How to make a green board in latex

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March 18, 2019

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Week 2

□ = [job·time]

TO DO:
- R course
  on DataCamp
- HW1 code on GITHUB

D.L. 2019-02-06: 23:55
- complete CLALS 3 Obs

2019-02-13 - 14:30
upload HW1 (using R)
made

SYSTEM
queue
SERVER

SYS
3
2
1
0

0 1 2 3 4 5

L_{SYS}

$\rightarrow$ ||| $\bigcirc$ $\rightarrow$

$L_q + L_{SRV}$

3) $\frac{6}{5} = L_{SYS}$ $\left[\frac{□}{time} = \frac{job·time}{time} = job\right]$

2) $\frac{3}{5} = L_q$ $\left[\frac{□}{time} = job\right]$

3) $\frac{3}{5} = L_{SRV}$ $\left[\frac{□}{time} = job\right]$

$L_{SYS} = L_q + L_{SRV}$

From what to start

- First of all prepare slide settings
- Secondly write down all usepackages

```
\usepackage{tikz}--\textcolor{red}{zīmēšanai}
\usepackage{tabu}--\textcolor{red}{tabulam}
\usepackage{color}--\textcolor{red}{krāsai}
\usepackage{geometry}--\textcolor{red}{lapas parametriem}
\usepackage{amssymb}--\textcolor{red}{matematiskiem simboliem}
\usepackage{latexsym}--\textcolor{red}{matematiskie simboli}
\{multicol}--\textcolor{red}{sadalīt lapu kolonnās}
\usepackage{graphicx}--\textcolor{red}{ielikt bildes}
\usepackage{listings}--\textcolor{red}{lapas numerācija}
```

Possible troubles

- Wrong usepackages, check if they fit you
- To put code as an example use verbatim command
- To hurry, you cam miss an important detail in the code
- Try to make code as simple as it can be possible

Divide paper in columns

Prepare the page using command 'geometry'
Using command multicol[column counts] you can divide page on parts
In my case it was three parts

```
    Page settings
\geometry{papersize={45cm,12cm}}
\geometry{left=1cm}
\geometry{right=1cm}
\geometry{bottom=1cm}
\geometry{top=1cm}
    Divide the page
\begin{multicols}{3}
    make column separation with command
\columnbreak
To draw axis usepackage(tikzpicture)
\begin{tikzpicture}
\draw[thick, ->](-1,-1) -- (1,-1)node[anchor=north east] {t};
\draw[thick, ->](-1,-1) -- (-1,1)node[anchor=south east] {L};
```

First column

To make a list we will use a command enumerate/itemize

```
\begin{enumerate}
    \item[] To Do :
        \begin{itemize}
            \item R course \\
                    on Datacamp
            \item HV1 code on Github
            \end{itemize}
\end{enumerate}
```

Second column

Lets create list with formulas using known commandbegin(enumerate) to give different counts to your list just item just make square brackets with symbol or count you want to put in

3. $\frac{6}{5} = L_{sys}^- \ [\frac{\square}{job} = \frac{jobtime}{time} - job \ ]$

2. $\frac{3}{5} = L_q^- \ [\frac{\square}{time} = job]$

1. $\frac{3}{5} = L_{SRV}^- \ [\frac{\square}{time} = job]$

$$\boxed{L_{sys} = L_q^- + L_{SRV}^-}$$

Code

```
\begin{enumerate}
\item[3.] $\frac{6}{5} = L_{sys}^{-}$ [$\frac{\Box}{job}$ \\
= $\frac{job time}{time} - job$ ]
\item[2.] $\textcolor{yellow}{\frac{3}{5} \\
= L_q^{-}}$ [$\frac{\Box}{time} = job$]
\item[1.] $\textcolor{red}{\frac{3}{5} \\
= L_{SRV}^{-}}$ [$\frac{\Box}{time} = job$]
\item [] \fbox{$L_{sys}$ \\
= $L_q^{-}$ + $L_{SRV}^{-}$}
\end{enumerate}
```

