Director's Report on
ACM-ICPC Asia Regional Dhaka Site Event
Online Contest 2014

Introduction

The ACM-ICPC Asia Regional Dhaka Site online Programming Contest 2014 was conducted by Bangladesh University of Business and Technology (BUBT), for the first time.

Bangladesh University of Business and Technology (BUBT) was established in the year 2003 under the Private University Act with the approval of the University Grants Commission (UGC) and the Ministry of Education, Govt. of Bangladesh. BUBT was founded by Dhaka Commerce College, Mirpur, Dhaka and is managed by a Board of Trustees and a Syndicate in which the Principal of the College and the Chairman of the Governing Body of Dhaka Commerce College are Ex-officio members. Thus BUBT and Dhaka Commerce College are the two sister educational institutions working together closely for providing quality education in Bangladesh.

The popularity of programming contests in Bangladesh has been growing in recent years. This is one of the arenas where Bangladeshi students have been consistently outperforming in international assessment. Excelling in such events requires analytical prowess, deductive capabilities and the ability to think on one's feet. The budding programmers from this country have risen to the challenge admirably. Participating in such competitions has enriched computer science departments of various universities, and has widened the mental horizon of the participating students. Bangladesh has a bright prospect in this field which cannot be disputed. From this point of view the Department of Computer Science and Engineering of Bangladesh University of Business & Technology (BUBT) is going to organize ACM-ICPC Asia Regional Dhaka Site Event 2014 on December 05-06, 2014 at BUBT Permanent Campus.

Primary Sponsor: IBM

Registration

Domestic teams are required registration for Online Preliminary Contest for ACM-ICPC 2014 Asia Regional Dhaka Site at the ACM-ICPC website (http://icpc.baylor.edu/). The keynotes about registration are:

Event	Date	Time
Registration Begins	Thursday, September 25, 2014	09.00 am
Registration Ends	Saturday, October 28, 2014	11.00 pm
Receiving User ID and Password for Online Contest	Thursday, October 30, 2014	11.00 pm
Online Mock Contest	Friday, October 31, 2014	04:00 pm
Online Contest	Saturday, November 08, 2014	02:00 pm
Team Performance & Slot Allocation List	Friday, November 14, 2014	05:00 pm

It is a matter of great regret that, there was a power outage across the country due to a collapse in the national grid in Bangladesh. Under this unavoidable circumstance the ACM-ICPC, 2014 Asia Regional Dhaka Site Online Preliminary Contest has been rescheduled to Saturday, November 08, 2014 instead of Saturday, November 01, 2014.

Participation

This year Dhaka site has reached a milestone by exceeding the number of registered team from previous years of competition. A total of 962 teams from 70 different institutes of Bangladesh made registration for Online Preliminary Contest. Among them 802 teams were accepted for Online Preliminary Contest. A total of 160 teams were eliminated either by their respective team coach or RCD of Dhaka Site for not meeting the basic eligibility of the contest.

The maximum numbers of teams participated in the contest were from the host university. This indicates that the students from this institute have great passion for Programming Contest. The list of the total participating institutes is shown here with their total number of teams.

Name of the Institute	No of Teams
Bangladesh University of Business & Technology	82
Bangladesh University of Engineering and Technology	62
University of Dhaka	39
East West University	34
Shahjalal University of Science and Technology	32
Chittagong University of Engineering & Technology	29
American International University – Bangladesh	28
Jahangirnagar University	25
Military Institute of Science and Technology	25
Mawlana Bhashani Science & Technology University	23
Daffodil International University	21
Comilla University	19
State University of Bangladesh	18
Dhaka City College	17
Khulna University of Engineering & Technology	17
Rajshahi University of Engineering & Technology	17
Ahsanullah University of Science and Technology	16
BRAC University	15
Southeast University, Bangladesh	15
Sylhet Engineering College	15
Hajee Mohammad Danesh Science and Technology University	14
Dhaka University of Engineering & Technology - Gazipur	13
Khulna University	13
Islamic University	12
Bangladesh University	9
International Islamic University Chittagong	9
Jagannath University, Bangladesh	9

