KISI-KISI

BIDANG LOMBA :

IT/SOFTWARE APPLICATION

1. TECHNICAL/COMPETITION DESCRIPTION (TD)

This competition is designed to test specialist users of software applications. The skill involves the ability to:

o Analyze system using database modeling tools and techniques with Entity Relationship Diagram (ERD)

o Use investigation and learning skills to obtain user requirements (e.g., document search and analysis)

o Write a method given the desired behavior (inputs, outputs, pre-conditions and post-conditions).

o Use latest available integrated development environments and identify the strengths and weaknesses of each in software development

o Search for, evaluate and integrate appropriate libraries and frameworks into the software being developed

o Construct database structure and data dictionary

o Use the functionality of the .NET environment to develop the software solution according to requirements specifications

o Use the full potential of SQL Server to store and manage the data for the system to be developed

o Demonstrating the software solution developed to solve sample of business case given

o Presenting the software solution developed in front of the clients to give functional overview of the software.

Generally, those skills are divided into five major module of skill test:

Module	Software
Database Creation and Main Form Development	Microsoft Visual Studio Express Edition 2013, Server Management Studio 2014, and SQL server 2014
Master Form Development	Microsoft Visual Studio Express Edition 2013, Server Management Studio 2014, and SQL server 2014
Transaction Form Development	Microsoft Visual Studio Express Edition 2013, Server Management Studio 2014, and SQL server 2014
ERD Design and Data Dictionary	Microsoft Visio 2013 and Microsoft Office Excel 2013
Application Presentation and Demonstration	Microsoft Office PowerPoint 2013

2. DETAIL COMPETITION MATERIAL

Detail material of each module will be explained in this section.

2.1 Database Creation and Main Form Development
· Creating physical model of the database
  o All entities are translated into database objects as instructed in the test project
  o Define the relationship between the entities
  o All the constraint required are implemented to support the system
· Creating Application Main Form
  o Login Form work using existing user data and roles
  o Navigation Form to navigate between form
  o Information Form can show instructed information
  o Showing media on application such as picture / video files
  o Creating Captcha on Registration Form

2.2 Master Form Development
· All master form developed can support the business process flow required in the test project
· Database query and connection are working correctly
  o creating connection between application and the database
  o query to display data
  o query to insert data
  o query to update data
  o query to delete data
  o query to search data
· Downloading and Uploading Files to the Application
· Date and Time Validation
· Timer Function

2.3 Transaction Form Development
· All transaction form developed can support the business process flow required in the test project
· Database query and connection are working correctly
  o creating connection between application and the database
  o query to display data
  o query to insert data
  o query to update data
  o query to delete data
  o query to search data
· Programming logic to solve given requirements
· Downloading and Uploading Files to the Application
· Date and Time Validation
· Timer Function
· Auto-searching on Data Tables from text boxes input

2.4 ERD Design and Data Dictionary

· Solve the given case by designing Entity Relationship Diagram (ERD)
· Relationship defining every two participating entities
· Attributes defining the properties of entities
· Cardinality defining number of instance of an entity from a relation that can be associated with the relation
· Providing the Data Dictionary to complement ERD developed.

2.5 Application Presentation and Demonstration

· Opening of the presentation
· Presentation content
· Application demonstration using sample business case
· Communication skills
· Time management

3. COMPETITION SCENARIO

3.1 Opening Day

· Welcome Ceremony
· Technical Briefing
  1. Explanation of Competition rules
  2. Explanation of technical description
  3. Test Project Overview Explanation
  4. Marking Schema
  5. Competitor working place's arrangement
· Familiarization
  1. Hardware PC Client & PC SERVER checking
  2. Software checking
  3. Competition working place checking

3.2 Competition Day 1

No	Schedule	Activity
1.	08:00 – 08.30	Case Explanation
2.	08:30 – 11:30	Database Creation and Main Form Development
3.	11:30 – 12:30	Break and Submission
4.	12:30 – 13:00	Case Explanation
5.	13:00 – 16:00	Master Form Development

3.3 Competition Day 2

No	Schedule	Activity
1.	08:00 – 08.30	Case Explanation
2.	08:30 – 11:30	Transaction Form Development
3.	11:30 – 12:30	Break and Submission
4.	12:30 – 13:00	Case Explanation
5.	13:00 – 16:00	ERD Design and Data Dictionary

3.4 Competition Day 3

No	Schedule	Activity
1.	08:00 – 09.00	Presentation Preparation
2.	09:00 – 11:30	Application Presentation and Demonstration
3.	11:30 – 12:30	Break
4.	12:30 – 15:00	Application Presentation and Demonstration (cont.)

4. MARKING GUIDELINE

o Marking will be done after each module finished
o Competitor that is capable to finish current module before submission time are permitted to start the next module.
o Competitors are not allowed to revise the submitted module after the submission time.
o Competitors are not allowed to bring any electronic and printed material to competition area.
o Jury is checking based on given check list. One checklist may contain more than one marking components. Missing or incorrect result on one of those components will be assumed as wrong answer.
o Marking Percentage :
  o Database Creation and Main Form Development : 20%
  o Master Form Development : 20%
  o Transaction Form Development : 25%
  o ERD Design and Data Dictionary : 20%
  o Application Presentation and Demonstration : 15%

5. FACILITIES

5.1 Hardware

The following machines and equipment will be   available to each made competitor:

o Computer for each competitor:
   - o Intel Core i7 4790, 3.6 Ghz up to 4.0 Ghz,
   - o LAN Card, VGA Card min 512 MB
   - o Network capabilities of 100Mbps
   - o Keyboard, Mouse USB
   - o Hard disk 1 TB SATA 7200 RPM
   - o RAM Memory 4 GB DDR3
   - o Monitor LCD with minimum 18.5"
o File Server
o CD/DVD Writer
o Blank DVD-RW o
UPS 10 KW
o Document holder and stationary

5.2 Software

The software used by competitors will be representative of widely accepted International software and may represent several software producers. One important aspect will be the integration potential between the various types of software. This will require a careful check but software of the following kind will be required for each computer system:

o Visual Studio Express Edition 2013
o Microsoft Office Professional 2013
o Microsoft SQL Server Express Edition 2014
o Microsoft SQL Server Management Studio Express 2014
o Microsoft Visio Standard 2013
o PDF Reader
o .(dot) net framework 3.5 and 4.0

SOAL

BIDANG LOMBA :

IT/SOFTWARE APPLICATION

PROJECT OVERVIEW

In this Test Project, you are required to develop an information system following the requirement given on the Test Project. In general, there will be 4 project resources given to you, which is:

1. **ERD and Data Dictionary for Test Project**

   This will be used to guide you to create the database files. Ensure that all entities created on the database are related with the given ERD, following the relationship and also the criteria in Data Dictionary for each entity!

