Tutorial 2a exercise paper

Shi Qiu

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sh4722qi-s@student.lu.se

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1 Introduction

This in introduction. Summary will be given in Section 4.

2 About Linux

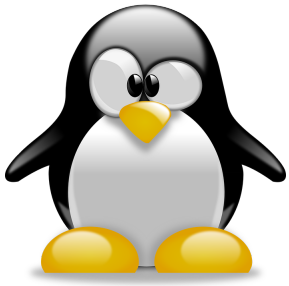

Figure 1: This is a penguin!

Figure 1 shows a *king penguin*. For more details, check the Linux web page [1].

2.1 Linux flavours

Table 2.1 lists some linux flavours [1].

Distribution	RedHat	Debian	SuSE
Fedora 20	x	y	z

Table 1: Different flavours of Linux

3 About mathematics

In-line math in LaTeX is enclosed in $ symbols. Backslash \ is used to denote special symbols.

Subscripts and superscripts are always math: A_x, A_{xy}, e^x and e^{x^2}. Using underscore _ outside math without \ causes big_troubles.

[1] Only one is shown for simplicity

All special symbols are also math: α, β, γ, δ, $\sin x$, $\hbar$, λ, $ldots$. More information can be found in Ref. [2].

Equation 1 shows χ^2:

$$\chi^2 = \sum_i \left(\frac{F_i - D_i}{\sigma_i} \right)^2 \tag{1}$$

We can also create a matrix

$$X = \begin{pmatrix} 1 & x_1^{(1)} & x_2^{(1)} & x_3^{(1)} \dots \\ 1 & x_1^{(2)} & x_2^{(2)} & x_3^{(2)} \dots \\ \vdots & & & \end{pmatrix} \tag{2}$$

To define a step function, we can do it like this

$$f(x) = \begin{cases} x+1 & y < 1 \\ -x+1 & y > 0 \end{cases} \tag{3}$$

4 Summary

We learned the following:

- Linux is good
- LaTeX is good for:
    1. Structuring documents
    2. Writing mathematical equations

We can also write unformatted text using `verbatim` environment, but sometimes we have to specify this in the preamble:

```
\usepackage{verbatim}
```

References

[1] Linux web site: `www.linux.com`

[2] Leslie Lamport, *LaTeX: A Document Preparation System*, second edition, Addision-Wesley (1994).