BITM 2313
HUMAN COMPUTER INTERACTION

PROBLEM-BASED LEARNING (10%)

BITM 2313	SEMESTER 2	SESSION 2020/2021

1.0 Objective

To conduct an evaluation testing on smart home security system.

2.0 Heuristic Evaluation Principles

The main goal of heuristic evaluations is to identify any problems associated with the design of user interfaces. Usability consultant Jakob Nielsen developed this method on the basis of several years of experience in teaching and consulting about usability engineering.

A heuristic evaluation is a usability inspection method for computer software that helps to identify usability problems in the user interface (UI) design. It specifically involves evaluators examining the interface and judging its compliance with recognized usability principles (the "heuristics").

3.0 Requirement

In a group, select and discuss **ONE** of the smart home security systems.

Discuss the security system based on the **Heuristic Evaluation Principles** as below:

1. *Visibility of system status* – always keep users informed about what is going on, through providing appropriate feedback within reasonable time
2. *Match between system and the real world* – speak the user's language, using words, phrases and concepts familiar to the user, rather than system-oriented terms
3. *User control and freedom* – provide ways of allowing users to easily escape from places they unexpectedly find themselves, by using clearly marked "emergency exits".
4. *Consistency and standards*- avoid making users wonder whether different words, situations, or action mean the same thing

5. *Help user recognize, diagnose, and recover from errors* – use plain language to describe the nature of the problem and suggest a way of solving it

6. *Error prevention* – where possible prevent errors occurring in the first place

7. *Recognition rather than recall* – Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

8. *Flexibility and efficiency of use* – provide accelerators that are invisible to novice users, but allow more experienced users to carry out tasks more quickly

9. *Aesthetic and minimalist design* – avoid using information that is irrelevant or rarely needed

10. *Help and documentation* – provide information that can be easily searched and provides help in a set of concrete steps that can easily be followed.

Prepare your presentation slides/video of your findings and present at the end of the session.

Smart home security system examples

i. ADT Pulse (https://sea.pcmag.com/adt-pulse/16128/adt-pulse)

ii. Vivint Smart Home (https://sea.pcmag.com/surveillance-cameras/14039/vivint-smart-home)