2. **Navigation Diagram for the Application**

   Use the Navigation Diagram to develop the form interaction inside the application. You are free to add new interaction between forms, without neglecting the defined interaction in this diagram.

3. **Example Design (Wireframe) of desired Information System**

   This file is used to give you design guidelines of all required forms. Please note that your form designs are not limited to these examples!
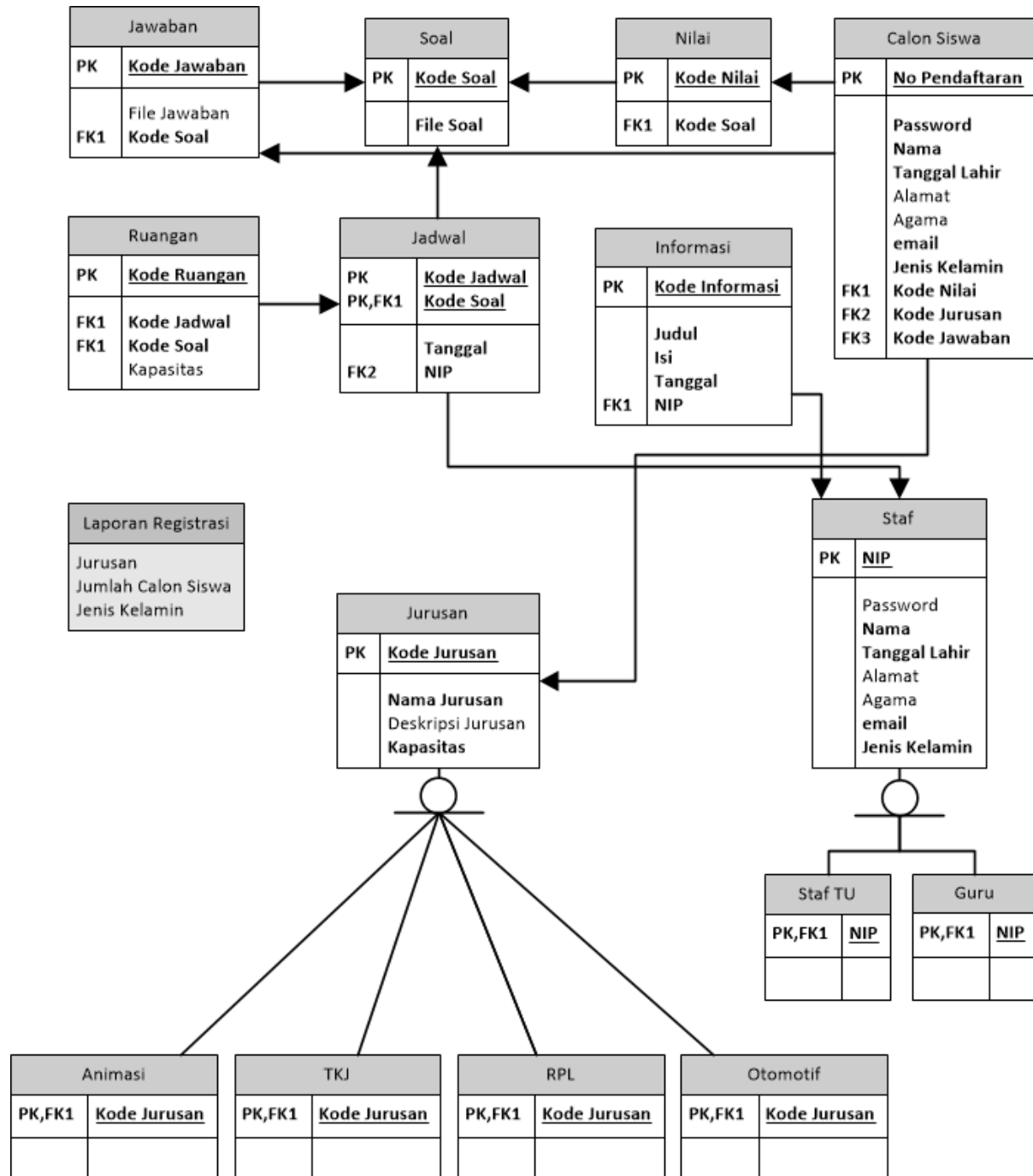
4. **Data files (*if any*)**

   The data files will be used to support you test and develop the information system on each module. Please use this data files in the development, you are allowed to use another resources outside the given data files only if instructed in the module.

SMK NUSANTARA INFORMATION SYSTEM

ENTITY RELATIONSHIP DIAGRAM

(EXAMPLE)

Jawaban

PK	Kode Jawaban
FK1	File Jawaban Kode Soal

Soal

PK	Kode Soal
	File Soal

Nilai

PK	Kode Nilai
FK1	Kode Soal

Calon Siswa

PK	No Pendaftaran
	Password Nama Tanggal Lahir Alamat Agama email Jenis Kelamin
FK1	Kode Nilai
FK2	Kode Jurusan
FK3	Kode Jawaban

Ruangan

PK	Kode Ruangan
FK1	Kode Jadwal
FK1	Kode Soal
	Kapasitas

Jadwal

PK	Kode Jadwal
PK,FK1	Kode Soal
	Tanggal
FK2	NIP

Informasi

PK	Kode Informasi
	Judul Isi Tanggal
FK1	NIP

Laporan Registrasi

Jurusan
Jumlah Calon Siswa
Jenis Kelamin

Jurusan

PK	Kode Jurusan
	Nama Jurusan Deskripsi Jurusan Kapasitas

Staf

PK	NIP
	Password Nama Tanggal Lahir Alamat Agama email Jenis Kelamin

Staf TU

PK,FK1	NIP

Guru

PK,FK1	NIP

Animasi

PK,FK1	Kode Jurusan

TKJ

PK,FK1	Kode Jurusan

RPL

PK,FK1	Kode Jurusan

Otomotif

PK,FK1	Kode Jurusan

SMK NUSANTARA INFORMATION SYSTEM

DATA DICTIONARY

(EXAMPLE)

