I am novice, when it comes to LaTex. So sorry if my question seems to be silly.

I am trying to write a class for creating the syllabus book, which initially creates list of files based on the course code of the subject, <course-code>.tex file, with some default template. In the code given below, shows 4 courses defined using `\begin{definecourse}{<course-code>}...\end{definecourse}`.

```

\documentclass{syllabus}

%%%%%%%%%%%%%%Bibliography%%%%%%%%%%%%%%%%%%%%%

\usepackage[sorting=none, backend=bibtex,style=ieee]{biblatex}

% If backend is set to bibtex, then configure texmaker Bi(La)Tex with "bibtex %"

\addbibresource{Reference.bib}%Add bib file with extention

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

\renewcommand{\arraystretch}{1.5}

%\tracinggroups=1

\begin{document}

\begin{scheme}{3}

\begin{definecourse}{ma121ai}

\coursetitle[LP]{Elements of electronics}

\end{definecourse}

\begin{definecourse}{ec121ai}

\coursetitle[LO]{Elements of electronics}

\end{definecourse}

\begin{definecourse}{ee121ai}

\coursetitle[LT]{Elements of electronics}

\end{definecourse}

\begin{definecourse}{xy121ai}

\coursetitle[PO]{Yoga}

\end{definecourse}

\end{scheme}

%\typeout{Debug: \space\gethours{1}}

%\begin {itemize} \item Text 1 \item Test 2 \end {itemize}

\end{document}

```

Using this <course-code>.tex file, I want the subject experts to define the basic fields and extend the definitions to define the subjects. Below code shows the content of `ec121ai.tex` file.

```

\begin{course}{1}

\category{}

\commonto{}

\stream{}

\ciemarks{}

\seemarks{}

\seeduration{}

\totalhours{}

%To change subjectwise credits, uncomment the following commands

%\lecturecredit{}

%\practicecredit{}

%\prerequisites{}

\begin{units}

\unit[4]{sample}

\end{units}

\begin{courseoutcomes}

\co{sample}

\end{courseoutcomes}

\begin{references}

%Add citation key defined in reference.bib file in the current directory

%As an example, a predefined key is added here under \referencecommand.

\reference{Razavi2000}

\end{references}

\end{course}

```

The `syllabus` class will then uses, these 4 files to generate 1. front page (like toc) and 2. 4 pages of syllabus.

Here the Front page is generated using the command inside `AtEndDocument` `\mainindextable{\arabic{numof@courses}}`, which in turn loops based on the counter:

```

\newcommand{\mainindextable}[1]{%

\begingroup

\def\@mainindextoc##1{%

\unexpanded{%

\begin{tabular}{>{\centering\arraybackslash}p{\dimexpr0.05\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

>{\centering\arraybackslash}p{\dimexpr0.2\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

p{\dimexpr0.5\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

>{\centering\arraybackslash}p{\dimexpr0.1\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}%

}%

\hline

##1. & \MakeTextUppercase{\expandafter{\csname course@\romannumeral##1@coursecode\endcsname}} & \expandafter{\csname course@\romannumeral##1@coursetitle\endcsname} & \pageref{course@\romannumeral##1}\\

\end{tabular}\\

}%

}% End of scartctable

\expanded{%

\endgroup

% #3%

\unexpanded{%

\begin{longtable}{|@{}l@{}|}%

\hline

\endfirsthead

\hline

\endhead

\hline

\endfoot

\hline

\endlastfoot

}%

\unexpanded{

\begin{tabular}{p{\dimexpr0.05\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

p{\dimexpr0.2\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

p{\dimexpr0.5\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}|%

>{\raggedleft\arraybackslash}p{\dimexpr0.1\textwidth-0.5\tabcolsep-0.25\arrayrulewidth\relax}%

}%

\hline%

\multicolumn{4}{p{\dimexpr\textwidth-2\tabcolsep-2\arrayrulewidth\relax}}%

{\centering{\textbf{\printsemester\space Semester}}}\\%

\hline

\centering{\textbf{SI}}&\centering{\textbf{Course Code}}&\centering{\textbf{Course Title}}& \centering{\textbf{Page No.}}\\

\end{tabular}\\

}

%wnd of%3#

\ifnum#1<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\expandafter\@mainloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#1)\relax}%

}

%#5%

\unexpanded{

\ifhmode

\\

\fi

\end{longtable}%

}

}%

}

\newcommand\@mainloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@mainindextoc{#1}%

\expandafter\@mainloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

