# UNIVERSITY OF CALIFORNIA SAN DIEGO

This is the Title of My Dissertation

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy

in

Physics

by

Jonathan Kasuke Guiang

# Committee in charge:

Professor Frank Würthwein, Chair Professor Avi Yagil, Co-Chair Professor Sekhar Chivukula Professor Albert Hsiao Professor Arun Kumar Professor Michael Norman

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The Dissertation of Jonathan Kasuke Guiang is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

2024

#### **DEDICATION**

In recognition of reading this manual before beginning to format the doctoral dissertation or master's thesis; for following the instructions written herein; for consulting with OGS Academic Affairs Advisers; and for not relying on other completed manuscripts, this manual is dedicated to all graduate students about to complete the doctoral dissertation or master's thesis.

In recognition that this is my one chance to use whichever justification, spacing, writing style, text size, and/or textfont that I want to while still keeping my headings and margins consistent.

#### **EPIGRAPH**

Talent is insignificant. I know a lot of talented ruins. Beyond talent lie all the usual words: discipline, love, luck, but, most of all, endurance.

James Baldwin

You write with ease to show your breeding, But easy writing's curst hard reading.

Richard Brinsley Sheridan

Writing, at its best, is a lonely life. Organizations for writers palliate the writer's loneliness, but I doubt if they improve his writing. He grows in public stature as he sheds his loneliness and often his work deteriorates. For he does his work alone and if he is a good enough writer he must face eternity, or the lack of it, each day.

Ernest Hemingway

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# PREFACE

Almost nothing is said in the manual about the preface. There is no indication about how it is to be typeset. Given that, one is forced to simply typeset it and hope it is accepted. It is, however, optional and may be omitted.

#### ACKNOWLEDGEMENTS

I have long wondered what I would write in this section. Every now and then, in times of crisis (or sometimes boredom), I would draft this exact section in my mind; I would find strength in the shoulders I stand upon. Those drafts have only grown with time. Thus, with each passing year, the words below became more and more clear, until now, where I find myself somehow already starting (struggling) to write them down, the date of my defense quickly approaching. It is truly humbling to enumerate the incredibly long list of those who have uplifted me — those to whom I owe everything — and it is truly a challenge to express my sincere gratitude in mere sentences. Nevertheless, please find below my best attempt to thank those who made this document, these last five years, and my short 26 years on Earth more full and meaningful than I think any one person is deserved.

Foremost, I owe boundless thanks to my incredible family. Although it appears at the beginning of this text, this section took the longest to write and was finished well after this section was otherwise complete, so deeply do I care for the words and names that follow.

Next, I am deeply indebted to the many mentors I have had in my relatively short academic career. These people served as my guides, teachers, and sometimes councilors. I thank Prof. Frank Würthwein, my advisor, for believing in me, supporting me, and flying me all over the world. Frank taught me to think critically and inspired me to be bold — alongside a great deal of lessons in physics, statistics, and more. I thank Prof. Avi Yagil, my co-advisor, for challenging, uplifting, and educating me. Avi taught me to speak precisely and served as a constant and reliable guide in all things. I thank Prof. Claudio Campagnari, my very first advisor, for taking me in and completely altering the course of my life. Claudio gave me purpose during what was, probably unbeknownst to him and many others, a very difficult time for me personally — thank you, Claudio; without you, this document simply would not exist. I thank Prof. Philip Chang for hours

of conversation (through Zoom and thousands of Skype messages) and even more hours of physics and C++ lessons, for helping me navigate my academic career, and for his nearly endless patience with me. I thank Prof. Indara Suarez for welcoming me into particle physics, for pushing me to meet my true potential, and for supporting me through my entire career in academic research. I thank Dr. Nick Amin for teaching me everything I know and for guiding me, once again, as I enter a new stage of my life. I thank also Dr. Bennett Marsh and Dr. Sam May for lessons in Python, machine learning, and mentorship — I am a better leader, person, and scientist thanks to Nick, Bennett, and Sam. Finally, I thank all of the members, past and present, of the "Surf n' Turf" (SNT) empire, whose dominion spans the continental United States of America and beyond. It has been a priviledge to serve as your resident Data Librarian, and I am deeply grateful to each of you, though listing all of your names here would surely inflate the length of this document well beyond the patience of its reviewers. Therefore, my thanks are extended, but not limited to the following SNT'ers: Prof. Frank Golf (who gave me my first project), Dr. Daniel Spitzbart, (soon to be Dr.) Aashay Arora, Dr. Mario Masciovecchio, Dr. Slava Krutelyov, and Dr. Manos Vourliotis.

