-to-quran-audio">https://islamweb.net/en/fatwa/127409/a-praying-person-reciting-the-quran-while-listening-to-quran-audio</a>

# List of Non-Functional Requirements

No	Type of NFR[1]	Requirement Statement	Source
1.	Performance	TimeIman : Al -'Asr should load fast and react quickly to user actions. Navigation between sections must be smooth.	Zafar, S. (2023, November 20). <i>The significance of Hadith in Islam: A guiding light for humanity</i> . The Muslim Vibe. <a href="https://themuslimvibe.com/faith-islam/the-significance-of-hadith-in-islam-a-guiding-light-for-humanity">https://themuslimvibe.com/faith-islam/the-significance-of-hadith-in-islam-a-guiding-light-for-humanity</a>
2.	Usability	The user interface must be simple and easy to use, with clear instructions and feedback. The app should be suitable for people with varying levels of tech skills.	Malaysia, E. (n.d.). <i>TheNoor</i> . Ethis Malaysia. <a href="https://myethis.com/campaigns/thenoor">https://myethis.com/campaigns/thenoor</a>
3.	Reliability	TimeIman : Al -'Asr should give correct prayer times and track Quran recitations without mistakes. It must cope with network issues smoothly, letting users keep their data even if the connection drops.	Wyche, S. P., Caine, K. E., Davison, B., Arteaga, M., & Grinter, R. E. (2008). Sun Dial. <i>CHI '08 Extended Abstracts on Human Factors in Computing Systems</i> . <a href="https://doi.org/10.1145/1358628.1358866">https://doi.org/10.1145/1358628.1358866</a>

[1] NFR is Non-Functional Requirements

## Lab Exercise 2



Analyze the requirements.

Model the requirements using use case diagrams.

Describe each use case. Each use case must have a reference to the list of functional requirements constructed in the previous lab exercise.

### Lab Exercise 3

#### **Use Case : User Registration and Profile Management**

**Purpose:** This use case enables new users to register for an account and existing users to log in and manage their profiles within the TimeIman: Al-'Asr app.

**Actor: UTeM community, Moderator**

#### **Pre-Condition**

1. The actor has successfully logged into the system.
2. The course file has been created.
3. The type of of course file materials have been defined.

#### **Normal Flow**

1. The use case starts when the user launches the TimeIman: Al-'Asr app.
2. If the user is new and does not have an account:
  - a. The user selects the "Sign Up" option from the app's interface.
  - b. The system presents a registration form prompting the user to enter required details such as username, email, password, and additional optional information.
  - c. The user fills out the registration form and submits it.
  - d. The system validates the provided information and creates a new user account.
  - e. The system redirects the user to the login screen.
3. If the user is returning and already has an account:
  - a. The user selects the "Log In" option from the app's interface.



- b. The system presents a login form requesting the user to enter their username/email and password.
  - c. The user enters their credentials and submits the form.
  - d. The system verifies the user's credentials.
  - e. If the credentials are valid, the system logs the user into their account and displays the app's home screen.
  - f. If the credentials are invalid, the system displays an error message and prompts the user to try again or reset their password.
- 4. Once logged in, the user can access their profile by selecting the "Profile" option from the app's menu.
  - 5. The user can view and edit their profile information, including personal details, prayer preferences, and notification settings.
  - 6. The user can save any changes made to their profile.
  - 7. The use case ends.

### **Alternative Flow**

### **Exceptional Flow**

#### A1: Invalid Registration Information

- 1. The system shall detect invalid or incomplete information provided by the user during registration.
- 2. The system shall display error messages next to the relevant fields indicating the issues (e.g., "Invalid email format", "Password must be at least 8 characters long").

3. The system shall prompt the user to correct the invalid information before proceeding.
4. Once the user corrects the information, the system shall allow them to resubmit the registration form.

### **Post-Condition**

1. Upon successful registration or login, the user gains access to the app's features and functionalities.
2. Any changes made to the user's profile information are saved and reflected in their account settings.

Construct requirement specifications for the use cases using the requirement template.

Document the specifications using this template.

An example of the use case specification can be found [here](#).