Technická univerzita v Košiciach Fakulta elektrotechniky a informatiky

Moja záverečná práca (šablóna)

Bakalárska práca

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Študijný program: Informatika

Študijný odbor: 9.2.1. Informatika

Školiace pracovisko: Katedra počítačov a informatiky (KPI)

Školiteľ: Leslie Lamport Konzultant: Donald E. Knuth

Košice 2016

Janko Hraško

Abstrakt v SJ

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Kľúčové slová v SJ

LATEX, programovanie, sadzba textu

Abstrakt v AJ

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.

Kľúčové slová v AJ

LATEX, programming, typesetting

Tu vložte zadávací list pomocou príkazu \thesisspec{cesta/k/suboru/so/zadavacim.listom} v preambule dokumentu.

Kópiu zadávacieho listu skenujte čiernobielo (v odtieňoch sivej) na 200 až 300 DPI! Nezabudnite do jednej práce vložiť originál zadávacieho listu!

Čestné vyhlásenie	
Vyhlasujem, že som záverečnú prácu vypracov denej odbornej literatúry.	ral(a) samostatne s použitím uve-
Košice, 13.5.2016	Vlastnoručný podpis

Poďakovanie

Na tomto mieste by som rád poďakoval svojmu vedúcemu práce za jeho čas a odborné vedenie počas riešenia mojej záverečnej práce.

Rovnako by som sa rád poďakoval svojim rodičom a priateľom za ich podporu a povzbudzovanie počas celého môjho štúdia.

V neposlednom rade by som sa rád poďakoval pánom *Donaldovi E. Knuthovi* a *Leslie Lamportovi* za typografický systém L^AT_EX, s ktorým som strávil množstvo nezabudnuteľných večerov.

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Motivácia

1 Formulácia úlohy

Text záverečnej práce musí obsahovať kapitolu s formuláciou úlohy resp. úloh riešených v rámci záverečnej práce. V tejto časti autor rozvedie spôsob, akým budú riešené úlohy a tézy formulované v zadaní práce. Taktiež uvedie prehľad podmienok riešenia.

2 Súvisiaca práca

2.1 Lorem ipsum

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

- First itemtext
- Second itemtext
- Last itemtext
- First itemtext
- Second itemtext

2.2 Aliquam eu malesuada urna

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- v knihe Babington, 1993 autor prezentuje naozaj odvážne myšlienky
- nemenej zujímavé výsledky publikuje ďalší autor v článku Adams, 1993
- v konferenčnom príspevku Draper, 1993 sú uvedené tiež zauímavé veci
- LATEX¹ je typografický jazyk

Given a set of numbers, there are elementary methods to compute its Greatest Common Divisor, which is abbreviated GCD. This process is similar to that used for the Least Common Multiple (LCM).

2.2.1 Donec vehicula consequat

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2.2.2 Nullam in mauris consectetur

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¹https://www.latex-project.org/



Obr. 2.1: LATEX Friendly Zone

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- 1. First itemtext
- 2. Second itemtext
- 3. Last itemtext
- 4. First itemtext
- 5. Second itemtext

2.2.3 Vestibulum tristique elementum varius

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Country List										
Country Name	ISO ALPHA 2	ISO ALPHA 3	ISO numeric							
or Area Name	Code	Code	Code							
Afghanistan	AF	AFG	004							
Aland Islands	AX	ALA	248							
Albania	AL	ALB	008							
Algeria	DZ	DZA	012							
American	AS	ASM	016							
Samoa										
Andorra	AD	AND	020							
Angola	AO	AGO	024							

Tabuľka 2.1: Country list

2.3 Phasellus id pretium neque

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3 Metodológia

4 Implementácia

5 Dosiahnuté výsledky

6 Interpretácia výsledkov

7 Ďalšia práca

8 Záver

Literatúra

- ADAMS, Peter, 1993. The title of the work. *The name of the journal*. Roč. 4, č. 2, s. 201–213. An optional note.
- BABINGTON, Peter, 1993. *The title of the work*. 3. vyd. The address: The name of the publisher. 10. ISBN 3257227892. An optional note.
- DRAPER, Peter, 1993. The title of the work. In: EDITOR, The (ed.). *The title of the book*. The address of the publisher: The publisher, zv. 4, s. 213. 5. An optional note.

Zoznam skratiek

GCD Greatest Common Divisor.

LCM Least Common Multiple.

Zoznam príloh

Príloha A Karel Language Reference

Príloha B CD médium – záverečná práca v elektronickej podobe,

Príloha C Používateľská príručka

Príloha D Systémová príručka

A Karel Language Reference

Karel's Primitives

- void movek() Moves *Karel* one intersection forward.
- void turn_left() Pivots Karel 90 degrees left.
- void pick_beeper() Takes a beeper from the current intersection and puts it in the beeper bag.
- void put_beeper() Takes a beeper from the beeper bag and puts it at the current intersection.
- void turn_on(char* path) Turns Karel on.
- void turn_off() Turns Karel off.

Karel's Sensors

- int front_is_clear() Returns 1 if there is no wall directly in front of *Karel*. 0 if there is.
- int right_is_clear() Returns 1 if there is no wall immediately to *Karel's* right. 0 if there is.
- int beepers_present() Returns 1 if *Karel* is standing at an intersection that has a beeper. 0 otherwise.
- int facing_north() Returns 1 if *Karel* is facing north. 0 otherwise.
- int beepers_in_bag() Returns 1 if there is at least one beeper in *Karel's* beeper bag. 0 if the beeper bag is empty.

Misc Functions

- void set_step_delay(int) Sets delay of one Karel's step in miliseconds.
- loop(int) Repeats *Karel's* instruction in a loop.