Alongside my many colleagues in particle physics, I have had the priviledge of working with a number of incredible research scientists who also made this document possible. I thank Diego Davila for patiently teaching some computer science to a budding physicist and for being a great mentor and friend. Thanks also to Igor Sfiligoi, Dr. Fabio Andrijauskas, and Terrence Martin for the support, much-needed lunches, and even gym lessons!

Lastly, I would like to acknowledge my incredible friends who have kept me sane and made me a better person. I thank Joey Incandela for being my physics brother (and best man), for the many cross-country game nights, and for his compassion and spirit. I thank Gabe Hernandez for being my ex-physics brother (and ex-roommate), for the silly inside jokes, and for his guidance and encouragement. I thank Grady Kestler for being my

partner in crime, for going through Stat. Mech. with me, and for his camaraderie and insight.

Chapter 2, in full, is a reprint of the material as it appears in Numerical Grid Generational in Computational Fluid Mechanics 2009. Smith, Laura; Smith, Jane D., Pineridge Press, 2009. The dissertation author was the primary investigator and author of this paper.

Chapter 3, in part, has been submitted for publication of the material as it may appear in Education Mechanics, 2009, Smith, Laura; Smith, Jane D., Trailor Press, 2009. The dissertation author was the primary investigator and author of this paper.

Chapter 5, in part is currently being prepared for submission for publication of the material. Smith, Laura; Smith, Jane D. The dissertation author was the primary investigator and author of this material.

# VITA

2019	Bachelor of Science, University of California, Santa Barbara
2019–2020	Teaching Assistant, Department of Physics University of California, San Diego
2020-2024	Research Assistant, University of California, San Diego
2024	Doctor of Philosophy, University of California, San Diego

#### **PUBLICATIONS**

"Distributions of Control Points in a System for Analysis of Stress Distribution" IRE Transactions of the I.R.E. Professional Group on Automatic Control, vol. AC-7, pp 272–289, September 2005

#### FIELDS OF STUDY

Major Field: Engineering (Specialization or Focused Studies)

Studies in Applied Mathematics Professors Alpha Beta and Gamma Delta

Studies in Mechanices Professors Epsilon Zeta and Eta Theta

Studies in Electromagnetism Professors Iota Kappa and Lambda Mu

#### ABSTRACT OF THE DISSERTATION

This is the Title of My Dissertation

by

Jonathan Kasuke Guiang

Doctor of Philosophy in Physics

University of California San Diego, 2024

Professor Frank Würthwein, Chair Professor Avi Yagil, Co-Chair

The Abstract begins here. The abstract is limited to 350 words for a doctoral dissertation. It should consist of a short statement of the problem, a brief explanation of the methods and procedures employed in generating the data, and a condensed summary of the findings of the study. The abstract may continute onto a second page if necessary. The text of the abstract must be double spaced.

# Introduction

The history of particle physics began with a simple question: what is everything made of? The concepts of atoms and particles, however, were not the obvious answers, though they are rooted in ancient thoughts: from the Greek philosopher Democritus [23], to the Hindu scholar Kanāda (or, "atom-eater"). Instead, for a vast majority of human history, all theories were equally immaterial. As late as 1808, when John Dalton published the first<sup>1</sup> atomic theory [11, 12], the existence of the atom itself could not be directly verified. Nevertheless, as science progressed, faltered, corrected, and progressed again (and again, and again), patterns began to emerge, presented here as what David Griffiths calls a "folk history" for brevety, with inspiration taken heavily from his revered textbook [16].

In the burgeoning field of late-nineteenth-century physics, Henri Becquerel, Marie Curie, J.J. Thompson, and others found that certain elements and electronic apparatuses emitted different kinds of invisible radiation [3, 10, 22, 24]. In the decades following, they further realized that this radiation consisted of tiny particles<sup>2</sup>, and Ernest Rutherford directed rays of these particles at thin sheets of metals, probing the subatomic scale for the first time. Based on these seminal experiments, Rutherford made a groudbreaking observation and two key deductions:

- 1. The atom exists<sup>3</sup> and has a very small "nucleus" of positive charge.
- 2. The nucleus is made of positively charged "protons."