Third column

Lets draw lines next y axis in different colours

```
\begin{tikzpicture}
\draw[thick,color=red,<->] (-2,-1) -- (-2,1)
node[anchor=south east] {\textcolor{red}{SERVER}};
\draw[thick,color=green,<->] (-2,1.1) -- (-2,3.5)
node {\textcolor{blue}{QUEUE}};
\draw[thick,color=blue,<->] (-4,-1) -- (-4,3.5)
node {\textcolor{blue}{SYSTEM}};
\end{tikzpicture};
```

Then lets make ready our axis with all marks and names

Third column

```
\draw[thick, ->] (-1,-1) -- (5.5,-1) node[anchor=north east] {};
\draw[thick, ->] (-1,-1) -- (-1,3.5) node[anchor=south east]
{$L_{sys}$};
\foreach \x in {0,1,2,3,4,5}
    \draw (\x cm, -28pt) -- (\x cm, -32pt) node[anchor=north]
{$$\x$$};
\foreach \y in {0,1,2,3}
    \draw (-28pt, \y cm) -- (-32pt, \y cm) node[anchor=east]
{$$\y$$};
\draw[thick,red,-](0,0)--(1,0)--(1,1)--(2,1)--(2,3)--(3,3)--(3,0)
--(4,0)--(4,2)--(5,2)--(5,0)--(5.5,0)
```

week 2

To Do :

- R course
  on Datacamp

- HV1 code on Github

D.L. 2019-02-06 23:55

- compute Clais 70Bs
  2019-02-13 - 14:30 made
  upload HW1 (using R)
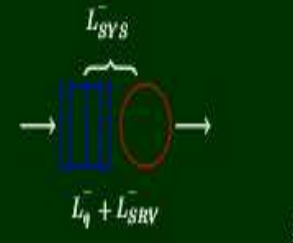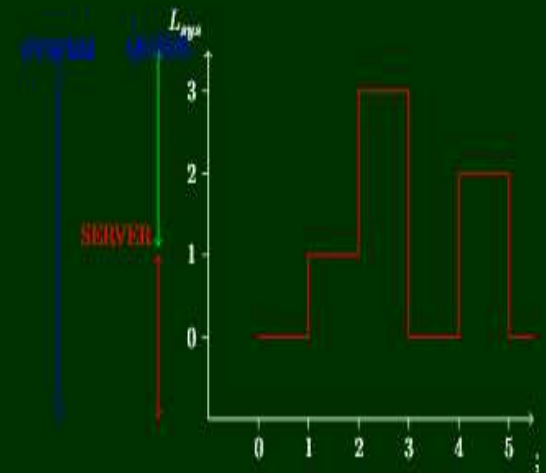
L

t

$\square = [job.time]$

3. $\frac{6}{5} = \bar{L}_{sys} \left[\frac{\square}{job} = \frac{jobtime}{time} - job \right]$

2. $\frac{3}{5} = \bar{L}_q \left[\frac{\square}{time} = job \right]$

1. $\frac{3}{5} = \bar{L}_{SRV} \left[\frac{\square}{time} = job \right]$

$$\boxed{L_{sys} = \bar{L}_q + \bar{L}_{SRV}}$$

L_{sys}

SERVER

3

2

1

0

0 1 2 3 4 5

t

$\bar{L}_{SYS}$

$\bar{L}_q + \bar{L}_{SRV}$

:)

$$\frac{d}{dx}[x^v J_v(x)] = \frac{d}{dx} \sum_{n=0}^{\infty} \frac{(-1)^n x^{2v+2n}}{2^{v+2n-1} n! \Gamma(v+n+1)}$$

$$= \sum_{n=0}^{\infty} \frac{(-1)^n x^{2v+2n}}{2^{v+2n-1} n! \Gamma(v+n)}$$

$$= x^v \sum_{n=0}^{\infty} \frac{(-1)^n x^{v-1}}{2^{(v-1)=2n} n! \Gamma((v-1)+n+1)} = x^v J_{v-1}(x)$$