8th International Abilympics Vocational Skills Contest

V11. Computer Programming

1. Task Assignment

Develop a system for a university academic administration affairs using Windows application program. The following processing terms must be fulfilled. In addition, contestants should freely develop unspecified parts by showing their creativity.

1) Processing Terms

   a) Users should be able to add, delete, modify and search data.

   b) File structure of database should be designed and developed along with the data.

   c) Table structures should include fields marked as *, and other fields may be added optionally.

   d) The size and type of the file structure may be specified by the contestants, to suit the task.

   - Table structure for student management

     *Student No., *Name, *Year of entrance, *ID, password, *Date of birth, e-mail, *Phone No., Address, etc.

   - Table structure for class management

     *Student No., Year of attending, Semester, Course code, Name of course, Classification (major requirements, electives, etc.), Professor, Meets (date), Class time, Classroom, Credit, etc.

   - Table structure for grade management

     *Student No., Year of attending, Semester, Course code, Name of course, Classification (major requirements, electives, etc.), *Points, *Grade, *GPA, etc.

e) Criteria for Grade

Points	Grade	Points	Grade
0 - 59	F	80 - 84	B0
60 - 64	D0	85 - 89	B+
65 - 69	D+	90 - 94	A0
70 - 74	C0	95 -100	A+
75 - 79	C+		

f) Criteria for GPA

Grade	GPA	Grade	GPA
F	0.0	B0	3.0
D0	1.0	B+	3.5
D+	1.5	A0	4.0
C0	2.0	A+	4.5
C+	2.5		

2. Allocated Time

5 Hours

3. Requirements

(a) Contestants will not be producing the same results of the task, and shall be evaluated on their ability to solve problems. They shall establish various functions of work processes and shall develop a user-friendly program.

(b) Contestants shall install and confirm the materials on the "List of Tools to be Brought" and facilities on the "List of Facilities Installed at Contest site" 30 minutes before the contest.

(c) If contestants who wish to bring personal software needs more than 30 minutes for installing, they shall receive the judges' approval and install before the contest.

(d) Use the contestant number to create a folder on the desk top screen, and save the program.

(e) Contestants are recommended to save their data regularly to prevent any data loss in case of blackouts or system malfunctions.

   * Contestants are responsible for any disadvantages gained due to their irresponsibility of not saving the program or mistakes in operating the system.

(f) Contestants who are finished with the task must receive confirmation of the submitted time from judge and run the program themselves.

(g) Contestants who wish to bring tools other than the ones on the "list of tools to be brought" shall notify the judges for approval in advance. However, the judges may ban the use of any tools that are considered to give the contestant an unfair advantage.

4. List of Materials to be Provided

No.	Material	Picture	Specification	Unit	Qty per person	Qty for joint-use	Note
1	USB storage device		4GB	Each	1		
2	Paper		A4	Sheet		300	

5. List of Tools to be Brought

No.	Tool	Picture	Specification	Unit	Qty	Note
1	Software			Copy	1	If needed
2	Voice card			Each	1	If needed

Contestants may bring a different software other than the one specified in the 'List of Tools to be Brought'. However, contestants must present it to the judges for approval in advance.

6. List of Facilities Installed at Contest Site

No.	Equipment	Picture	Specification	Unit	Qty	Note
1	Personal computer		Core i5 3.2G, 2G RAM, 320G HDD OS: Windows 7	Each	1 per contestant	

No.	Equipment	Picture	Specification	Unit	Qty	Note
2	Monitor		19″ LCD	Each	1 per contestant	
3	Computer desk		1,400mm x 750mm	Each	1 per contestant	
4	Chair		General	Each	1 per contestant	
5	Software		Visual studio 2010 (Visual basic, Visual C++)	Copy	1 per contestant	
6	Software		MS-Office 2007 (ACCESS, WORD)	Copy	1 per contestant	
7	Laser printer		For printing A4	Each	1	Joint-use
8	Desk, chair		1400mm x 750mm	Set	1 per judge	
9	Extension cord		For operating computer	Each	1 per contestant	
10	Pen (Black, Blue, Red)			Each	3	For evaluation

7. Evaluation Criteria

No.	Main Items to be Evaluated	Marks
1	Data Modeling (db interworking, relation diagram)	10
2	Degree of Program Completion (processing terms & solving of presented matter)	45
3	Function Efficiency (creativity, etc.)	20
4	User convenience	10
5	Design, composition and alignment	15
	Total	100