```

Similarly the 4 pages of syllabus is created using another command `\newpage

\xpandtable{\nscheme}{\currentcoursenum}{\nlec}{\nprac}{\npel}{\nref}{\nco}%`, which generates 4 pages for the defined course, again based `\gdef`s in the aux files (generated by reading the commands from `<course-code>.tex` file.

```

\newcommand{\xpandtable}[7]{% 1: numofscheme; 2: numofcourse; 3: numoflec; 4: numofprac; 5: numofpracel; 6: numofref; 7: numofcos

\begingroup

\def\@scartchlectable##1{%

% \iflecture

% {%

\unexpanded{%

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}p{\dimexpr0.8\textwidth\relax}|%

>{\centering\arraybackslash}p{\dimexpr0.2\textwidth-2\tabcolsep-1.2\arrayrulewidth\relax}%

@{}}%

\hline

\centering

}%

{\unexpanded{\textbf{\unexpanded{Unit - \MakeTextUppercase}{\romannumeral##1}}}}

\unexpanded{%

&%

\textbf

}{%

\unexpanded{\expandafter{\csname course@\romannumeral#2@lectureunit@\romannumeral##1@hour\endcsname}\quad Hours}%

}

\unexpanded{%

\\%

\hline

%

\multicolumn{2}{p{\dimexpr\textwidth-2\tabcolsep-2\arrayrulewidth\relax}}%

}{%

\unexpanded{\begin{minipage}[b]{\dimexpr\textwidth-2\tabcolsep-2\arrayrulewidth\relax}}

\unexpanded{\setlist[itemize]{topsep=0pt,itemsep=0.125em}}

\unexpanded{\expandafter{\csname course@\romannumeral#2@lectureunit@\romannumeral##1@content\endcsname}}

\unexpanded{\end{minipage}}

}%

\unexpanded{%

% \end{minipage}

\\%

% \hline

\end{tabular\*}%

\\%

}%

}% End of scartctable

\def\@scartchpractable##1{%

\unexpanded{%

\item \expandafter{\csname course@\romannumeral#2@practiceunit@\romannumeral##1@content\endcsname}%

}%

}% End of scartctable

\def\@scartchpraceltable##1{%

\unexpanded{%

\item \expandafter{\csname course@\romannumeral#2@practiceelunit@\romannumeral##1@content\endcsname}%

}%

}% End of scartctable

\def\@scartchoutcometable##1{%

\unexpanded{%

\item \expandafter{\csname course@\romannumeral#2@co@\romannumeral##1@content\endcsname}%

}%

}% End of scartctable

\def\@scartchreftable##1{%

\unexpanded{%

\item \fullcite{\expanded{\csname course@\romannumeral#2@ref@\romannumeral##1@content\endcsname}}%

% \item \expanded{\csname course@\romannumeral#2@ref@\romannumeral##1@content\endcsname}%

}%

}% End of scartctable

\expanded{%

\endgroup

% #3%

\unexpanded{%

\begin{longtable}{|@{}l@{}|}%

\hline

\endfirsthead

\hline

\endhead

\hline

\endfoot

\hline

\endlastfoot

}%

\unexpanded{%

% \pageinfo@commands={%

% \edef\@courselabel{course@\romannumeral#2}%

% \PgInfo@write{\@courselabel}%

% \begingroup % to confine the change to \@currentlabel

% % \def\@currentlabel{\thecoursetitle}%

% \label{\@courselabel}%

% \endgroup

% % \the\pagepoint@commands

% \global \pageinfo@commands={}%

% }% pageinfo@commands

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}>{\centering\arraybackslash}p{\dimexpr\textwidth\relax}@{}}%

\hline

\textbf

}%

{\unexpanded{Semester - \printsemester}}%%check for \expandafter

\unexpanded{%

\\%

\hline%

\textbf

}%

{\unexpanded\expandafter{\csname course@\romannumeral#2@coursetitle\endcsname}}

\unexpanded{%

\\%

\textbf

}%

{\unexpanded\expandafter{\csname course@\romannumeral#2@category\endcsname}}

\unexpanded{%

\\%

\textbf

}%

{\unexpanded\expandafter{\csname course@\romannumeral#2@stream\endcsname}}

\unexpanded{%

\\%

\end{tabular\*}%

\\%

}%

\unexpanded{%

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}>{\centering\arraybackslash}p{\dimexpr0.2\textwidth-2\tabcolsep-0.4\arrayrulewidth\relax}|%

p{\dimexpr0.2\textwidth\relax}|%

p{\dimexpr0.2\textwidth-2\tabcolsep-0.4\arrayrulewidth\relax}|%

p{\dimexpr0.2\textwidth-2\tabcolsep-0.4\arrayrulewidth\relax}|%

p{\dimexpr0.2\textwidth\relax}@{}}%

\hline%

\textbf{Course Code}&\textbf{:}\space\MakeTextUppercase{\csname course@\romannumeral#2@coursecode\endcsname} & & \textbf{CIE} & \textbf{:}\space{\csname course@\romannumeral#2@ciemarks\endcsname}\space Marks\\%

