

# **Standard Bank IT Challenge**

**Final**

**7 May 2009**

**Johannesburg**

## **Introduction**

This is the fifth year that the Standard Bank IT Challenge has been held principally for Universities in South Africa. From the heats a team was selected to represent each of the following Universities:

- **University of Cape Town**
- **University of the Witwatersrand**
- **University of Stellenbosch**
- **Rhodes University**
- **University of Pretoria**
- **University of Western Cape**
- **University of KwaZulu-Natal**
- **Nelson Mandela Metropolitan University**

In addition there was a team from within Standard Bank, namely:

- CIB IT

All teams consisted of 4 members, one of whom acted as Team manager.

In order to try and promote greater interest from female students, teams needed to have at least one female member of the team. This certainly proved to be a successful innovation and should continue to be encouraged.

This year the Challenge supported four programming languages, Java, C++, C# and VB.net. All of the teams used either Java or C++. There were a few enquiries after the competition about whether Python might again be supported in the future. Each team was supplied with a PC and access to a single printer.

The Challenge is aimed to show both programming ability as well as working in a team with limited resources.

The Challenge final was judged by four judges, Dr Giles Chapman, Mr David Cartwright, Dr Richard Dixon and Mr Michael Powell. Giles Chapman and David Cartwright are Fellows of the UK British Computer Society. Dr Richard Dixon acted as Chief Judge for the final.

## **Competition**

Teams were given up to 7 problems to solve – 1, 2a, 2b, 3a, 3b, 4, and 5. Problem 2b and 3b were given out on successful completion of 1a and 2a respectively. Problem 5 was an interactive question. The time available for the event was 6.5 hours.

Problems were judged on a pass/fail basis when tested against test data. The time to complete a successful outcome on a question was recorded – any previous failed submissions on that question each created a 20 minute penalty for that problem.

In the case of the interactive question, each successful submission for Problem 5 counted as a correct submission. In addition the correct solutions were to be tested

against each other at the end of the competition period. The winner with the best algorithm of this got an extra question pass, and the second and third had 40 minutes and 20 minutes credited to their total elapsed time.

## Results

- There were 76 submitted solutions of which 33 were correct – the highest number of correct solutions for any of the Challenge events so far.
- All teams had at least two correct solutions.
- Nobody had a correct solution to 2a, and hence there were no attempts at 2b.
- Seven of the teams submitted valid solutions to the interactive question, the first of which came in within 1 hour.

The Interactive Question - No 5

Position	Team
1 <sup>st</sup>	Pretoria
2 <sup>nd</sup>	Stellenbosch
3 <sup>rd</sup>	KwaZulu-Natal

The overall University results were:

Team	Passes	Total Elapsed Time
Stellenbosch	5	13:27
Cape Town	5	15:43
Pretoria	5	18:36
KwaZulu-Natal	4	9:46
Witwatersrand	4	17:47
Nelson Mandela Metropolitan	3	13:40
Rhodes	3	17:09
Western Cape	2	12:01

**Winners: Stellenbosch University**

**Runners-up: Cape Town**