Tabel	KEY	Kolom	Tipe Data	Required?	Notes
Jawaban	PK	Kode Jawaban	INTEGER	Y	Auto Increment
		File Jawaban	ATTACHMENT	Y	
	FK	Kode Soal	INTEGER	Y	
Soal	PK	Kode Soal	INTEGER	Y	Auto Increment
		File Soal	ATTACHMENT		
Nilai	PK	Kode Nilai	INTEGER	Y	Auto Increment
	FK	Kode Soal	INTEGER	Y	
Calon Siswa	PK	No Pendaftaran	INTEGER	Y	Auto Increment
		Password	CHAR(10)	Y	Minimal 4 huruf
		Nama	VARCHAR(50)	Y	
		Tanggal Lahir	DATETIME	Y	
		Alamat	VARCHAR(100)		
		Agama	CHAR(10)		
		email	CHAR(10)	Y	
		Jenis Kelamin	CHAR(10)	Y	
	FK	Kode Nilai	INTEGER	Y	
	FK	Kode Jurusan	INTEGER	Y	
	FK	Kode Jawaban	INTEGER	Y	
Ruangan	PK	Kode Ruangan	INTEGER	Y	Auto Increment
	FK	Kode Jadwal	INTEGER	Y	
	FK	Kode Soal	INTEGER	Y	
		Kapasitas	INTEGER		
Jadwal	PK	Kode Jadwal	INTEGER	Y	Auto Increment
	PK, FK	Kode Soal	INTEGER	Y	
		Tanggal	DATETIME	Y	
	FK	NIP	INTEGER	Y	
Informasi	PK	Kode Informasi	INTEGER	Y	Auto Increment
		Judul	VARCHAR(50)	Y	
		Isi	VARCHAR(1000)	Y	
		Tanggal	DATETIME	Y	
	FK	NIP	INTEGER	Y	

Tabel	KEY	Kolom	Tipe Data	Required?	Notes
Staf	PK	NIP	INTEGER	Y	Auto Increment
		Password	CHAR(10)	Y	Minimal 4 huruf
		Nama	CHAR(10)	Y	
		Tanggal Lahir	DATETIME	Y	
		Alamat	VARCHAR(100)	Y	
		Agama	CHAR(10)		
		email	CHAR(20)	Y	
		Jenis Kelamin	CHAR(10)	Y	
Jurusan	PK	Kode Jurusan	INTEGER	Y	Auto Increment
		Nama Jurusan	CHAR(20)	Y	
		Deskripsi Jurusan	VARCHAR(600)		
		Kapasitas	INTEGER	Y	
TKJ	PK, FK	Kode Jurusan	INTEGER	Y	
RPL	PK, FK	Kode Jurusan	INTEGER	Y	
Animasi	PK, FK	Kode Jurusan	INTEGER	Y	
Otomotif	PK, FK	Kode Jurusan	INTEGER	Y	
Guru	PK, FK	NIP	INTEGER	Y	
Staf TU	PK, FK	NIP	INTEGER	Y	

SMK NUSANTARA INFORMATION SYSTEM

NAVIGATION DIAGRAM

(EXAMPLE)

```
                              13                    12
                         View Test Result      View Test Result
                             Graphic                 Form


            08                    10                    11
         Exam Case          Teacher Navigation     Exam Evaluation
       Download Form             Form                  Form                                    15
                                                                                            Employee
                                                                                         Management Form


                                                                                              16
                                                                                          Study Program
                                                                                         Management Form

            09                    07                    06                    14               17
     View Individual Test    Student Navigation     Login Form          Staff Navigation   Applicant / Student
        Result Form              Form                                        Form          Management Form


                                                                                              18
                                                                                            Account
                                                                                         Management Form

                                                                              20
                                  04                    01               Student Exam
                           Student Registration     Main Form          Allocation Form        19
                                  Form                                                     Exam Management
                                                                                              Form

                                  05                    02                    03
                             Registration         School Information   Detailed Info for
                           Confirmation Form           Form            Each Study Program
                                                                            Form
```
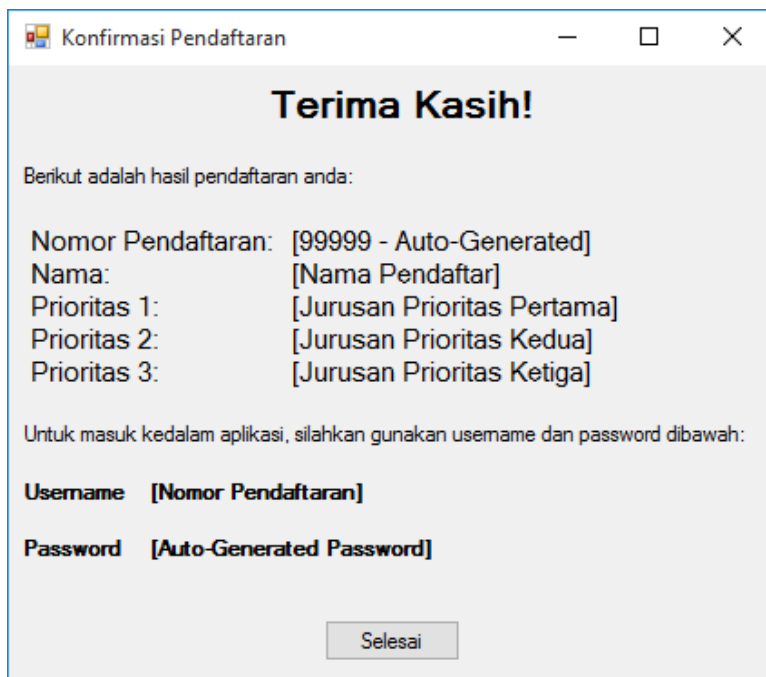
01 Main Form

02 School Information Form

03 Detailed Info for Each Study Program Form

04 Student Registration Form

05 Registration Confirmation Form

Konfirmasi Pendaftaran   — ☐ ✕

Terima Kasih!

