ASSIGNMENT 1 (30%)

CPT6123 Research Methodology in Computer Science

Objective:

The objective of this assignment is for the students to select a research topic in computer science and do literature reviews based on selected published research papers from the peer-reviewed journal/conference papers.

General Instructions:

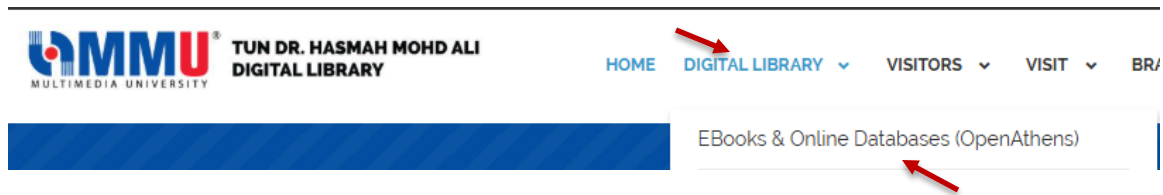Students can perform the following tasks in order:

a) Grouping:

➢ Students will have to work in a group of 4 (maximum) for the assignment within the same tutorial section.

b) Selection of Research Topic:

➢ Each group can choose any research topic under the areas of Computer Science. However, students are highly encouraged to choose a topic related to their specialisation and it may be helpful while doing their final year projects.

➢ Please get approval for the topic of research from the corresponding tutor before proceeding to next task.

c) Background Reading (survey research papers from journal/conference papers):

➢ Each team will need to identify and study research papers from a selected research topic to gain an understanding of the research area.

➢ This is to help you gain an overview of the topic of research and gain insights into the research progress done on the chosen topic.

➢ Students are strongly encouraged to use reputable academic databases such as IEEE Xplore and Scopus to find peer-reviewed journal articles and conference papers. These resources are accessible via the direct link above or via MMU's library portal using your student credentials.

➢ On the library's main page, click the *Digital Library* link and select *EBooks and Online Databases (OpenAthens)* to login and access the journal databases:

d) Review Report on selected topic based on research papers (One per group)

➢ Each group needs to study minimum 4 research papers on the selected topic and submit a REVIEW REPORT based on the research papers.

➢ The selected research papers should have been published within the last FIVE (5) years.

➢ Each of the selected research papers should be a minimum of 8 pages in length.

➢ The review report should contain the problem statement, research methodology/algorithm used by the researchers, results and discussion, advantages, limitations along with their own critical comments and suggestions for future enhancements.

e) Preparation of Report:

➢ The reviewed reports should be prepared using LaTeX template provided.

➢ Students should incorporate appropriate writing styles, grammar, construction of sentences (appropriate use of active/passive voice), mathematical notations, ethical issues etc. for the report.

➢ All citations in your reference section should be in APA7 format. You may refer to https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html for more details on the APA format.

f) Group member contribution:

➢ Every member's contribution to the reviewed report is to be listed in the first page of the report under the title. The contribution is in percentage (e.g. 5%, 25% etc. and summed to be 100% for all members together) and must be agreed with by all the members prior to the submission of the report.

g) Submission Details:

➢ Each group is required to submit the following (Group ID will be allocated by the tutor):

i) 4 research papers (minimum 4 articles) - File Name Convention: GroupID_StudentID_TutorialSection_PaperTitle.pdf

ii) Review reports on 4 research papers (minimum 4 articles) - File Name Convention: GroupID_TutorialSection_Report.pdf

iii) Latex Source (and related files) for the review report - File Name Convention: GroupID_TutorialSection_Assignment1.tex

➢ All the above documents to be submitted to your tutor following your registered tutorial Session

➢ The deadline to submit all the above documents is Friday, 5th September 2025 by 11.59p.m. (Week 4).

➢ A penalty of 5 marks per day will be imposed for any late submission. Any submission received beyond Sunday, 10th September 2025 will receive zero marks.

➢ All submissions must be made via eBwise (link will be posted at a later date by tutor for each session). The time stamp recorded in the eBwise documents will serve as the ultimate reference and evidence of the submission time.

h) Marking rubrics as follows:

Review Report (30%) (based on individual student contribution)	Maximum Marks
1. Introduction	2
2.Problem statement and objectives	4
3. Related prior research works / Literature Review	4
4. Research methodology/algorithms used	4
5. Performance evaluation / discussion on the results and contributions	4
6. Conclusion & Future Work	4
7. Proper formatting of the entire report using LaTeX	2
8. Adequate References in APA format	2
9. Proper spelling and grammar usage	2
10. Proper Writing Style and Composition	2
TOTAL	**30**