

Overview of peach³, a course work management system

<http://peach3.nl/>
Department of Mathematics and Computer Science
Eindhoven University of Technology (TU/e)

August 2013

Abstract

This document provides an overview of peach³, a web-based system developed at Eindhoven University of Technology to manage digital course work created by students.



HCI: Honors Class Foundations of Informatics

Assignments

Cluster	Visible	Open
Participants	Always	Until 21-11-2011 13:30

Description

- Solve the problems for [Settling Multiple Debts Efficiently](#). In particular, question 9 in that problem set concerns an efficient debt-settling algorithm that **minimizes the total amount transferred**.
 - Can you think of an efficient debt-settling algorithm that **minimizes the total number of transfers**?
- In the first solution for the period-finding problem of last week, a so-called *Linear Search* was used to check whether the next generated number had already been en... [Read full description](#)

Originally, peach³ was developed to support a few practical programming courses and programming contests at the Department of Mathematics and Computer Science at Eindhoven University of Technology. Over the years, peach³ was developed further and saw increased and more diverse usage in non-programming courses, also outside the department, outside TU/e, and even abroad. Last year, we added extensive facilities for double-blind peer reviews. This document describes the current status of peach³.

Overview of **peach**³ features

The **peach**³ system (the superscript 3 is part of the name) was designed and developed by Erik Scheffers and Tom Verhoeff of the Department of Mathematics and Computer Science at Eindhoven University of Technology in the year 2000, to support **programming education and contest hosting**. Since 2001, it has been in active use, and has evolved into a general system to manage any digital work delivered by students in courses or contests.

The **peach**³ system

1. is available under an open-source software license; for TU/e courses, **peach**³ runs on TU/e servers at <https://peach.win.tue.nl/>;
2. offers assignments, organized in courses, to registered participants;
3. collects work for assignments, submitted via a web interface (also usable on smartphones and tablets);
4. supports group work (multiple authors per submission);
5. enforces submission deadlines, that can be extended individually;
6. stores and preserves all versions of submissions on a server;
7. controls access to submissions and related information;
8. enables staff to provide manual feedback and grades for submissions;
9. supports double-blind peer reviewing, where the reviewers submit review reports, grades, and/or rankings for peer submissions;
10. processes (optionally) each submission by an assignment-specific script, to produce automatic feedback;
11. generates bulk downloads of submissions and course overview reports;
12. offers a secure API to support interaction with external software;
13. compares submissions for related assignments to aid fraud detection;
14. supports internationalization (multi-lingual user interface).

The **peach**³ installation at TU/e is connected through web services to Oase, the digital learning and working environment of TU/e. Consequently,

- TU/e users can log into the **peach**³ system with their TU/e credentials;
- **peach**³ obtains TU/e student information, including pictures, via Oase;
- **peach**³ obtains registration information for TU/e courses via Oase;
- **peach**³ obtains TU/e course information via Oase.