1819-108-C1-W5-GreenBoard-Final

Anna Bogachova

February 2019

Week 2

TO DO:
- R course on DataCamp
- HW 1 code on GITHUB

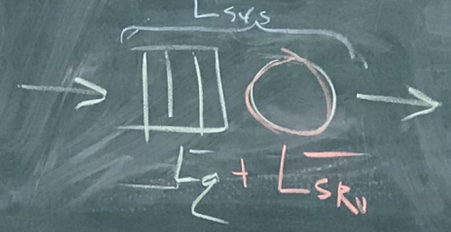
D.L. 2019-02-06 : 23:55
- complete CLASS JOBS

2019-02-13 - 14:30
upload HW 1 (made using R)

SYSTEM
queue
SERVER

L_{SYS}

□ = [job · time]



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

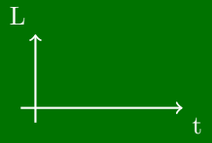
2) $\frac{3}{5} = L_q$ $\left[\frac{\square}{time} = job\right]$

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

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

Week 2

1. To Do
   - R course on DataCamp
   - HW 1 code on GITHUB
2. Deadlines
   - 2019-02-06 23:55
   - conpute CLASS JOBS
3. 2019-02-13 14:30
   - Upload HW1 (made using R)



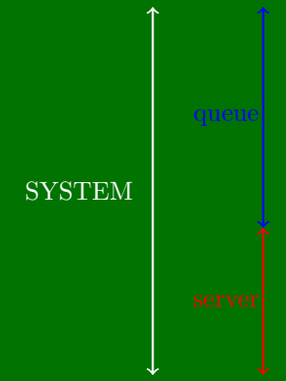
$\square = [job * time]$

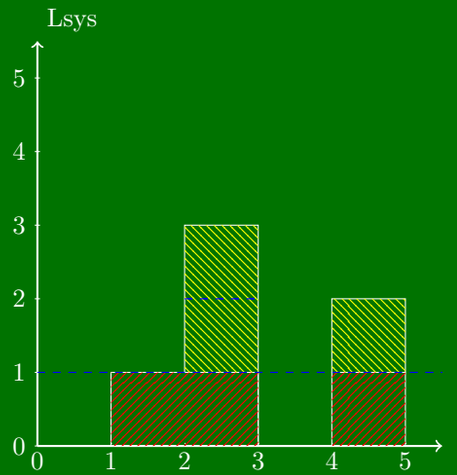
3) $\frac{6}{5} = \overline{Lsys}$ $[\frac{\square}{time} = \frac{job * time}{time} = job]$

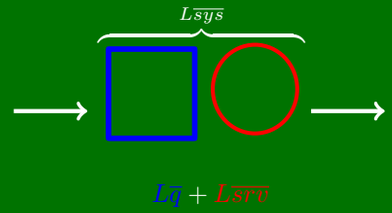
2) $\frac{3}{5} = \overline{Lq}$ $[\frac{\square}{time} = job]$

