ENHANCING ACADEMIC WRITINGS USING CURRENT TECHNOLOGIES: *LaTeX & Overleaf*

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Abstract :-

Good academic writing requires effective planning, drafting, and revision. Academic writing in English is linear, which means it has one central point or theme with every part contributing to the main line of argument, without digressions or repetitions. Its objective is to inform rather than entertain. As well as this it is in the standard written form of the language. There are ten main features of academic writing that are often discussed. Academic writing is to some extent: complex, formal, objective, explicit, hedged, and responsible. It uses language precisely and accurately. It is also well organised and planned. Current technologies like LaTeX and Overleaf online compilers which enhance academic writing.

Keywords :- Academic writings, Technical writing, LaTeX, Overleaf, Online compilers

I. **Introduction :-** Students, professors, and researchers in every discipline use academic writing to convey ideas, make arguments, and engage in scholarly conversation. Academic writing is characterized by evidence-based arguments, precise word choice, logical organization, and an impersonal tone. Though sometimes thought of as long-winded or inaccessible, strong academic writing is quite the opposite: It informs, analyzes, and persuades in a straightforward manner and enables the reader to engage critically in a scholarly dialogue.

(https://www.thoughtco.com/what-is-academic-writing-1689052)

II. What Is Academic Writing?

Academic writing is the formal writing style used in colleges and universities. It's what students are expected to produce for classes and what professors and academic researchers use to write scholarly materials. High schools sometimes require academic writing style in certain classes. Academic writing is a formal style of writing used in universities and scholarly publications. You'll encounter it in journal articles and books

on academic topics, and you'll be expected to write your essays, research papers, and dissertation in academic style.

III.   What is the main purpose of academic writing?

The most common purpose in academic writing is to explain some idea or research finding and to persuade readers that your explanation or theory is the correct one. In doing so, you may need to describe an object, place, or activity. Sometimes you might write to narrate set of events, in the manner of a story.

IV.   Key Characteristics of Academic Writing-

While specific requirements may vary based on the particular form of academic writing or the class or publication for which a work is produced, some characteristics are common to all academic writing.

- **formal tone** - A formal tone is always used in academic writing. It is not lighthearted or conversational in tone. Slang and clichés do not belong in this type of writing.
- **precise language** - In keeping with the formal tone, it's important to choose precise language that very clearly conveys the author's meaning.
- **point-of-view (POV)** - Academic writing is usually written in third person POV because its focus is to educate on the facts rather than to support an opinion or give advice.
- **research focus** - Because most academic writing involves reporting research results, it tends to focus on the specific research question(s) being studied.
- **organization** - Academic writing should be organized logically in a linear, matter-of-fact fashion. Use headings to delineate each major section.
- **source citations** - Most academic writing includes at least some secondary research sources. Be sure to properly cite all sources and include a bibliography.

V.   Types of academic writing

Academics mostly write texts intended for publication, such as journal articles, reports, books, and chapters in edited collections. For students, the most common types of academic writing assignments are listed below.

- **Essay** :- A fairly short, self-contained argument, often using sources from a class in response to a question provided by an instructor.
- **Research Paper** :- A more in-depth investigation based on independent research, often in response to a question chosen by the student.
- **Thesis/ Dissertation :-** The large final research project undertaken at the end of a degree, usually on a topic of the student's choice.
- **Research Proposal :-** An outline of a potential topic and plan for a future dissertation or research project.
- **Literature Review :-** A critical synthesis of existing research on a topic, usually written in order to inform the approach of a new piece of research.

VI.   A step-by-step guide to the writing process

The writing process looks different for everyone, but there are five basic steps that will help you structure your time when writing any kind of text. Good academic writing requires effective planning, drafting, and revision.

Fig :- Academic Writing Steps

VII.   Academic Writing should be :-

Academic writing refers to a style of expression that researchers use to define the intellectual boundaries of their disciplines and specific areas of expertise.

- Formal and unbiased
- Clear and precise
- Focused and well-structured
- Well-sourced
- Correct and consistent

VIII.   Academic Writing should avoid:-

Academic writing generally tries to avoid being too personal. Information about the author may come in at some points—for example in the acknowledgements or in a personal reflection—but for the most part the text should focus on the research itself.

- Personal
- Long-winded
- Emotive and grandiose

IX.   Current Technology as LaTex and Overleaf

Technology has also immensely improves research skills in academic writing. ... Most digital tools and platforms limit students to text expression, and they may incorporate informal writing into formal settings. The aspect truncates communication as internet terms, phrases, and expressions distort traditional studies.