Berikut adalah hasil pendaftaran anda:
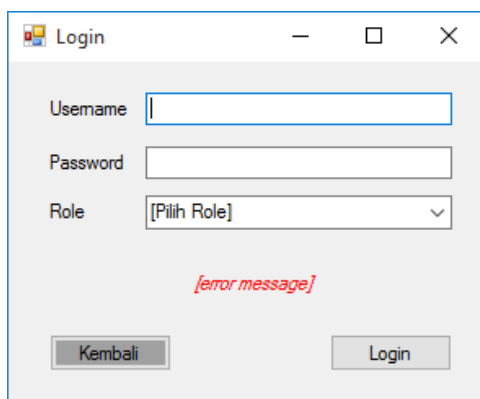
Nomor Pendaftaran: [99999 - Auto-Generated]
Nama: [Nama Pendaftar]
Prioritas 1:   [Jurusan Prioritas Pertama]
Prioritas 2:   [Jurusan Prioritas Kedua]
Prioritas 3:   [Jurusan Prioritas Ketiga]

Untuk masuk kedalam aplikasi, silahkan gunakan username dan password dibawah:

Username   [Nomor Pendaftaran]

Password   [Auto-Generated Password]
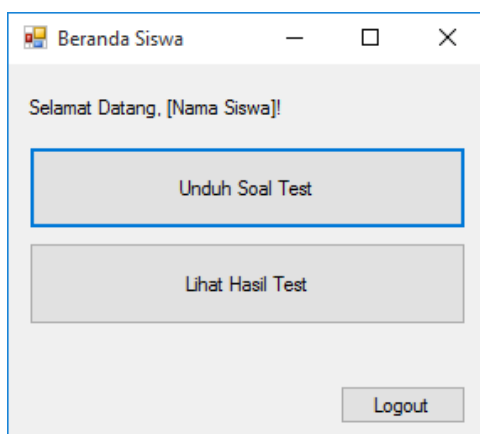
[Selesai]

06 Login Form

Login   — ☐ ✕

Username [   ]

Password [   ]

Role   [Pilih Role]   ▾

[error message]

[Kembali]   [Login]

07 Student Navigation Form

Beranda Siswa   — ☐ ✕
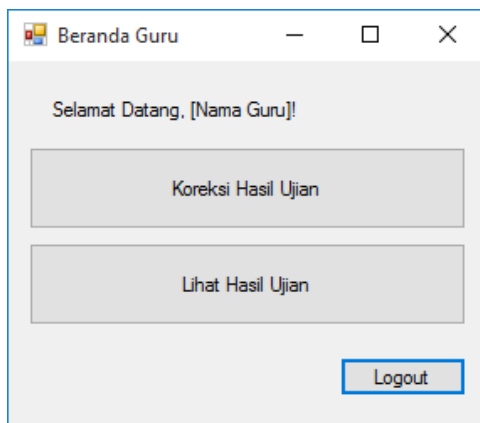
Selamat Datang, [Nama Siswa]!

[Unduh Soal Test]

[Lihat Hasil Test]

[Logout]

10 Teacher Navigation Form

Beranda Guru — □ ×
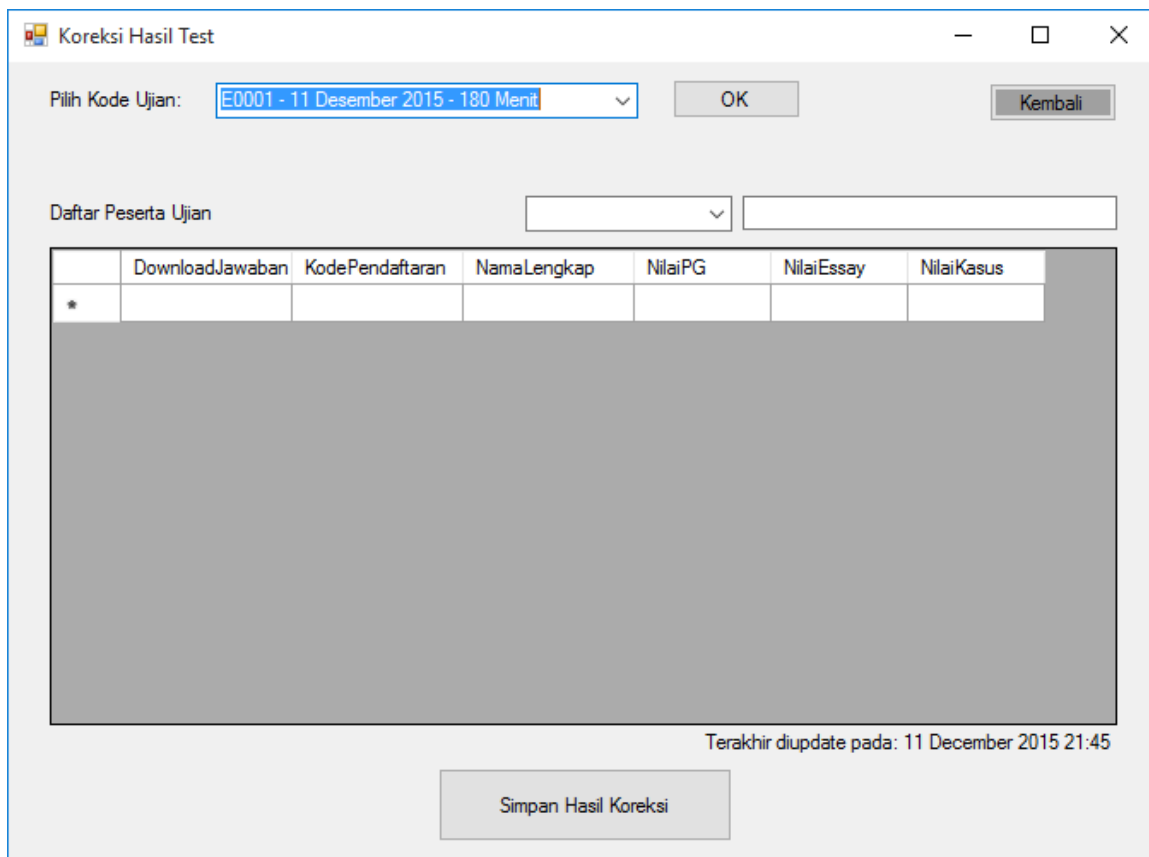
Selamat Datang, [Nama Guru]!