1) $\frac{3}{5} = \overline{Lsrv}$ $[\frac{\square}{time} = job]$

$$\boxed{\overline{Lsys} = \overline{Lq} + \overline{Lsrv}}$$







```
\documentclass{report}
\usepackage[utf8]{inputenc}

\usepackage{listings}
\usepackage{xcolor}
\definecolor{bookColor}{cmyk}{0      , 0   , 0     , 0}  % 0.90\% of black
\color{bookColor}

\usepackage[paperheight=150mm,paperwidth=350mm,margin=20mm,heightrounded]{geometry}
\usepackage[colorlinks]{hyperref}
\usepackage{scalerel ,amssymb}
\def\mcirc{\mathbin\color{red}\scalebox{4}[4]{\scalerel*{\bigcirc}{j}}}
\def\msquare{\mathord\color{blue}{\scalebox{3}[3]{\scalerel*{\Box}{\strut}}}}
\newcommand*\squared[1]{\tikz[baseline=(char.base)]{
\node[shape=rectangle,color=white,draw,inner sep=7pt] (char) {#1}
;}}



\usepackage{graphicx}

\usepackage{amsmath}
\usepackage{lipsum}
\usepackage{amssymb}
\usepackage{multicol}
\usepackage{tikz}
```

```
\usepackage{geometry}

\usepackage{graphicx}



\begin{document}

\title {\color{black}{1819-108-C1-W5-GreenBoard-Final}}
\author{\color{black}{Anna Bogachova}}
\date{\color{black}{February 2019}}

\maketitle



\includegraphics[width=\textwidth]{IMG_0629}

\usetikzlibrary{patterns}
{%

\renewcommand{\arrayrulewidth}{0pt}%

 \begin{multicols}{3}

    \item Week 2
```

```
    \begin{enumerate}

     \item  To Do
     \begin{itemize}
     \item R course on DataCamp
     \item HW 1 code on GITHUB
     \end{itemize}
     \item Deadlines
     \begin{itemize}
         \item 2019-02-06 23:55
           \end{itemize}
     \begin{itemize}
      \item conpute CLASS JOBS
        \end{itemize}
    \item 2019-02-13 14:30
     \begin{itemize}
    \item Upload HW1 (made using R)
      \end{itemize}
\end{enumerate}

\begin{tikzpicture}
\draw[thick,->](-0.2,0)--(0,0)--(2,0)node [anchor=north west]{t};
\draw[thick,->](0,-0.2)--(0,0)--(0,1)node [anchor=south east]{L};
\end{tikzpicture}
%&
```

```
\begin{tabular}
{|p{0.1cm}||p{0.1cm}|p{0.5cm}|p{1cm}|p{4cm}|}
\hline
\multicolumn{5}{|c|}{$\square{}{}=[job*time]$}
\\[1ex]
\hline\hline
$$3) $$ & $$\frac{6}{5}$$ & $$=$$ &
$${\color{blue}L\overline{sys}}$$ &
$$[\frac{\square{}}{time}=
\frac{job*time}{time}=job ]$$\\

\hline
$$2) $$ & $$\frac{3}{5}$$ & $$=$$ & $${\color{yellow}L\overline{q}}$$ & $$[\frac{\square{}}{time}=job]$$\\
\hline
$$1) $$ & $$\frac{3}{5}$$ & $$=$$ & $${\color{red}L\overline{srv}}$$ & $$[\frac{\square{}}{time}=job]$$\\
\hline
\begin{tikzpicture}
\squared{${\color{white}L\overline{sys}}\color{white}={\color{white}L\overline{q}}\color{white}+{\color{white}L\overline{srv}}$}
\end{tikzpicture}
\end{tabular}


\columnbreak
%&
%\columnbreak
%&
```

```
    \raggedleft

\begin{tikzpicture}
\draw[thick,->](0,0) -- (5.5,0) node[anchor=north west]{};
\draw[thick,->](0,0) -- (0,5.5) node[anchor=south west]{Lsys};
\foreach \x in{0,1,2,3,4,5}
    \draw(\x cm, 1pt) -- (\x cm, 1pt) node [anchor=north] {$\x$};
   \foreach \y in {0,1,2,3,4,5}
     \draw(1pt,\y cm) -- (-1pt,\y cm) node [anchor=east] {$\y$};
\draw[dashed,blue](0,1)--(5.5,1);
\draw[dashed,blue](2,2)--(3,2);

\draw (1,0) -- (1,1) -- (3,1) -- (3,0)-- (3,0);
\draw (2,1) -- (2,3) -- (3,3) -- (3,0)-- (2,0);
\draw (4,1) -- (4,2) -- (5,2) -- (5,1)-- (5,1);
\draw (4,0) -- (4,1) -- (5,1) -- (5,0)-- (5,0);
\fill[pattern=north east lines,pattern color=red ](1,0) -- (1,1) -- (3,1) -- (3,0)-- (3,0);
\fill[pattern=north west lines,pattern color=yellow ](2,1) -- (2,3) -- (3,3) -- (3,1)-- (3,1);
\fill[pattern=north west lines,pattern color=yellow ]  (4,1) -- (4,2) -- (5,2) -- (5,1)-- (5,1);
\fill[pattern=north east lines,pattern color=red ]   (4,0) -- (4,1) -- (5,1) -- (5,0)-- (5,0);
 \draw[dashed,blue](0,1)--(5.5,1);
\draw[dashed,blue](2,2)--(3,2);
\draw[thick,color=blue,<->] (-2,2) -- (-2,5);
\draw[thick,color=red,<->] (-2,2) -- (-2,0);
\draw [color=blue](-2.5,3.5) node {queue};
\draw [color=red](-2.5,1) node {server};
```

```
\draw[thick,<->] (-3.5,0) -- (-3.5,5);
\draw(-4.5,2.5) node {SYSTEM};
%\draw (0,1) -- (2,1) -- (2,2) -- (3,2) -- (3,4)--
(4,4)--(4,1)--(5,1)--(5,3)--(5,4)--(6,4)--(6,1)--(7,1);
\definecolor{green}{rgb}{0, 0.45, 0}
\pagecolor{green}

  \end{tikzpicture}
%\begin{equation}

\hfill \break

\begin{tikzpicture}
\draw [->, ultra thick] (2,2) -- (3,2);

\end{tikzpicture}
\overbrace{\msquare\mcirc}^{L\overline{sys}}
\begin{tikzpicture}
\draw [->, ultra thick] (2,2) -- (3,2);
\end{tikzpicture}

%\end{equation}


 $${\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\:\color{blue}L\ov
 \thispagestyle{empty}
```

```
 %\end{tabular}
  \end{multicols}
}
  \thispagestyle{empty}
\end{document}
```