LaTeX – A document preparation system :-

LaTeX is a high-quality typesetting system; it includes features designed for the production of technical and scientific documentation. LaTeX is the de facto standard for the communication and publication of scientific documents. LaTeX is available as free software.

An introduction to LaTeX

LaTeX, which is pronounced «Lah-tech» or «Lay-tech» (to rhyme with «blech» or «Bertolt Brecht»), is a document preparation system for high-quality typesetting. It is most often used for medium-to-large technical or scientific documents but it can be used for almost any form of publishing.

LaTeX is not a word processor! Instead, LaTeX encourages authors not to worry too much about the appearance of their documents but to concentrate on getting the right content

To produce this in most typesetting or word-processing systems, the author would have to decide what layout to use, so would select (say) 18pt Times Roman for the title, 12pt Times Italic for the name, and so on. This has two results: authors wasting their time with designs; and a lot of badly designed documents!
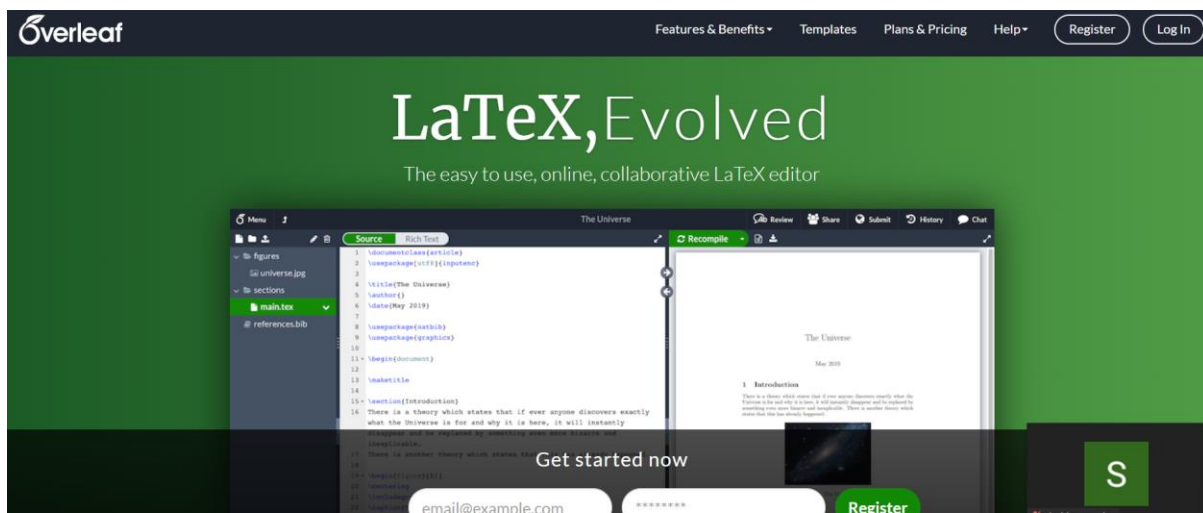
LaTeX is based on the idea that it is better to leave document design to document designers, and to let authors get on with writing documents
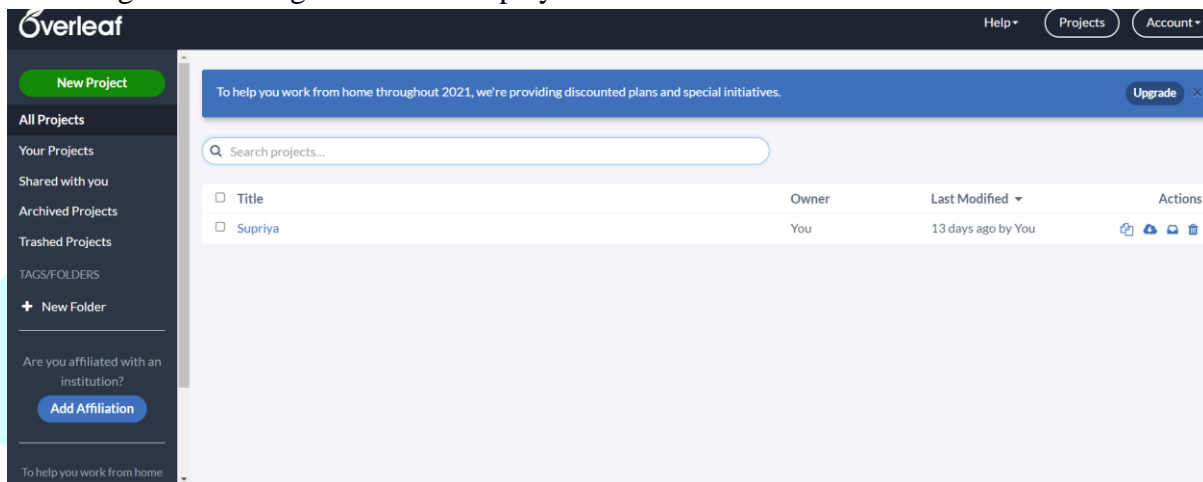
Overleaf, Online LaTeX Editor