Koreksi Hasil Ujian

Lihat Hasil Ujian

Logout

11 Exam Evaluation Form

Koreksi Hasil Test — □ ×

Pilih Kode Ujian: `E0001 - 11 Desember 2015 - 180 Menit` ∨   OK   Kembali

Daftar Peserta Ujian

	DownloadJawaban	KodePendaftaran	NamaLengkap	NilaiPG	NilaiEssay	NilaiKasus	
*							

Terakhir diupdate pada: 11 December 2015 21:45

Simpan Hasil Koreksi

14 Staff Navigation Form

Beranda Karyawan   — ☐ ✕

Selamat Datang, [Nama Karyawan]!   [Logout]

Manajemen Master Data

[Karyawan dan Guru]

[Calon Siswa]

[Jurusan]

[Jadwal Ujian]

[User Acount]

Manajemen Ujian

[Alokasi Peserta Ujian]

[Koreksi Hasil Ujian]

[Laporan Hasil Ujian]

15 Employee Management Form

Manajemen Karyawan   — ☐ ✕

Cari Data   [⌄]   [ ]   [Cari]

Urutkan Data   [⌄]   ○ Ascending   ○ Descending   [Urutkan]

	KodeKaryawan	NIP	NamaKaryawan	TanggalLahir	JenisKelamin	NoTele
▶*						

Kode Karyawan   K0001   [Tambah Data]

NIP   0931011992101   [Perbarui Data]

Nama Karyawan   Ronald Ang   [Simpan]

Tanggal Lahir   Friday , December 11, 2015 ▦▾   [Hapus Data]

Jenis Kelamin   ◉ Laki-Laki ○ Perempuan

No. Telepon   087809123245   [Kembali]

Alamat   Jl. Jalur Sutera Barat, No. 19

17 Applicants / Student Management Form

Manajemen Calon Siswa — □ ✕

Cari Data [⌄] [   ] [Cari]

Urutkan Data [⌄] ○ Ascending ○ Descending [Urutkan]

	KodePendaftaran	NamaLengkap	TanggalLahir	JenisKelamin	NoTelepon	Alamat
▶*						

Kode Pendaftaran [00001]   [Perbarui Data]

Nama Lengkap [Ferdi Surya]   [Simpan]

Alamat [Jl. Kemanggisan IV. No. 23]   [Hapus Data]

Tanggal Lahir [Friday   , December 11, 2015   ⏷]

No. Telepon [082113255002]   [Kembali]

Jenis Kelamin   ◉ Laki-Laki   ○ Perempuan

Asal Sekolah [SMP Nasional 1]

Tgl Pendaftaran [Friday   , December 11, 2015   ⏷]

Pilihan Jurusan

Prioritas 1 [Rekayasa Piranti Lunak   ⌄]

Prioritas 2 [Teknik Komputer dan Jaringan   ⌄]

Prioritas 3 [Animasi   ⌄]

Status Test Masuk

[Lulus]

[Tidak Lulus]

[Belum Ujian]

19 Exam Management Form

THE DEVELOPMENT OF

SMK NUSANTARA INFORMATION SYSTEM

SMK NUSANTARA is one of Indonesia famous vocational school located in Malang, East Java. As the school growth, the Headmaster thinks it is the time to use Information System to support their business process, starting from student registration process. After hiring famous consultant to analyze and design the system, it is the time to develop the system.

Based on the system design given to you, you're required to develop Information system to support the business process of student registration for SMK Nusantara. Ensure your developed solutions can accommodate SMK Nusantara business process properly, following the instruction on the project!

Module 1: Database Creation and Main Form Development

1. **Create the Database**

   Create a database using your MS SQL Server on the local database server following the ERD and Data Dictionary given to you.

2. **Insert the Data**

   Insert the master data given to you on file "*master-data.xlsx*" to the related table on your newly created database.

3. **Create Application**

   Create an application using your preferred platform (C# or Visual Basic.NET).

4. **Create "01 Main Form"**

   Create the main menu of the application as outlined in "**01 Main Form**" in the wireframe.

5. **Create "02 School Information Form"**

   Create the main menu of the application as outlined in "**02 School Information Form**" in the wireframe.

6. **Create "03 Detailed Info for Each Study Program Form"**

   Create the main menu of the application as outlined in "**03 Detailed Info for Each Study Program Form**" in the wireframe.

7. **Create "04 Student Registration Form"**

   Create the main menu of the application as outlined in "**04 Student Registration Form**" in the wireframe.

8. **Create "05 Registration Confirmation Form"**

   Create the main menu of the application as outlined in "**05 Registration Confirmation Form**" in the wireframe.

9. **Create "06 Login Form"**

   Create the main menu of the application as outlined in "**06 Login Form**" in the wireframe.

10. **Create "07 Student Navigation Form"**

    Create the main menu of the application as outlined in "**07 Student Navigation Form**" in the wireframe.

11. **Create "10 Teacher Navigation Form"**

    Create the main menu of the application as outlined in "**10 Teacher Navigation Form**" in the wireframe.

12. **Create "14 Staff Navigation Form"**

    Create the main menu of the application as outlined in "**14 Staff Navigation Form**" in the wireframe.

Module 2: Master Form Development

1. **Create "15 Employee Management Form"**

   Create the main menu of the application as outlined in "**15 Employee Management Form**" in the wireframe.

2. **Create "17 Applicant / Student Management Form"**

   Create the main menu of the application as outlined in "**17 Applicant / Student Management Form**" in the wireframe.

3. **Create "19 Exam Management Form"**

   Create the main menu of the application as outlined in "**19 Exam Management Form**" in the wireframe.

