Research Methodology: LaTex Practical

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Introduction

- Latex is a tool to create professional-looking documents.
- It is based on the WYSIWYM (what you see is what you mean) idea, meaning you only have focus on the contents of your document and the computer will take care of the formatting.
- Instead of spacing out text on a page to control formatting, as with Microsoft Word or LibreOffice Writer, users can enter plain text and let LaTeX take care of the rest.

Why learn Latex?

- Able to tackle the more complicated parts of typesetting, such as inputting mathematics, creating tables of contents, referencing and creating bibliographies, and having a consistent layout across all sections.
- LaTex packages allow users to do even more with LaTeX, such as add footnotes, draw schematics, create tables etc.
- Separates content from style - we can change its appearance with ease.
- Conference/journal submissions usually provide LaTex templates to write the paper.

First Piece of Latex

- Open TexStudio.
- File → New From Template → Article
- Pay attention other options (Beamer, Report, Letter etc.)
- Please refer to **this** document which we shall be using for today's practical in Latex.

Intro paragraph Latex Code Snippet

```
\section{Diabetes}
\paragraph{The challenge of Diabetes}
There are about 60 million people with diabetes in the European
Region, or about 10.3\% of men and 9.6\% of women aged 25 years
and over.
\paragraph{}Prevalence of diabetes is increasing among all ages in the
European Region, mostly due to increases in overweight and obesity,
unhealthy diet and physical inactivity.
\paragraph{}Worldwide, high blood glucose kills about 3.4 million
people annually. Almost 80\% of these deaths occur in low- and
middle-income countries, and almost half are people aged under 70
years. WHO projects diabetes deaths will double between 2005 and
2030.
```

Figure 1: LaTex code snippet for the Intro paragraph of the Latex Practical Document.

Bullet List Latex Code Snippet

```
\section{Statistics}
The IDF Diabetes Atlas Ninth edition 2019 provides the latest figures,
information and projections on diabetes worldwide.
In 2019,
\begin{itemize}
  \item Approximately 463 million adults (20-79 years) were living with
  diabetes; by 2045 this will rise to 700 million
  \item The proportion of people with type 2 diabetes is increasing in
  most countries
  \item 79\% of adults with diabetes were living in low- and
  middle-income countries
  \item 1 in 5 of the people who are above 65 years old have diabetes
  \item 1 in 2 (232 million) people with diabetes were undiagnosed
  \item Diabetes caused 4.2 million deaths
  \item Diabetes caused at least USD 760 billion dollars in health
  expenditure in 2019 – 10\% of total spending on adults
  \item More than 1.1 million children and adolescents are living with
  type 1 diabetes
  \item More than 20 million live births (1 in 6 live births) are affected
  by diabetes during pregnancy
  \item 374 million people are at increased risk of developing type 2
  diabetes
\end{itemize}
```

Figure 2: LaTex code snippet for the statistics bullet points in the Latex Practical Document.

Figure Insertion Latex Code Snippet

```
\section{Figure}
\begin{figure}[H]
   \flushright
   \centering
   \includegraphics[width=15cm]{Diabetes}
   \caption{ Summary of the growing burden of the global diabetes
   epidemic.  \href{https://rb.gy/vk5ea2}{Source}.}
   \label{fig:diabetes}
\end{figure}
```

Figure 3: LaTex code snippet for figure in the Latex Practical Document.

Table Insertion Latex Code Snippet

```
\section{Table}
\begin{table}[H]
\caption{Diabetes estimates (20-79 year old).
\href{https://www.diabetesatlas.org/data/en/region/3/eur.html}{Source}
}
\begin{tabular}{p{6cm}cccc}
   \hline
   & 2010 & 2019 & 2030 & 2045 \\
   \hline
   People with diabetes, in 1,000s&   55,388.0&  59,322.1&
   65,993.3&  68,121.4\\
   \hline
   Age-adjusted comparative prevalence of diabetes, & 6.9 &6.3  &7.3
   &7.8  \\
   \hline
   People with undiagnosed diabetes, in 1,000s&  -&24157.3  & - & - \\
   \hline
   Proportion of people with undiagnosed diabetes, &-  &40.7  &-  &-  \\
   \hline
\end{tabular}

\end{table}
```

Figure 4: LaTex code snippet for the Table in the Latex Practical Document.

Resources Link

The folder for this lecture can be downloaded from **this** location.

- **Best way to learn is to start writing all your documents from today in LaTex.**
- For any new feature/functionality required in the document, Google is good search tool.
- Google query search results from **Overleaf** are accurate.
- Packages to explore on own: IEEE Referencing, Tikz.

Please email me at yesodabhargava@iiitp.ac.in for any queries while using LaTex for documentation. Thank you.