\textbf{Credit\space L:T:P}&\textbf{:}\space{\csname course@\romannumeral#2@courseltp\endcsname} & & \textbf{SEE} & \textbf{:}\space{\csname course@\romannumeral#2@seemarks\endcsname}\space Marks\\%

\textbf{Total Hours}&\textbf{:}\space{\csname course@\romannumeral#2@totalhours\endcsname} & & \textbf{SEE Duration} & \textbf{:}\space{\csname course@\romannumeral#2@seeduration\endcsname}\space Hours\\%

\hline%

}

\unexpanded{%

\end{tabular\*}%

% \the\pageinfo@commands%

\\

}%

%wnd of%3#

\iflecture%

\ifnum#3<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\expandafter\@lecloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#3)\relax}%

}

\fi

\ifpractice%

\ifnum#4<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\unexpanded{%

% \hline

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}p{\dimexpr\textwidth\relax}@{}}

\textbf

}%

{\unexpanded{\space\expandafter{\csname course@\romannumeral#2@practicetitle\endcsname}}}

\unexpanded{%

\setlist[enumerate]{topsep=0em,itemsep=0.125em}

\begin{enumerate}

}%

\expandafter\@pracloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#4)\relax}%

\unexpanded{%

\end{enumerate}

\end{tabular\*}%

\\%

}

}

\fi

\ifpracticeel%

\ifnum#5<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\unexpanded{%

% \hline

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}>{\raggedright\arraybackslash}p{\dimexpr\textwidth\relax}@{}}

\textbf

}%

{\unexpanded{\expandafter{\space\csname course@\romannumeral#2@practiceeltitle\endcsname}}}

\unexpanded{%

\setlist[enumerate]{topsep=0em,itemsep=0.125em}

\begin{enumerate}

}%

\expandafter\@pracelloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#5)\relax}%

\unexpanded{%

\end{enumerate}

\end{tabular\*}%

\\%

}

}

\fi

% course outcomes

\ifnum#7<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\unexpanded{%

% \hline

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}p{\dimexpr\textwidth\relax}@{}}

\hline

\textbf

}%

{\unexpanded{\space Course Outcomes: After completing the course, the students will be able to:}}

\unexpanded{%

\\

\hline

\setlist[enumerate]{topsep=-1em,itemsep=0.125em}

\begin{enumerate}[leftmargin=35pt,label=\textbf{CO\arabic\*:}]

}%

\expandafter\@outcomeloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#7)\relax}%

\unexpanded{%

\end{enumerate}

\end{tabular\*}%

\\%

}

}

% % References

\ifnum#6<1 \expandafter\@gobble\else\expandafter\@firstofone\fi

{

\unexpanded{%

\begin{tabular\*}{\textwidth}{@{\extracolsep{\fill}}>{\raggedright\arraybackslash}p{\dimexpr\textwidth\relax}@{}}

\hline

\textbf

}%

{\unexpanded{\space References}}

\unexpanded{%

\\

\hline%

\setlist[enumerate]{topsep=-1em,itemsep=0.125em}

\begin{enumerate}

}%

\expandafter\@refloop

\expandafter{\number\numexpr(1)\expandafter\relax\expandafter}%

\expandafter{\number\numexpr(#6)\relax}%

\unexpanded{%

\end{enumerate}

\end{tabular\*}%

\\%

}

}

%#5%

\unexpanded{

\ifhmode

\\

\fi

\end{longtable}%

}

}%

}

\newcommand\@lecloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@scartchlectable{#1}%

\expandafter\@lecloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

\newcommand\@pracloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@scartchpractable{#1}%

\expandafter\@pracloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

\newcommand\@pracelloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@scartchpraceltable{#1}%

\expandafter\@pracelloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

\newcommand\@refloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@scartchreftable{#1}%

\expandafter\@refloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

\newcommand\@outcomeloop[2]{%

\ifnum#1>#2 \expandafter\@gobble\else\expandafter\@firstofone\fi

{%

\@scartchoutcometable{#1}%

\expandafter\@outcomeloop\expandafter{\number\numexpr#1+1}{#2}%

}%

}%