Module 3: Transaction Form Development

1. **Create "11 Exam Evaluation Form"**

   Create the main menu of the application as outlined in "**01 Main Form**" in the wireframe.

Module 4: ERD Design and Data Dictionary

SMK Nusantara is going to continue the development of their Information System to support another business process of the school. The next phases are going to develop the system for Allocating Student Class.

Usually, all students are allocated to their class by considering the Entrance Exam Score to group them to these following classes:

1. Global Class, which all lecturing activity will be conducted in English, this class is suited for all students who got TOEFL score higher than 550 and having Entrance Exam Score higher than 90.

2. High Achiever Class, suited for all students who got Entrance Exam Score higher than 80.

3. Normal Class, suited for all students who do not meet the criteria for Global and High Achiever Class.

Another thing to analyze, all class will have one home-class teacher; each teacher can become home-class teacher in one class only.

Giving the simple constraint above, please design the ERD and Data Dictionary to support Student Class Allocation in SMK Nusantara. Please refer to existing ERD and Data Dictionary to develop your design solutions.

Module 5: Application Presentation and Demonstration

On the last module of the project, you have to conduct presentation and application demonstration to the Headmaster, **showing all jobs that you already done emphasizing the ERD and Data Dictionary you design** to support the next development phase of SMK Nusantara Information System. Please take notes to these following criteria to prepare your presentation:

1. Opening of Presentation should be clear and focused on what you going to present
2. Presentation content should be clear, precise, and detailed, to explain the function of information system developed
3. Application demonstration should be able clear and well structured.
4. The ERD and Data Dictionary you develop in 4th Module should be able to solve sample business case.
5. Communication skills, showing good presentation technique and conducted in Bahasa
6. Time management, you only given 10 minutes to present and demonstrate your application
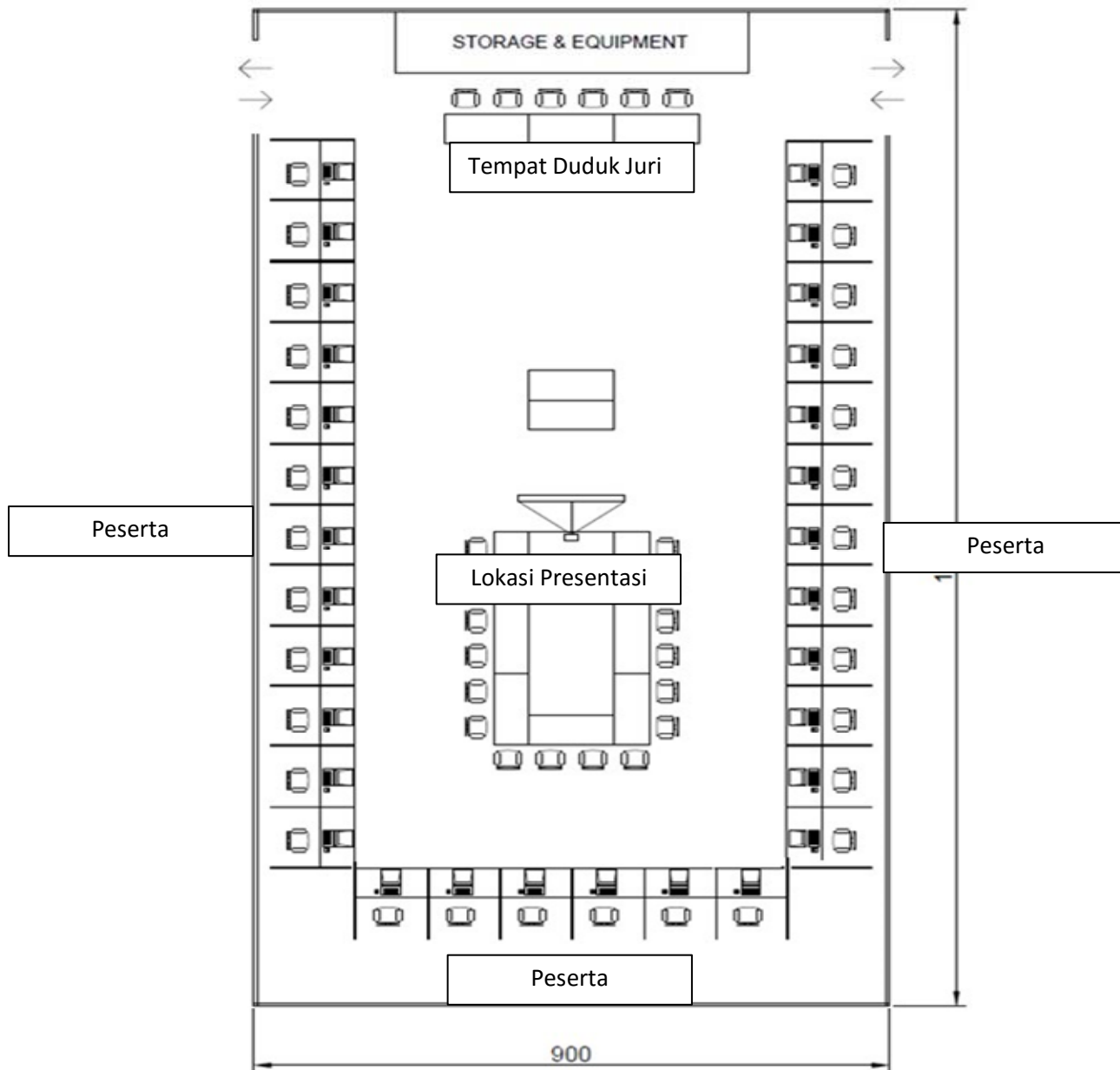
LAY OUT

BIDANG LOMBA :

IT/SOFTWARE APPLICATION

LAYOUT RUANGAN LOMBA
INFORMATION TECHNOLOGY / SOFTWARE APPLICATION
LKS XXIV – 2016

STORAGE & EQUIPMENT

Tempat Duduk Juri

Peserta

Lokasi Presentasi

Peserta

Peserta

900

Bogor, 11 Desember 2015

Penyusun 1   Penyusun 2

Mahenda Metta Surya   Dawam Dwi Jatmiko Suwawi

FORMAT PENILAIAN

BIDANG LOMBA :