Name of the Institute	No of Teams
Leading University, Sylhet	9
North South University	9
Pabna University of Science and Technology	9
University of Chittagong	8
BGC Trust University, Bangladesh	7
United International University	7
Varendra University	7
Green University Of Bangladesh	6
Islamic University of Technology	6
Manarat International University	6
Shaikh Burhanuddin Post Graduate College	6
Stamford University Bangladesh	6
University of Liberal Arts Bangladesh	6
Begum Rokeya University, Rangpur	5
Institute of Science and Technology - Bangladesh.	5
Daffodil Institute of Information Technology	4
Eastern University of Bangladesh	4
Metrolpolitan University - Sylhet	4
Primeasia University	4
The University of Asia Pacific	4
University of Information Technology & Sciences	4
University of Rajshahi	4
Hamdard University Bangladesh	3
North East University Bangladesh	3
University of Science and Technology Chittagong	3
Uttara University	3
Bangabandhu Sheikh Mujibur Rahman Science and Technology University	2

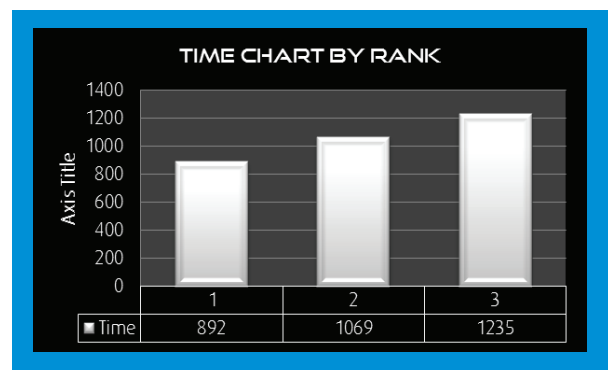| Name of the Institute	No of Teams
IBAIS University	2
Institute of Science and Technology	2
International University of Business Agriculture and Technology	2
Jatiya Kabi Kazi Nazrul Islam University	2
Jessore University of Science and Technology	2
Noakhali Science and Technology University	2
Sylhet International University	2
Z. H. Sikder University of Science and Technology	2
Asian University of Bangladesh	2
Atish Dipankar University of Science & Technology	1
CCS (National University of Bangladesh)	1
City University	1
Dhaka International University	1
Ahsanullah University of Science and Technology	1
Premier University	1
The People's University of Bangladesh	1
TOTAL TEAMS:	**802**

There was a rule for online contest, that is: During the online contest, a proctor must supervise the team. The proctor is responsible for certifying that the participating teams do not take any unfair means in the contest. A proctor must be a faculty member from the institution of the team. If the coach is a faculty member, then he/she can also be the proctor of the team. A proctor may supervise multiple teams.

Judging System:
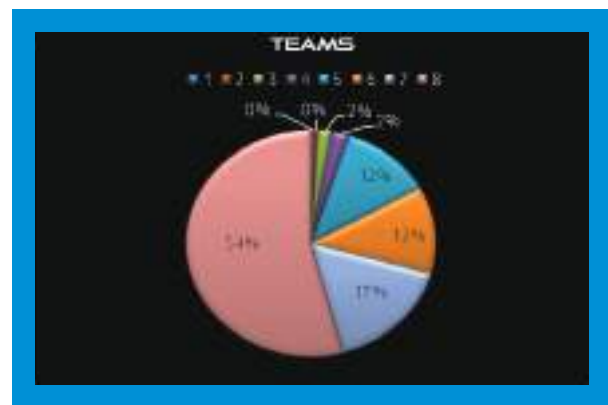The online contest was held on codemarshal (http://www.codemarshal.com) judging system.

