

Programming Contest PALMA junior

as an Informal Education of pupils

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Content

- [Background](#)
- [Description of programming contest PALMA junior](#)
- [E-learning support of contest PALMA junior](#)
- [Realization of contest PALMA junior](#)
- [Conclusion](#)



Background

- modern technologies bring new, more attractive and effective methods of education
- programming contests for secondary school students organized in Slovak republic:
 - International Olympiad in Informatics (IOI)
 - Central International Olympiad in Informatics (CEOI)
 - National Olympiad in Informatics (OI)
 - Correspondence Seminar in Programming (CSP)
 - Colobezka/Imagine Cup
 - PALMA (P. J. Šafárik University in Košice, Faculty of Science)
 - since 2005 - PALMA junior (P. J. Šafárik University in Košice, Faculty of Science)



Description of programming contest PALMA junior

- devoted to younger class of age
 - for pupils of second level at primary schools, students of lower grades at eight-year secondary grammar schools and freshmen at secondary schools (two categories: Expert, Profík)
- main aims:
 - to discovery and support of young programming talents
 - to show the beauty of programming on simply, elegant and effective solutions
 - non-formal education of students and partially of their teachers
- programming environment Imagine (based on Logo)
- oriented to **P**rogramming, **A**Lgorithms and **M**athematics
- 2005 – zeroth year, 2006 - first year of contest



E-learning support of contest PALMA junior

- electronic application form for teams is accessible on the contest website <http://di.ics.upjs.sk/palma>
- following the information in electronic application we create an access to authorized area for registered team
- authorized area is implemented in LMS Moodle
 - active and dynamic environment
 - open, free and continually developed
 - very attractive for participants



E-learning support of contest PALMA junior

- contest web page includes (for all participants)
 - contest rules
 - teaching materials for students
 - actual information
 - assignments of problems for particular bouts
 - ranking of contestants
 - authorial solutions of problems
 - description of typical mistakes
 - gallery of final results





PALMA junior



Pravidlá súťaže

Pár slov na úvod

Pomocné materiály

prostredie Imagine

základné príkazy

vlastné príkazy

objekty v Imagine

rekurzia

zoznamy

propagačný letáčik

Zadania II. ročníka

[1] [2] [3] [4] [5] [6]
chodnik.imp
chodnik.zip

Riešenia, komentáre

Opravovatelia

PALMA junior je súťaž v programovaní pomocou programovacieho prostredia Imagine pre žiakov druhého stupňa základných škôl, žiakov prímých až kvintých osemročných gymnázií a žiakov 1. ročníkov stredných škôl.

Do súťaže sa môžu prihlásiť dvojčlenné tímy žiakov alebo jednotlivci. V školskom roku 2006/2007 budeme organizovať tri online školské kolá a jedno finálové kolo.

Zadania jednotlivých úloh a výsledky riešení budú zverejňované na našich webových stránkach <http://di.ics.upjs.sk/palma>.

Dávame vám do pozornosti pracovný zošit "Tvorivá informatika: 1. zošit z programovania" súčasťou ktorého je CD so žiackou licenciou prostredia Imagine.

Aktuality

- [31. 10. 2006] V časti riešenia a komentáre si môžete pozrieť autorské riešenia úloh, komentáre k vašim riešeniam, galériu vašich prác a zopár fotiek.
- [27. 10. 2006] Poradie po prvom kole si môžete pozrieť v časti "Výsledky".
- [25. 10. 2006] Doplnili sme informácie do pravidiel súťaže PALMA junior. Nič sa nezmenilo, len sme podrobnejšie vysvetlili niektoré z pravidiel.

registrácia

vstup

Výsledky

Profiík, Expert

Imagine

Comenius Logo

Pohľadnice

20 príkazov

PALMA

STROM

© Univerzita Pavla Jozefa Šafárika v Košiciach, Prírodovedecká fakulta, Ústav informatiky
palmaj (zavinac) upjs.sk