<sup>&</sup>lt;sup>1</sup>Dalton's now legendary claim to this was hotly contested by his contemporary, William Higgins, although without much credence [17].

<sup>&</sup>lt;sup>2</sup>Namely photons (X-rays or  $\gamma$  rays), electrons ( $\beta$  rays), and helium ions (He<sup>2+</sup> or  $\alpha$  rays).

3. The nucleus is also made of "neutrons" which somehow help keep it together.

Thus, the atomic age began in the lab. That is, the works cited so far contain little-to-no mathematical formulas or postulates — the language of theorists — but rather the tables of measurements and detailed observations of experimentalists. While there was serious theoretical motivation for the existence of atoms<sup>4</sup>, the structure of the atom itself had not been correctly described. These atomic pioneers, however, had stumbled upon the surface of a greater truth than Democritus, Kanāda, or anyone else could have imagined. By time the Rutherford's neutrons had been discovered by James Chadwick in 1932 [8], the formulation of a New Physics was well underway, marking the beginning of a long (and yet incomplete) journey towards the true description of the entire universe.

While Rutherford and others were tinkering with radiation in the lab, Albert Einstein, Max Planck, Niels Bohr, and others began writing down corrections to "classical" physics in order to better describe unexplained phenomena observed in the lab [14, 21, 5]. By the 1930s, a cadre of theorists, including many of the most well-known physicists in history<sup>5</sup>, had formed around Quantum Mechanics, which extended the early results of Einstein, Planck, and Bohr into a more complete theory describing the subatomic world, then confined to protons, neutrons, and electrons. However, over the next decades, a slew of new particles where either discovered in the lab or theorized to exist, with strong support from other observations: anti-matter was proposed, then produced in the lab; electrons were joined by muons, neutrinos, and their anti-particles in the "lepton" family; whole families of more massive particles (baryons and mesons which together comprise the

<sup>&</sup>lt;sup>3</sup>It should be noted that Jean Perrin separately confirmed the existence of molecules, and thus reality of atoms, by proving experimentally that the random walk of a microscopic object suspended in liquid could only be due to collisions with the molecules of that liquid [20] — a phenomenon first observed by the great botanist Robert Brown [7] (i.e. Brownian motion) and rigorously explained by Albert Einstein in one of his first papers [13].

<sup>&</sup>lt;sup>4</sup>Daniel Bernoulli, for example, had explained temperature as the kinetic motion of molecules decades before Dalton made his observations, and James Maxwell, Ludwig Boltzmann, Josiah Gibbs, and others had formulated the statistical mechnics of gases and other collections of microscopic objects well before Rutherford's experiments.

<sup>&</sup>lt;sup>5</sup>Werner Heisenberg, Erwin Schrödinger, and Jon von Neumann to name a few.

families of hadrons), akin to protons and neutrons, were observed. Experimental results had again, momentarily, outpaced theory. Although theorists were developing new ideas on how to classify or relate different particles, the ever-growing collection of particles was otherwise in dissarray. However, as is a consistent pattern in history, science progressed, faltered, corrected, and progressed again (and again, and again), and patterns began to emerge.

It began with Murray Gell-Mann, who, among others, saw a pattern in the deluge of new particles discovered. He arranged them in geometric patterns — octogons, triangles, and so forth — according to their properties [15], and found that his unusual diagrams held predictive power: some of his shapes were missing vertices, which were later found to be particles exactly matching the expected properties expected by Gell-Mann's theory [2]. With confidence in Gell-Mann's so-called "Eightfold Way" established, a natural question arose: what is the significance of these patterns? Gell-Mann himself, and, separately, George Zweig, arrived at the answer: hadrons are not themselves fundamental particles like electrons, photons, and the like; instead, they are composed of truly fundamental particles called "quarks" [19]. Similar to Rutherford's experiments 50 years prior, wherein beams of particles were used to probed the structure of the atom, the reality of this proposal could be probed by firing beams of electrons at protons, revealing its inner structure [4, 6]. Though these experiments showed only that the proton had three constituent "partons," they provided initial evidence for the existence of quarks. And so the field progressed, with families of particles filling out into neat organizations: the quarks became a family of six, divided into three generations (up/down, charm/strange, top/bottom); the leptons, with the addition of the tau and its neutrino, satisfyingly also totaled six particles divided into three generations  $(e/v_e, \mu/v_\mu, \tau/v_\tau)$ ; the photon was joined by the gluon, W/Z, and Higgs, forming the family of bosons, with the latter being discovered most recently, twelve years prior to the publication of this document, by the esteemed ATLAS and CMS collaborations [1, 9]. At the same time, a beautiful, yet deeply perplexing, quantum field