```

>>\*\*Note:\*\* These pages are created by the class and not by the user. Thus capturing the page number becomes tricky here.

1. Front page: see the \*\*Page No.\*\* column, where the page numbers for 2nd to 4th syllabus are not mapped properly.

[![enter image description here][3]][3]

2. 4 pages of syllabus with page numbers at the footer.

[![enter image description here][4]][4]

[![enter image description here][5]][5][![enter image description here][6]][6]

[![enter image description here][7]][7]

I am attaching the class so far created, [here][1] and part of the work is based on my [previous questions][2]. Thanks to \*\*Ulrich Diez\*\*, who gave some insight to build the tables with the contents.

Now the problem is code does not give the exact page number during compilation. I tried using \*three options\*, but \*\*all failed\*\*.

Option 1:

```

\def\Pgnum#1{%

% \def\coursepagenumber{#1}%

\@ifundefined{course@\romannumeral#1@pgnum}%

{\mbox{\normalfont\bfseries ??}}%

{\csname course@\romannumeral#1@pgnum\endcsname}

% {\PgInfo@get{#1}}

}% pointsinrange

```

Option 2: \*\*from exam.cls\*\*

```

\def\PgInfo@write#1{%

\begingroup

\edef\reserved@a{\write\@mainaux

{\string\PgInfo{#1}{\noexpand\thepage}}}% \noexpand\thepage: delays expansion of \thepage until actual write time (so you get the current page number, not the number during \edef)

% \string\PgInfo -> literal string \PgInfo

%% \write\@mainaux{\string\PgInfo{mylabel}{\noexpand\thepage}} -> \write\@mainaux{\PgInfo{mylabel}{<current page>}}

\reserved@a% Calls \reserved@a, which actually performs the \write

\typeout{Pginfo write: \reserved@a}

\endgroup

}

\def\PgInfo#1#2{\expandafter\gdef\csname #1@pgnum\endcsname{#2}}

% When LaTeX rereads the .aux file, this gets executed: "\PgInfo{Q1}{5}", which defines the control sequence \Pg@Q1 as: "\gdef\Pg@Q1{5}"

\def\PgInfo@get#1{\csname course@\romannumeral#1@pgnum\endcsname}

```

Option 3: Used the idea from \*\*exam.cls\*\*, inside `\begin{course}...\end{course}` under `\def\category`

```

\pageinfo@commands={%

\edef\@courselabel{course@\romannumeral#1}%

\PgInfo@write{\@courselabel}%

\begingroup % to confine the change to \@currentlabel

% \def\@currentlabel{\thecoursetitle}%

\label{\@courselabel}%

\endgroup

% \the\pagepoint@commands

\global \pageinfo@commands={}%

}% pageinfo@commands

```

All failed to produce the proper page numbers. I have attached the images of pdf output.

[1]: https://github.com/narashimaraja/syllabus/blob/main/syllabus.cls

[2]: https://tex.stackexchange.com/questions/749950/looping-inside-longtable-using-foreach-loop-with-multicolumn

[3]: https://i.sstatic.net/51402D8H.png

[4]: https://i.sstatic.net/GmzKLrQE.png

[5]: https://i.sstatic.net/Q4tx6hnZ.png

[6]: https://i.sstatic.net/nuCc6xtP.png

[7]: https://i.sstatic.net/LmONLtdr.png