IT/SOFTWARE APPLICATION

FORMAT PENILAIAN
INFORMATION TECHNOLOGY / SOFTWARE APPLICATION
LKS XXIV - 2016

1. ASSESSMENT CRITERIA

Section	Criterion	Marks		
		Subjective	Objective	Total
A	Database Creation and Main Form Development	0	20	20
B	Master Form Development	0	20	20
C	Transaction Form Development	0	25	25
D	ERD Design and Data Dictionary	0	20	20
E	Application Presentation and Demonstration	15	0	15
Total		**15**	**85**	**100**

2. SUBJECTIVE MARKING
   Scores are awarded on a scale of 1 to 10.

3. SKILL ASSESSMENT SPECIFICATION

Type	Example	Maximum Points	Correct	Not Correct
Full Point or Zero Points	The pie chart shows data labels as precentages	0.2	0.2	0
Deduct from full points on a predetermined sliding scale	Report is formatted as speciffied (deduct 0.1 mark from each error)	0.5	0.5	0-0.4
Add to zero point on a predetermined progressive scale	Solver criteria specified correctly (add 0.1 mark for each criterion)	1	1	0.1-0.9

Bogor, 11 Desember 2015
Penyusun 1   Penyusun 2

Mahenda Metta Surya   Dawam Dwi Jatmiko Suwawi

PENILAIAN INDIVIDU PESERTA
LOMBA KETERAMPILAN SISWA (LKS) SMK XXIV TAHUN 2016

BIDANG LOMBA: Information Technology / Software Application

Nama Peserta	Asal SMK	Provinsi	Nilai					Total Nilai
			Modul 1	Modul 2	Modul 3	Modul 4	Modul 5	

Penyusun 1

Bogor,11 Desember 2015
Penyusun 2

Mahenda Metta Surya

Dawam Dwi Jatmiko Suwawi

LEMBAR INFORMASI

BIDANG LOMBA :

IT/SOFTWARE APPLICATION

I. Pendahuluan

Era globalisasi memberi dampak ganda yaitu di samping membuka kesempatan kerjasama yang seluas-luasnya antar negara, juga membuka persaingan yang semakin ketat dan tajam di segala bidang pekerjaan.

Untuk menghadapi tantangan tersebut di atas, maka Pemerintah Indonesia harus memperkuat daya saing dan keunggulan kompetitif di semua sektor dengan mengandalkan pada kualitas dan kemampuan sumber daya manusia dengan penguasaan teknologi dan manajemen. Untuk itu Pemerintah selalu berusaha menyiapkan tenaga kerja yang berkompeten dalam bidangnya masing-masing.

Penyelenggaraan Lomba Keterampilan Siswa (LKS) Tingkat Nasional ke-XXIV di Malang bagi siswa Sekolah Menengah Kejuruan (SMK) seluruh Indonesia adalah sebagai wujud nyata salah satu upaya dalam pengembangan sumber daya manusia yang dilakukan oleh Pemerintah melalui Direktorat Pembinaan SMK-Ditjen Pendidikan Menengah.

II. Tujuan

1. Mendorong SMK untuk meningkatkan kualitas pelaksanaan Kegiatan Belajar Mengajar (KBM) yang mengacu kepada Standar Keterampilan Kerja Nasional Indonesia (SKKNI) bidang keahlian komputer khususnya penggunaan aplikasi software office automation dengan lebih mahir.
2. Untuk memantau peta kualitas dan kemampuan SMK di seluruh Indonesia sesuai dengan Standar Keterampilan Kerja Nasional Indonesia (SKKNI) bidang keahlian komputer khususnya penggunaan aplikasi software office automation.
3. Mempromosikan Keterampilan siswa SMK bidang keahlian komputer khususnya penggunaan aplikasi software office automation kepada dunia industri sebagai calon pengguna tenaga kerja.
4. Memberikan kesempatan dan motivasi kepada siswa untuk berkompetisi secara positif, untuk menumbuhkan kebanggaan pada bidang keahlian yang ditekuninya, juga kebanggaan bagi sekolah dan daerah/provinsinya.

III. Peserta

Peserta adalah siswa SMK dengan kriteria sebagai berikut :
1. Warga Negara Kesatuan Republik Indonesia.
2. Tercatat Siswa Aktif SMK negeri atau Swasta program keahlian TI di Indonesia dalam tahun pelajaran 2016/2017.
3. Dinyatakan sebagai Pemenang LKS Tingkat Propinsi program keahlian TI – Software Application atau yang ditunjuk oleh Kepala Dinas Pendidikan Nasional di Propinsi sebagai peserta LKS tingkat Nasional ke-XXIV Tahun 2016 mewakili propinsi yang bersangkutan.
4. Setiap propinsi hanya dapat diwakili oleh 1 (satu) orang peserta.

IV. Materi Lomba

A. Lingkup Lomba

Jenis kegiatan yang dilombakan adalah meliputi :

1. Database Creation and Main Form Development
   Meliputi tes keterampilan dalam mentransformasikan ERD yang telah diberikan kedalam database dengan menggunakan SQL Server 2014 serta pengembangan aplikasi utama seperti form navigasi, form login, dan form informasi perusahaan menggunakan .net application (C# atau Visual Basic.net) (180 menit)

2. Master Form Development
   Meliputi tes keterampilan dalam mengembangkan aplikasi sesuai dengan permintaan soal yang telah diberikan, berkaitan dengan pengolahan master data menggunakan .net application (C# atau Visual Basic.net) (180 menit)

3. Transaction Form Development
   Meliputi tes keterampilan dalam mengembangkan aplikasi sesuai dengan permintaan soal yang telah diberikan, berkaitan dengan pengolahan transaksi-transaksi bisnis perusahaan menggunakan .net application (C# atau Visual Basic.net) (180 menit)

4. ERD Design and Data Dictionary
   Meliputi tes keterampilan menganalisa kasus yang diberikan untuk merancang ERD yang mendukung pengembangan proses bisnis pada soal menggunakan Microsoft Visio 2013, serta menyediakan kamus data sebagai pendukung ERD yang dikembangkan menggunakan Microsoft Office Excel 2013 (180 menit)