theory was developing, describing how each of these particles interact. Together, these triumphs in experiment and innovations in theory, representing an impressive number of Nobel Prizes [18], comprise the Standard Model (SM) of particle physics, our current best (and not nearly complete) answer to that primeval question: what is everything made of?

At the time of writing, the Standard Model has withstood a tremendous amount of scrutiny across decades of intense study and many millions of dollars of scientific apparatuses. Meanwhile, the now long-known errors and inconsistencies in the Standard Model have been, much to the community's dismay, equally durable. Particle physics has therefore reached a familiar inflection point, where the stage is set for the next surprising discovery in the lab that confirms an unusual approach, like Gell-Mann's Eightfold Way, or inspires a completed different one, just as Rutherford, Curie, and countless others have done in the past. Described in this document are the efforts of one graduate student, along with the invaluable support of his many colleagues, to contribute to this extraordinary enterprise. This effort is based on the proton-proton collision data collected by the Compact Muon Solenoid (CMS), a multi-billion dollar particle detector situated on the beamline of the Large Hadron Collider — the largest and most powerful particle collider ever built, at the time of writing. In particular, a careful study of the Higgs boson is performed, enabling vital tests of SM predictions and placing strict constraints on possible extensions to it. At the risk of losing the reader who is not committed to reading the many pages that lie beyond this introduction, no New Physics is documented here. Instead, this humble subission, amongst over one thousand publications from the CMS Collaboration alone, represents a small contribution to the rich history documented above, demonstrating another stunning success of a theory that dares to describe the entire universe.

# Chapter 1

# A Grand Apparatus

# 1.1 The Large Hadron Collider

The purpose of this page is to illustrate an ordinary page of text in a doctoral dissertation or master's thesis. All pages of the doctoral dissertation or master's thesis must be kept within the margins of 1.5" on the left, 1" on the right, 1" on the top and 1.25" on the bottom. All text must be double spaced except as indicated below.

It is recommended that to increase the margins as paper can shift in a printer and as some photocopiers tend to increase the image being copied.

The first line of each paragraph must be indented at least one 0.5" tab, as done here.

This text is intended to be a part of the dissertation, for a doctoral student, or the thesis if you are receiving a master's degree, and now a quote is included here:

All quotes of more than six lines, even though this one is not, are to be indented 0.5" from the left and 0.5" from the right. These longer quotes are to be single spaced. Don't forget to adjust for proper spacing after the last line of the quoted material.

The rest of the paragraph would continue as so.

- 1.2 The Compact Muon Solenoid
- 1.3 The High Lumonisity Era

# Chapter 2

# Testing the Standard Model

I don't demand that a theory correspond to reality because I don't know what it is ... All I'm concerned with is that the theory should predict the results of measurements. (Stephen Hawking)

- 2.1 Vector Boson Scattering
- 2.2 Search for WH Production via VBS
- 2.3 Search for VVH Production via VBS

This demonstrates how OGS wants figures and tables formatted. For figures, the caption goes below the figure and "Figure" is in bold. See Figure 2.1. Tables are formatted with the caption above the table. See Table 2.1.

Of course, Table 2.1 looks horrible. It should probably be formatted like Table 2.2 instead.

For facing caption pages, see Table 2.3. Of course, facing caption pages are vaguely ridiculous and my implementation of them in the class file is by far the most brittle part of the implementation. It's entirely possible that something has changed and these don't work at all. I implemented it merely for the challenge.

