CX2616

Banque commune École Polytechnique – ENS de Cachan
PSI
Session 2012

_____

Épreuve de Langue Vivante Etrangère

_____

Durée : 3 heures

_____

Aucun document n'est autorisé

L'usage de toute calculatrice est interdit

Aucun dictionnaire n'est autorisé

_____

Chaque candidat doit obligatoirement traiter le sujet qui correspond à la langue vivante étrangère choisie irréversiblement au moment de son inscription et l'indiquer sur sa copie.

ANGLAIS

I. VERSION

Traduire en français le texte ci-dessous, y compris le titre.

Empirical Software Engineering

Software engineering has long considered itself one of the hard sciences. After all, what could be "harder" than ones and zeroes? In reality, though, the rigorous examination of cause and effect that characterizes science has been much less common in this field than in supposedly soft disciplines like marketing, which long ago traded in the gut-based gambles of "Mad Men" for quantitative, analytic approaches.

A growing number of researchers believe software engineering is now at a turning point comparable to the dawn of evidence-based medicine, when the health-care community began examining its practices and sorting out which interventions actually worked and which were just-so stories. This burgeoning field is known as empirical software engineering and as interest in it has exploded over the past decade, it has begun to borrow and adapt research techniques from fields as diverse as anthropology, psychology, industrial engineering and data mining.[...]

At present, a tremendous enabler of empirical software engineering research is the open-source software movement, which is rapidly generating a freely available accumulation of code along with complete archives of the communications between developers. In an open-source setting, programmers collect around software projects to produce applications that they want to see available for free. The developers are often in different places and time zones, so communication occurs via email and online forums. The code and communication records are accessible to all via websites, so interested developers can join the project at any stage to share expertise, troubleshoot and add to the source code.

These electronic repositories are a software-engineering researcher's paradise. They constitute a historical record of the life of a project, including all of the dead ends and debates, the task assignments, the development of team structure and many other artifacts.[...]

As in any applied science, the ultimate measure of success for all of this work will be change—change in the tools used to develop software, change from current practices to those that are probably better and most importantly, change in what is and is not accepted as proof.

From *American Scientist*, November-December 2011.

II. QUESTION.

Répondre en anglais à la question suivante en 200 mots:

What can be expected from the development of a global scientific community ?