1819-108-C1-W3-01

Rainers Leons Justs

18th February 2019

WEEK 2

TO DO

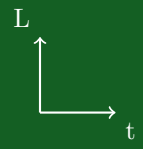
- R Course on Datacamp
- HV 1 code on GiTHUB

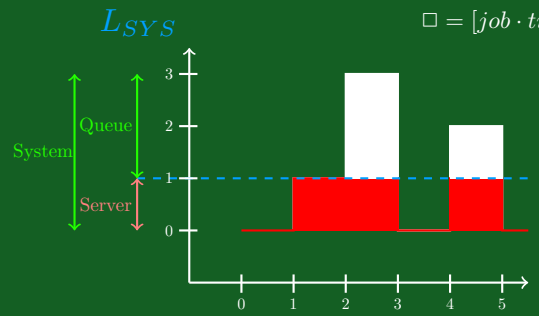
D.L. 2019-02-06 : 23.59

- Compute CLASS JOBS

2019-02-13 14:30

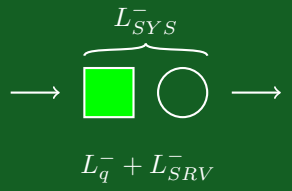
- upload HW1 (made using R)





$$3)\frac{6}{5} = L_{sys}^{-}\left[\frac{\square}{time} = \frac{job \cdot time}{time} = jobs\right]$$

$$2)\frac{3}{5} = L_{q}^{-}\left[\frac{\square}{time} = jobs\right]$$



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

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

```
\documentclass{report}
\usepackage[utf8]{inputenc}
\usepackage{graphicx, latexsym}
\usepackage[fleqn]{amsmath}
\usepackage{tikz}
\usepackage{pgfplots}
\usepackage{multicol}
\usepackage{xcolor, pagecolor}
\usepackage{listings}
\definecolor{dgreen}{RGB}{20,95,35}
\definecolor{lblue}{RGB}{0,160,255}
\definecolor{lgreen}{RGB}{35,255,0}
\definecolor{salmon}{RGB}{255,128,128}

\usepackage{geometry}
\geometry{left=3cm, right=2cm, bottom=0.5cm, top=1cm, landscape}
\setlength\columnsep{0pt}

\title{1819-108-C1-W3-01}
\author{Rainers Leons Justs}
\date{18th February 2019}

\pgfplotsset{compat=1.15}
\setlength{\mathindent}{0cm}
\begin{document}

\maketitle

\begin{multicols}{3}

% \begin{figure}
%     \centering
%     \includegraphics[width=\linewidth]{images/image.jpg}
%     \caption{Blackboard}
% \end{figure}

\pagecolor{dgreen}

\textcolor{white!100}{WEEK 2 \newline TO DO}
\textcolor{white!100}{
\begin{itemize}
    \item R Course on Datacamp
    \item HV 1 code on GiTHUB
\end{itemize}
D.L. 2019-02-06 : 23.59
\begin{itemize}
```

```
    \item Compute CLASS JOBS
\end{itemize}
2019-02-13 14:30
\begin{itemize}
    \item upload HW1 (made using R)
\end{itemize}
}

\begin{tikzpicture}

\draw[thick,->, color=white] (0,0) -- (1,0) node[anchor=north west] {t};
\draw[thick,->, color=white] (0,0) -- (0,1) node[anchor=south east] {L};

\end{tikzpicture}

\begin{center}
\begin{tikzpicture}[thick,scale=0.69, every node/.style={scale=0.6}]

\node[scale=1.5,align=center, color=white] at (5,4) {$\Box = [job \cdot time]$};
\draw[thick,->, color=white, color=white] (-1,-1) -- (5.5,-1);
\draw[thick,->, color=white] (-1,-1) -- (-1,3.5) node[anchor=south east, lblue, scale=2] {$L_{SYS}$};

\draw[color=white] (1,0) -- (1,1) -- (2,1) -- (2,3) -- (3,3) -- (3,0) -- (4,0) -- (4,2) -- (5,2) -- (5,0);
\draw[red] (0,0) -- (1,0) -- (1,1) -- (3,1) -- (3,0) -- (4,0) -- (4,1) -- (5,1) -- (5,0) -- (5.5,0);
\fill[red] (1,0) rectangle (3,1);
\fill[red] (4,0) rectangle (5,1);
\fill[white] (2,1) rectangle (3,3);
\fill[white] (4,1) rectangle (5,2);
\draw[lblue, dashed] (-2,1) -- (5.5,1);

\draw[color=lgreen, <->] (-2,3) -- (-2,1);
\node[align=center, color=lgreen, scale=1.2] at (-2.6,2) {Queue};
\draw[color=salmon, <->] (-2,1) -- (-2,0);
\node[align=center, color=salmon, scale=1.2] at (-2.6,0.5) {Server};
\draw[color=lgreen, <->] (-3.2,3) -- (-3.2,0);
\node[align=center, color=lgreen, scale=1.2] at (-3.8,1.5) {System};

\foreach \x in {0,1,2,3,4,5}
    \draw[color=white] (\x cm,-24pt) -- (\x cm,-34pt) node[anchor=north] {$\x$};
\foreach \y in {0,1,2,3}
    \draw[color=white] (-24pt,\y cm) -- (-34pt, \y cm) node[anchor=east] {$\y$};

\end{tikzpicture}
\end{center}

\begin{center}
\begin{tikzpicture}[thick,scale=0.65]
```

```
\node[align=center, color=white] at (2.75,1.5) {$L_{SYS}^{-}$};
\draw[color=white,->] (0,0) -- (1,0);
\filldraw[fill=green, draw=white] (1.5,-0.5) rectangle (2.5,0.5);
\draw[color=white] (1.5,0.75) .. controls (1.5,0.95) and (2.75,0.8) .. (2.75,1);
\draw[color=white] (2.75,1) .. controls (2.75,0.8) and (4,0.95) .. (4,0.75);
\draw[color=white] (3.5,0) circle (0.5cm);
\draw[color=white,->] (4.5,0) -- (5.5,0);
\node[align=center, color=white] at (2.8,-1.5) {$L_{q}^{-} + L_{SRV}^{-}$};

\end{tikzpicture}
\end{center}

% $$L_{q}^{-} + L_{SRV}^{-}$$


\textcolor{white!100}{
\begin{equation}
\nonumber
    3) \frac{6}{5} = L_{sys}^{-} \bigg[\frac{\Box}{time} = \frac{job \cdot time}{time} = jobs\bigg]
\end{equation}}
\textcolor{white!100}{
\begin{equation}
\nonumber
    2) \frac{3}{5} = L_{q}^{-} \bigg[\frac{\Box}{time} = jobs\bigg]
\end{equation}}
\textcolor{white!100}{
\begin{equation}
\nonumber
    1) \frac{3}{5} = L_{SRV}^{-} \bigg[\frac{\Box}{time} = jobs\bigg]
\end{equation}}


\textcolor{white!100}{
\boxed{$$L_{sys} = L_{q} + L_{SRV}$$}
}



\end{multicols}


\newpage
\pagecolor{white}

Koda atteeloshana ar lstlistings vidi no listings package

\end{document}
```