Result Analysis:

A total of 775 teams out of 802 participated in Online Preliminary contest. The duration of the contest was 05 hours. There were total 8 problems given to the contestants from the spectrum of computing, mathematics and other different fields of science. The team named "BUET Onion" from Bangladesh University of Engineering and Technology (BUET) stood first solving all problems. The 1st and the 2nd Runner-Up of the contest were "DU Avengers" from University of Dhaka and "JU_Assassins" from Jahanginagar University respectively. Although all these three teams solved every single problem, the ranking was done according to the least time (including plenty time) taken by a team to solve the given problems. The following graph indicates the time ratio of first three teams.
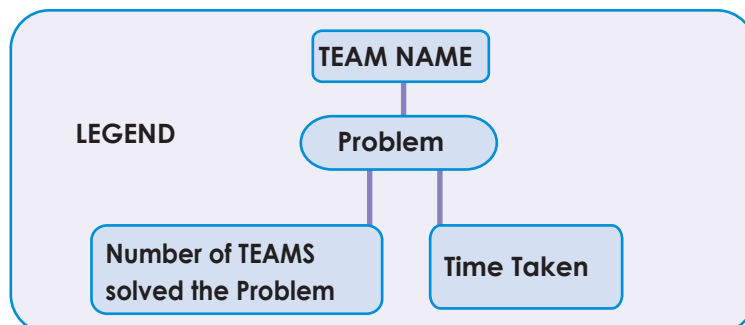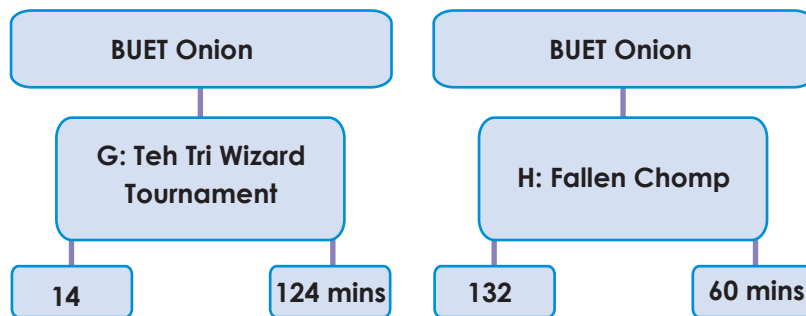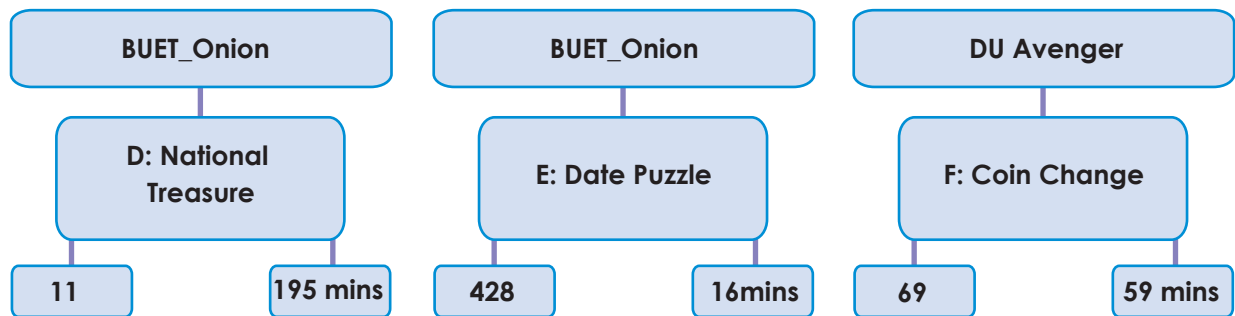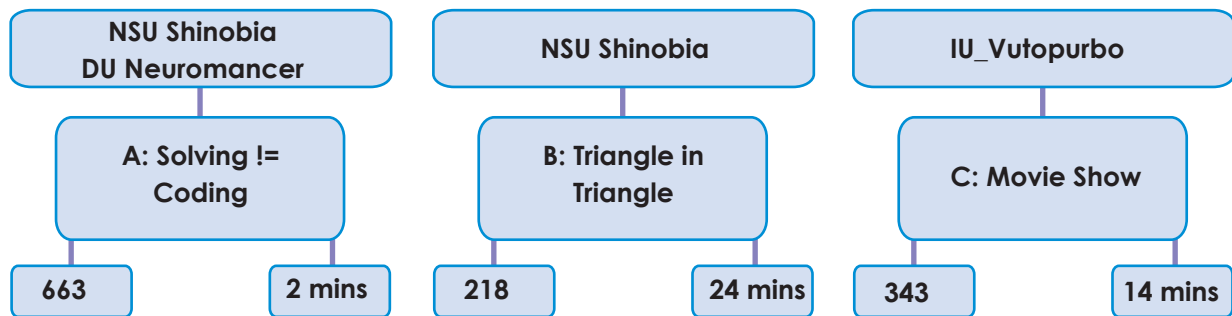

