Computers and ‘magic sauce’

A trio of happy young UWA computer programmers is practising hard before representing Australia in the finals of the International Collegiate Programming Contest (ICPC).

Our team is Michael Martis, who has completed Honours in Mathematics, Ben Ritter (Honours in Computer Science) and Eliot Courtney, who is finishing his undergraduate degree in Computer Science on exchange at Kobe University in Japan.

They are looking forward to the five-hour programming marathon in Morocco in May.

The young men have been working together to solve programming problems and entering competitions as a team for about three years. The ICPC is the pinnacle of their short careers.

But they are destined for greater things. Michael has scored a position with Google in Sydney and the company has generously allowed him to put off his starting date, so he can concentrate on the competition, joining one of the world’s best-known programming companies after the Morocco trip.

“The problems we have to solve in the ICPC are distilled problems that always have a story constructed around them and they’re often very funny,” Michael said.

“One of the easiest to describe is an argument between two pirate kings, trying to split up some treasure.”

“Using computer science we had to find the optimal way of splitting the treasure up so our favourite pirate king received more than the other one, without the other one realising he’d been cheated.”

The computer programmers are given 10 or a dozen such problems to solve over the five-hour competition.

“It’s a very intense five hours,” Ben said. “You can’t just put three clever people together. You need to cover the breadth of theory and practice, then add the magic sauce! That magic sauce is the ability to work together, to communicate ideas.”

Elliot, speaking via Skype from Kobe, said the three got along really well. “Being friends is very important.”

“The competitions are very tense,” Michael said. “You need to employ a lot of strategies that are not related to computer skills. Our tactic is to get the quickest person to jump onto the computer at the start to solve the easiest problems first.”

“There is only one computer for each team and that’s a very important part of the competition,” Ben said. “It sets the tone.”

Michael said while one person was on the computer, the others were reading, thinking about solutions, going through codes and coming up with tricks.

Elliot said the toughest part of the competition was the limited feedback on completed problems. The team is only told if their answer is correct or incorrect, not how or why.

With all this stress involved, do they actually enjoy it? “Absolutely,” they all beamed.

“We don’t expect to cover ourselves in glory,” Michael said. “We’d just like to beat the other two Australian teams.”

“The last UWA team to make it to the finals, in 2009, managed to solve just three of the 11 problems.”

“There will be 130 teams from all over the world. It’s extraordinarily competitive.”

Ben, Michael and Elliot have honed their skills through the computer club at UWA which is almost entirely run by students.

“We have had great support from all the staff in Computer Science and Software Engineering, particularly from Dr Tim French and, initially, from Luigi Barone, a former staff member, who was the original driving force behind the club,” Michael said.

The club is for students who are passionate about computer programming. All three of the team have been teaching and mentoring younger students while preparing for and taking part in competitions.