# PHD ZEN comic here

Figure 2.1. Comic entitled "Ph.D. Zen" by Jorge Cham, 2005. Copyright has not been obtained and so it isn't displayed.

Table 2.1. Electronic Dissertation Submission Rates at UCSD, Fall 2005 and Winter 2006. (First two quarters that the program was available to all Ph.D. candidates not in a Joint Doctoral Program with SDSU.)

	Ph.D.s awarded (Including Joint degrees)	Electronic submission of Dissertation	Paper Submission of Dissertation	Percentage of Electronic Submission
Fall 2005	84	37	47	44.05%
Winter 2006	64	42	22	65.63%

Table 2.2. Electronic Dissertation Submission Rates at UCSD, Fall 2005 and Winter 2006. (First two quarters that the program was available to all Ph.D. candidates not in a Joint Doctoral Program with SDSU.)

	Ph.D.s awarded (In- cluding Joint degrees)	Electronic submission of Dissertation	Paper Submission of Dissertation	Percentage of Electronic Submission
Fall 2005	84	37	47	44.05% $65.63%$
Winter 2006	64	42	22	

Table 2.3. University of California, San Diego Gender Distribution for the Campus Population, October 2005

(http://assp.ucsd.edu/analytical/Campus%20Population.shtml)

(This is an example of a facing caption page, the next page is the example of the table/figure/etc. that corresponds to this caption. It is also an example of table/figure that is rotated 90 degrees to fit the page.)

	Women	T	Men		Total	
Population Segment	Z	%	Z	%	Z	%
Students	12,987	51%	12,686	49%	25,673	100%
Employees	9,943	26%	7,671	44%	17,614	100%
Total	22,930	53%	20,357	47%	43,287	100%

# Notes:

- in the Schools of Medicine and Pharmacy and Pharmaceutical Science are excluded, and 2) registered, non-matriculated, 1. The counts shown below will differ from the official quarterly Registrar's registration report because 1) data for residents visiting students are included.
- 2. Student workers are excluded from employees; however emeritus faculty and others on recall status are included.

Campus Planning. Analytical Studies and Space Planning 31 January 2006

# Chapter 3

# Heading on Level 0 (chapter)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 3.1 Heading on Level 1 (section)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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# 3.1.1 Heading on Level 2 (subsection)

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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#### Heading on Level 3 (subsection)

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the

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### Heading on Level 4 (paragraph)

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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This is the second paragraph. Hello, here is some text without a meaning. This

text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 3.2 Lists

# 3.2.1 Example for list (itemize)

- Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
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length of words should match the language.

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# Example for list (4\*itemize)

• Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
  - \* Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
    - Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
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• Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 3.2.2 Example for list (enumerate)

- 1. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 2. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- 3. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 4. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 5. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Example for list (4\*enumerate)

- 1. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
  - (a) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
    - i. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- A. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- B. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- ii. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of

words should match the language.

- (b) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 2. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# 3.2.3 Example for list (description)

First item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Second item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Third item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fourth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fifth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Example for list (4\*description)

First item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Second item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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Chapter 51

Another chapter

Another figure

Figure 51.74. Another figure caption

Table 51.89. Another table caption

Figure 51.75. ASDF fig

Table 51.90. ASDF tab

# Appendix A

# Heading on Level 0 (chapter)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# A.1 Heading on Level 1 (section)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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"Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# A.1.1 Heading on Level 2 (subsection)

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift —

not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Heading on Level 3 (subsection)

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift — not at all! A blind text like this gives you information about the selected font, how the

letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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This is the second paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

And after the second paragraph follows the third paragraph. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Heading on Level 4 (paragraph)

After this fourth paragraph, we start a new paragraph sequence. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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### A.2 Lists

# A.2.1 Example for list (itemize)

- Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
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### Example for list (4\*itemize)

• Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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  - \* Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
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- · Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
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# A.2.2 Example for list (enumerate)

- 1. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 2. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- 3. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 4. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 5. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Example for list (4\*enumerate)

- 1. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
  - (a) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
    - i. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift—not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

- A. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- B. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- ii. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of

words should match the language.

- (b) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.
- 2. Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

# A.2.3 Example for list (description)

First item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Second item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Third item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fourth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

Fifth item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### Example for list (4\*description)

First item in a list Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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