

**UNIVERSITI TEKNOLOGI MARA**

**DESIGNING PHOTO GALLERY FOR ELDERLY  
BASED ON MENTAL MODEL**

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Report submitted in fulfillment of the requirements  
for the degree of

**Master of Science in Information Technology**

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## STUDENT'S DECLARATION

I declare that the work in this report was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as reference work. This report has not been submitted to any other academic institution or non-academic institution for any other degree of qualification.

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## ABSTRACT

Human Computer Interaction (HCI) evolve from only focusing on computer science research and development to user centered system development then recently to emotional and spiritual design of interfaces (Caroll, 2011). Nowadays, many developers become advent to design software and technology based on user's spiritual need and emotional requirement especially to older adults or elderly users. Prior to the design development, this research was conducted to primarily understand and identify requirement desired by elderly in browsing and organizing their personal photos. This research then developed Mental Model of elderly for Photo Gallery application. Lastly, this research designed a prototype of Photo Gallery for elderly based on Mental Model. This research applied empirical technique to collect data which focused on qualitative survey. The qualitative survey is done through questionnaire, interview questions, user study (usability) and also drawings. These methods are being adapted and improvised from previous project "Elderly User Mental Model of Reminder System" by Fariza Hanis Abdul Razak, Rafidah Sulo & Wan Adilah Wan Adnan. Four (4) personas were interviewed and their Mental Model drawings also gathered and observed. Besides that, designer's Mental Model also established in order to have some point of views of whom constructing the application. Both user's Mental Model and designer's Mental Model were then analyzed against seven (7) common design methods by Davidson consisting simplicity, familiarity, availability, flexibility, feedback, safety and affordances so that it can be mapped into ultimate Mental Model which being used as guidelines for prototyping phase. The significance of this research is to assist elderly browsing photos, organizing photos, input captions, create folders and manage their Photo Gallery easily. Besides, this research is to provide foundation studies for other researchers and HCI professionals on elderly Mental Modelling. And this research also to give a basis for designers who are working on producing new technology or application for elderly based on Mental Model. In the end, this research manages to develop a Photo Gallery for elderly based on Mental Model and achieve the three (3) objectives being set earlier.

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