Overleaf is an online collaborative writing and publishing tool that makes the whole process of writing, editing and publishing scientific documents much quicker and easier. Overleaf provides the convenience of an easy-to-use LaTeX editor with real-time collaboration and the fully compiled output produced automatically in the background as you type. Overleaf was originally launched in 2012 as WriteLaTeX by the company WriteLaTeX Limited, co-founded by John Hammersley and John Lees-Miller.[

Overleaf is a great on-line LaTeX editing tool that allows you to create LaTeX documents directly in your web browser. This article explains how to create a new project in Overleaf, either starting from scratch, uploading your own files or using one of the many templates available.

- To start using Overleaf go to www.overleaf.com.If you don't have an account enter your e-mail address and set a password in the corresponding boxes below *Get started now*, click *Register* and that's it, you will be redirected to the project management page where you will be guided into how to create a new project.
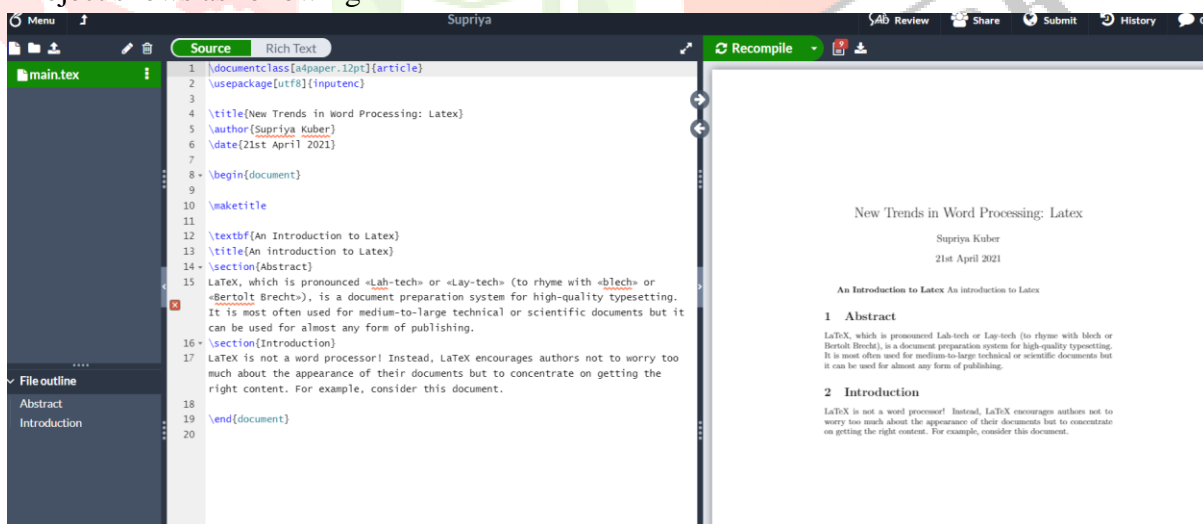
After Log in Following screen will display

All the codes are available on official website of Overleaf.
Project shows as following

LaTeX Features

- o Typesetting journal articles, technical reports, books, and slide presentations.
- o Control over large documents containing sectioning, cross-references, tables and figures.
- o Typesetting of complex mathematical formulas.
- o Advanced typesetting of mathematics with AMS-LaTeX.
- o Automatic generation of bibliographies and indexes.

o Multi-lingual typesetting.

o Inclusion of artwork, and process or spot colour.

o Using PostScript or Metafont fonts.

Conclusion :-

Different fields of study have different priorities in terms of the writing they produce. For example, in scientific writing it's crucial to clearly and accurately report methods and results; in the humanities, the focus is on constructing convincing arguments through the use of textual evidence. However, all academic writing shares certain key principles intended to help convey information as effectively as possible. New emerging technologies are providing great help to author for effective writing. Overleaf is nothing but a online complier different than word processor proving very efficient and effective in technical and academic writing.

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