Are you a Super Coder?
A coding competition for Irish primary and secondary level students

[Dublin, Ireland] September 6, 2013 - The future of computing and software development is multi- and many-core programming. Today's computer chips are little faster than 5 years ago and to counter this manufactures are packing more cores within processors to give the impression of improved speed. These additional cores allow for multitasking and other compute intensive operations. To efficiently harness these additional cores on modern CPUs (e.g. the latest Intel Xeon processors have up to 12 cores) requires software developers to have skills in parallel programming. It is paramount that these skills are introduced to students as early as possible to ensure Ireland has software developers with skills to tackle the problems of tomorrow that will undoubtedly require use of highly parallel machines.

"To program in parallel you need to think in parallel and we hope to see examples of great code from young minds that are not entrenched in the traditional serial approach that is increasingly a limiting factor be it on a mobile phone or supercomputer." – Dr. Michael Browne, ICHEC Technical Manager

To promote the concept of high performance computing and parallel programming in particular, ICHEC (Irish Centre for High-End Computing (http://www.ichec.ie) has launched a coding competition in association with CoderDojo (http://coderdojo.com/) called "Are you a Super Coder?". The competition funded by Science Foundation Ireland (SFI) Discover Science & Engineering (http://www.sfi.ie/discover-science-engineering-dse/) is open to all primary and secondary level students in Ireland. The challenge for the students is to implement photography filters commonly found in modern photo editing software. The first is a mirroring effect where a new image is created such that the right hand side is a mirror of the left. The second is a little more involved and distorts the image using a predefined algorithm. The site introduces image processing by providing code to convert colour images into grayscale and also apply a Gaussian blur. The site also highlights good software development skills with the use of Makefiles, requirements of documentation and the idea of keeping code simple and maintainable. Winners of the first phase of the competition will have the opportunity to access the new Irish supercomputer during a special Science Week event. Further details of the competition can be found here: http://s.ichec.ie/superCoderContest. A new short video produced by ICHEC that introduces parallel processing and its utility in many industries including F1 racing, animation, weather forecasting can be found here: http://youtu.be/35p5wGevzVY

"CoderDojo is delighted that Irish ninja code kids will be able to get the opportunity to work with the new Irish supercomputer as big data processing is a core technology for all our future and present benefit." – Bill Liao, CoderDojo Co-founder

About ICHEC
The Irish Centre for High-End Computing (ICHEC) is the national High-Performance Computing Centre in Ireland with offices located both in Dublin and Galway. Established in 2005, ICHEC operates the national HPC service providing compute resources and software expertise for the research communities across all the main science disciplines through collaborative partnerships and programmes of education. ICHEC has grown to an organization recognised internationally as a partner of choice for HPC services and R&D enablement. Since 2010, ICHEC has developed an active industry engagement programme working on a consultancy basis in areas as varied as financial services, oil & gas, data analytics and renewable energy. ICHEC is funded by Department of Jobs, Enterprise & Innovation, Department of Education and Skills, Science Foundation Ireland (SFI) and the Higher Education Authority (HEA), and hosted by NUI Galway. For additional information, visit http://www.ichec.ie and http://gpgpu.ichec.ie.

Supplementary Material
http://www.ichec.ie
http://nameourcomputer.ichec.ie
http://s.ichec.ie/superCoderContest
http://youtu.be/35p5wGevzVY

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