Among all the participated teams 351 teams were able to solve one problem. A total of 107 teams were able to solve two problems. The summary of problem solving is as follow:
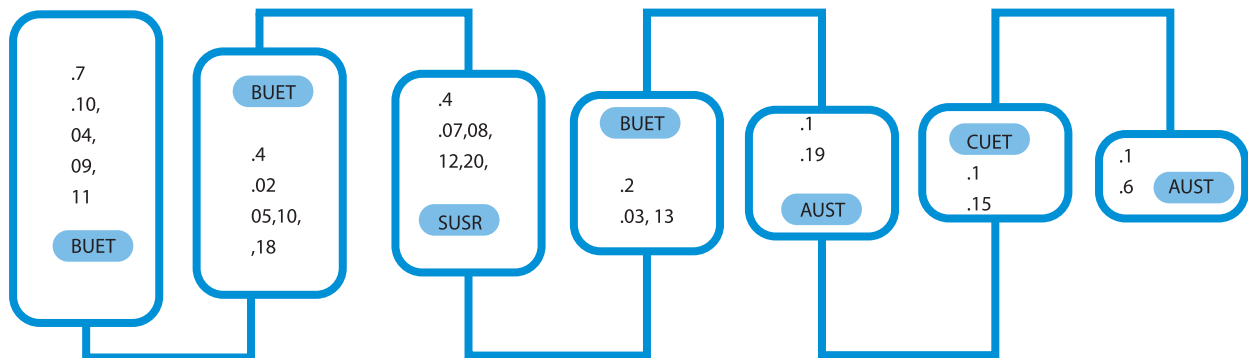
- ✓ 03 teams solved 08 problems
- ✓ 03 teams solved 07 problems
- ✓ 11 teams solved 06 problems
- ✓ 15 teams solved 05 problems
- ✓ 78 teams solved 04 problems
- ✓ 81 teams solved 03 problems
- ✓ 107 teams solved 02 problems
- ✓ 351 teams solved 01 problem

From the 8 challenging problems the most solved problem was the Problem No A: " Solving != Coding". A total of 663 teams were able to solve this problem. The problem was solved within the first 2 minutes by both "NSU Shinobia" and "DU Neuromancer" teams. The lowest solved problem was Problem No D: "National Treasure". It was first solved by "BUET Onion" team in 195 minutes of the contest. This problem was solved 11 times. The timeline of the problem solving according to the problems is demonstrated here:

