Ain Shams University
Faculty of Engineering
Computer Engineering and Software Systems Program

CSE432: Automata and Computability – Spring 2023

T E R M - P R O J E C T   R E Q U I R E M E N T S

This project is a group project with each group has 4 to 6 students. A detailed description that elaborates on the proposed project is needed. The project can be in any of the following categories:

Part 1

Write a report on how the Turing machine and Pushdown automata are used in the computation models.

The report should also include:

- its implementations
- its advantages and disadvantages
- the problems it solves or over come
- its shortages and drawbacks
- any extra knowledge

Part 2

Write a java – C++ or C# program to

1- convert any non-deterministic finite automaton to deterministic finite automaton
2- convert context free grammar to Pushdown automaton

documentation for the program with screen shot from the output

Important Notes:

- Project source code must be submitted on LMS in a zip/rar archive. Full implementation of the project should be delivered by the due time.
- Use consistent document format (font sizes, titles, subtitles, captions, paragraph formatting … etc.). Recommended font sizes are: main title 14pt, subtitles 12pt, main text 12pt, and captions 10 pt. Recommended font type is "**Arial Black**" for titles and subtitles, and "Arial" for all other texts. Recommended spaces before and after paragraphs are 12pt before and 6pt after each paragraph, and 1.5 spacing is highly recommended. Justified paragraphs from both sides are also recommended.
- Figures and tables must be centred in the pages, and they should be numbered separately. Each figure/table must have a caption that appears below the figure/table.
- Pages must be numbered consistently except the cover page.
- All reports must be written in English, always avoid typos and grammatical errors.
- Report will go plagiarism check.
- All project deliverable must be uploaded to the LMS, no hardcopy is accepted, and please do not send your project deliverables by email.