E-learning support of contest PALMA junior

- in authorized area contestants have an access to (for registered teams only)
 - **discussion forum**
 - to discuss mistiness and troubles before the bout
 - **chat**
 - to communicate between each other and to discuss with organizers
 - **questionnaires**
 - to detect the easiest, the most difficult and the most interesting problem of contest
 - **evaluation of contestants solutions**
 - results in section MARKS with comments written by organizers after current bout



Prehľad témy

Vážení súťažiaci,


prajeme vám veľa potešenia a síl pri riešení úloh v jednotlivých kolách a budeme sa tešiť z vašich úspechov.


vaši opravovatelia Adka, Alenka, Emília, Janka, Jano, Ľubo, Zuzka

 [Čo je nové v Palme-junior?](#)

1 1. KOLO - 26. október 2006, 14:00-17:00 hod

 [Zadanie úlohy č. 1 \(len PROFÍK\)](#)

 [Zadanie úlohy č. 2 \(len PROFÍK\)](#)

 [Zadanie úlohy č. 3 \(PROFÍK, EXPERT\)](#)

 [Zadanie úlohy č. 4 \(PROFÍK, EXPERT\)](#)

 [chodnik.imp](#)

 [chodnik.zip](#)

 [Zadanie úlohy č. 5 \(EXPERT\)](#)

 [Zadanie úlohy č. 6 \(EXPERT\)](#)

 [Chat s poradcami \(len 26. októbra 2006 v čase 13:00-17:00 hod\)](#)

 [Diskusné fórum k priebehu súťaže](#)

POZOR, POZOR, POZOR.


Čítajte pozorne zadania úloh. Posielajte nám **PROCEDÚRY**, nielen výsledné obrázky, aby sme vám mohli udeliť nejaké body.

Keď ste prišli na to, že máte chybné riešenie niektorej úlohy, môžete poslať ešte raz riešenie do 17.00 hod.

 [Tu odovzdaj zadanie 1. úlohy](#)

 [Tu odovzdaj zadanie 2. úlohy](#)

 [Tu odovzdaj zadanie 3. úlohy](#)

 [Tu odovzdaj zadanie 4. úlohy](#)

 [Tu odovzdaj zadanie 5. úlohy](#)

 [Tu odovzdaj zadanie 6. úlohy](#)

 [Fotky - Gymnázium Alejová, Košice](#)

 [Fotky - ako sme opravovali](#)

Realization of contest PALMA junior

- three on-line bouts
 - contestants have three hours for solving the problems
 - contestants deliver their solutions in the environment of LMS Moodle
 - organizers check the contestants solutions and add comments
 - organizers publish the ranking of all teams
- final bout for eight best teams (zeroth year)
 - contestants solved assignments
 - absolute winners of the first year were awarded
 - accessory funny activities for contestants - they solved several logical problems





Realization of contest

PALMA junior

- How to measure an acquisition of this content?
 - information from discussion forum, from chat, (from questionnaires), from discussion with teachers during the final bout
- Teachers can express their attitude to choice and quality of solved problems
- Opinion of teachers about this type of contest
 - the contest stimulate lots of students to be interested in programming
 - natural emulation of students helped them to reach better educational results

Realization of contest PALMA junior

- The teachers appreciated
 - accessibility of educational resources
 - the contest by itself as very good way of students' motivation to improve their algorithmic thinking and programming skills
 - very active and exciting atmosphere during the on-line bouts



Conclusion

- for most contestants it is the first contact with this type of contest
- this form of contest motivates the students and is natural for them
- PALMA junior is a way of informal learning in a field of algorithms and programming
- we are going to create an e-learning course focused on
 - methodology of teaching of algorithms and programming in environment of Imagine
 - creation of assignments
 - evaluation of students' solutions
 - selected topics from a field of programming (lists, sorting algorithms, recursion etc.)



Thanks

We would like to thank Valentína Gunišová and Janka Brandoburová for helping us with creating assignments, authorial solutions, analyses of solutions, additional resources, evaluating students' solutions and creating galleries.



Thanks for your attention

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