5. Application Presentation and Demonstration
   Meliputi tes keterampilan dalam mempresentasikan hasil sistem informasi yang telah dikembangkan, dengan memberikan simulasi bagaimana sistem informasi tersebut dapat memenuhi kebutuhan bisnis dari soal yang diberikan. Simulasi dilakukan dalam bentuk demo aplikasi dan presentasi hasil karya yang dikembangkan menggunakan Microsoft Office Powerpoint 2013 (300 menit)

B. Skor dan Bobot Penilaian

Skor maksimal dan bobot :
1. Database Creation and Main Form Development
   (skor maksimal 100, bobot 20%)……………………………….. N1
2. Master Form Development
   (skor maksimal 100, bobot 20%)…...................................N2
3. Transaction Form Development
   (skor maksimal 100, bobot 25%) N3
4. ERD Design and Data Dictionary
   (skor maksimal 100, bobot 20%) N4
5. Application Presentation and Demonstration
   (skor maksimal 100, bobot 15%)…..................................N5

Perhitungan Nilai Tes N1….N5 :

$$\text{Nilai Tes N1…N5} = \frac{\text{Skor Perolehan}}{\text{Skor maksimal}} \times \text{Bobot.}$$

$$\text{Nilai Akhir} = \sum(\text{Nilai Tes N1...N5})$$

C. Aspek-aspek Penilaian

C-1. Aspek yang dinilai untuk Tes Database Creation and Main Form Development adalah :
o Database Definition Language (DDL)
o Database Manipulation Language (DML)
o Validation
o Form Function
o Form Interaction

C-2. Aspek yang dinilai untuk Tes Master Form Development adalah:
o Validation
o Form Function
o Form Interaction
o Database Manipulation Language (DML)
o Master Data Processing

C-3. Aspek yang dinilai untuk Tes Transaction Form Development adalah :
o Validation
o Form Function
o Form Interaction
o Database Manipulation Language (DML)
o Transaction Processing

C-4. Aspek yang dinilai untuk Tes ERD Design and Data Dictionary adalah :
o Entity Relationship Diagram (ERD) Design
o Data Dictionary to complement ERD Design

C-5. Aspek yang dinilai untuk Tes Application Presentation and Demonstration adalah :
o Presentation Content
o Application Demonstration
o Time Management
o Communication Skills

V. Tim Penguji

Tim Juri terdiri dari 3 orang professional/praktisi/akademisi di bidang IT Software Application khususnya dalam perancangan dan pengembangan aplikasi.

VI. Kriteria Pemenang Lomba

Juara Lomba adalah peserta yang memiliki nilai akhir tertinggi dari seluruh nilai para peserta lomba. Nilai akan dibuat dalam distribusi yang telah ditetapkan di point **IV-B** untuk setiap modul dan hasil akhirnya akan di jumlahkan.
Para Juara ditentukan langsung oleh Juri meliputi: Juara I, II dan III, serta Juara Harapan I, II, dan III

VII. Tempat Lomba

Lomba akan dilaksanakan di Malang, Jawa Timur

VIII. Tata Tertib Lomba

Pembimbing diharapkan :
1. Mendampingi peserta pada saat 'technical meeting'.
2. Mengisi daftar hadir yang disediakan Panitia.
3. Menjaga ketertiban dan ketenangan dalam pelaksanaan lomba.
4. Membantu peserta yang dibimbingnya apabila terjadi gangguan kesehatan.
5. Tidak membantu peserta pada saat lomba berlangsung.

Peserta diharapkan :

a. Hanya satu orang yang menjadi peserta mewakili propinsi dengan Surat Penunjukkan dari Dinas Pendidikan Propinsi. Tidak dibenarkan peserta diganti di saat tengah lomba berlangsung.
b. Peserta harus hadir pada saat 'technical meeting'.
c. Peserta harus sudah hadir 15 menit sebelum test dimulai.
d. Wajib mengisi daftar hadir pada saat setiap jenis lomba yang diadakan.
e. Berpakaian kerja yang rapi, diharapkan hanya memakai identitas nomor peserta dari panitia.
f. Tidak diperbolehkan membawa buku/catatan/HP di ruang ujian.
g. Untuk alasan kesehatan peserta diperbolehkan membawa makanan kecil dan minuman ke dalam ruang ujian.
h. Penentuan nomor peserta dilakukan melalui undian, bagi peserta yang tidak mengikuti technical meeting, nomor undian ditentukan oleh panitia.
i. Peserta lomba menempati/menggunakan peralatan lomba sesuai hasil undi.
j. Peserta tidak dapat melanjutkan lomba dikarenakan sakit atau hal-hal lain, maka dianggap gugur/ mengundurkan diri.
k. Peserta tidak dibenarkan berkonsultasi atau mendapat pengarahan teknis tentang pekerjaan (job) pada waktu kegiatan berlangsung dari pembimbing masing-masing kecuali dari tim juri.
l. Kegagalan/keterlambatan pekerjaan tidak diberikan toleransi (misalnya karena lupa pekerjaan belum di-save).
m. Peserta lomba wajib melakukan pemeriksaan peralatan dan kebersihan lingkungan kerja.
n. Pemeriksaan peralatan dilakukan oleh peserta di depan juri dan panitia selama lebih kurang 60 menit sebelum perlombaan dimulai.
o. Kerusakan peralatan (hardware/software) akibat kesalahan prosedur yang dilakukan peserta, menjadi tanggung jawab peserta itu sendiri.
p. Tidak dibenarkan menggunakan peralatan (hardware/software) diluar ketentuan yang ada.
q. Pembimbing tidak dibenarkan masuk ke ruang lomba atau menghubungi peserta baik langsung maupun alat komunikasi pada saat lomba berlangsung dengan alasan apapun. Mematuhi tata tertib yang telah ditentukan oleh panitia atau juri, apabila melanggar maka akan dikenakan sanksi.

IX. Penutup

Hal-hal yang belum tercantum dalam lembar informasi ini akan diinformasikan pada waktu rapat teknis (technical meeting).