NSU Shinobia DU Neuromancer

A: Solving != Coding

663 | 2 mins

NSU Shinobia

B: Triangle in Triangle

218 | 24 mins

IU_Vutopurbo

C: Movie Show

343 | 14 mins

BUET_Onion

D: National Treasure

11 | 195 mins

BUET_Onion

E: Date Puzzle

428 | 16mins

DU Avenger

F: Coin Change

69 | 59 mins

BUET Onion

G: Teh Tri Wizard Tournament

14 | 124 mins

BUET Onion

H: Fallen Chomp

132 | 60 mins

LEGEND

TEAM NAME

Problem

Number of TEAMS solved the Problem

Time Taken

The teams from BUET occupied 7 different positions from the first 20 highest scoring teams which was the highest number of positions secured by any single institute. The institutes who won the first twenty positions are shown here:

Discussion:

The Online contest created huge enthusiasm among the contestants of the country. For the first time, 775 teams have participated in the online contest from 70 different institutes at Dhaka regional event. The contestants, despite their interest and drives, are yet to unleash their potentiality in problem solving skill due to lack of enough exercise and problem solving technique. The continuation of the online contest culture needs to be in consistent to exceed the landmark of 1000 plus teams.

Recommendations:

Based on the experience and observations of the preliminary contests, the recommendations are:
1. Students should be familiar with contest environment from the very beginning of their undergraduate study.
2. Faculty members who teach programming language should encourage students in participating programming contest.
3. Students should nurture their honesty whilst attending contest to unlock their hidden treasure of potentiality and team work skills.

Acknowledgements:

>> Shahriar Manzoor, Southeast University
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Co-Judging Director of ACM-ICPC Dhaka 2014.
>> All the internal and external Judges
>> All Committee members
>> Volunteers

Programme Time Schedule

December 04, Thursday - Accommodation				
Start		End	Description	Location
15:30		16:30	Registration & Room Allocation for Accommodation	BUBT Reception

December 05, Friday - Registration and Mock Contest				
Start		End	Description	Location
08:30		09:45	Team Registration for contest	BUBT Premises
10:00		11:00	ACM-ICPC Opening Ceremony	BUBT Premises
11:00		13:00	2014 ACM-ICPC Asia Regional Dhaka Site Mock Contest	New Bulding
12:30		13:30	Photo Session on the Contest area	New Bulding
13:00		14:30	Prayer and Lunch Break	
14:30		17:30	Indoor Games	Student Common Room
15:00		19:30	Cultural Program	BUBT Premises
19:00		20:00	Travel To Hotel	BUBT Gate

December 06, Saturday - Onsite Contest and Closing Ceremony				
Start		End	Description	Location
07:45		08:20	Entrance of the Contestants to the contest Venue	New Bulding
08:30		13:30	2014 ACM-ICPC Asia Regional Dhaka Site Onsite Contest	New Bulding
08:30		12:30	ACM-ICPC Broadcast for coaches	Student Common Room
12:30		13:30	Lunch for Coaches	Student Common Room
13:30		15:30	Transportation from BUBT to Dhaka Botanical Garden & National Zoo Transportation Time table will be posted in front of the Transport Desk	BUBT Gate
13:45		16:45	Visiting Botanical Garden and National Zoo	
15:00		17:15	Transportation from Dhaka Botanical Garden and National Zoo to BUBT	Botanical Garden Gate
15:00		17:30	Fun Events & Indoor Games for Contestants	BUBT Premises
17:30		19:30	2014 ACM-ICPC Asia Regional Dhaka Site Closing Ceremony	BUBT Premises
19:30		21:00	Celebration with Dinner	BUBT Premises

ACHIEVEMENTS

BUBT Secured 6th Position in ACM ICPC,
Asia Amritapuri Regional Contest 2011
Hosted by: Amrita University, Kerala, India

Our Other Achievements:

- 4th position according to University wise ranking in National Collegiate Programming Contest (NCPC) 2011, Hosted by University of Dhaka
- 1st position among all Private Universities in National Collegiate Programming Contest (NCPC) 2011, Hosted by University of Dhaka
- 1st position among all Private Universities in ACM ICPC-2011 Dhaka Site, Hosted by North South University