Final Task Assignment

V22 Data Processing
(Advanced Course)

CONTENT

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I.   Introduction

This project aims at preselecting candidates for the purpose of forming the French team for the 9th International Abilympics.

You will have 3 hours to complete it.

II. Description of the project

The project is to be completed using the relational DBMS (Database Management System) Microsoft Access 2010.

You will create an app for processing French applications to the 9th International Abilympics organized by the association.

The various skills in competition are professional skills (pottery, cooking, computer programming, welding, jewelry…) that are evaluated during this competition. They are assembled in general skill categories (Craft, ICT, Services…).

Candidates can register to several different skills in competition.

In this app, applications can be in 3 statuses: when a candidate registers, his application is "Pending". Then, after his application has been evaluated, it is either "Accepted" if the candidate possesses enough experience in the chosen skill, or "Refused".

The list of accepted applications will be used later in order to select members of the French team.

1. Main expected features

⇒ Managing applications by skill contest,
⇒ Adding new candidates and the contests they chose,
⇒ Consulting the number of accepted applications by general skill category and by skill contest,
⇒ Editing the chart of skills by general skill categories,
⇒ Editing the list of accepted applications by skill contest.

III. Skills – Evaluation

Below are the skills you will use during the competition, as well as the matching scoring scale.

1. Creation of a database   1 point
2. Creation and definition of the 4 tables and of their fields   11 points
3. Definition of the relationships and referential integrity rules   3 points
   between tables
4. Data input, import, copy and modification with and without query   16 points
5. Creation of a query   9 points
6. Creation of the 4 forms   35 points
7. Creation of reports   15 points
8. User-friendliness of the created app   10 points

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Total   100 points

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All these tasks will be described in the following chapter. Each completed task must be conform to the given instructions.

IV. Tasks to perform

1. Database – 1 point

You will create a new database named "**ApplicationAdministration**".

2. Tables and fields

You will find below a detailed description (structure) of the tables and of their fields to implement in the database.

All properties are to be defined except the "description" column, the sole purpose of which is to help you understand.

A. General skill categories – 1 points

Skill families containing the skills to be evaluated during the competition.

Name of the table: **SkillCategory**

Field name	Data type	Caption	Constraints / field properties	Description
pnlCat	Number Long integer	Id	Primary key	Id for the general skill category
tCat	Text (25)	Skill category	Not null, No duplicates	Name of the skill category

B. Skills – 2 points

Skill contests to be evaluated during the competition.

Name of the table: **Skill**

Field name	Data type	Caption	Constraints / field properties	Description
ptSki	Text (3)	Code	Primary key	Code of the skill
tSki	Text (80)	Skill	Not null, Indexed without duplicates	Name of the skill

nlCatSki	Number Long integer	Skill category	Foreign key, Not null, Indexed with duplicates. Combo box listing the sorted general skill categories.	General skill category

C. Candidates – 3 points

Persons having presented an application to the 9th International Abilympics.

Name of the table: **Candidate**

Field name	Data type	Caption	Constraints / field properties	Description
pnlCan	Number Long Integer	Id	Primary key	Id of the candidate
tTitleCan	Text (8)	Title	Default values = "Mr.", Not null, Indexed with duplicates. Combo box limited to "Mr." and "Ms."	Title of the candidate (Mr., Ms.)
tSurnameCan	Text (50)	Surname	Not null, Indexed with duplicates Edit the format in order to have all characters in capital letters.	Surname of the candidate
tFirstNameCan	Text (50)	First Name	Not null	First name of the candidate
tAddressCan	Text (70)	Address		Address of the candidate

Field name	Data type	Caption	Constraints / field properties	Description
tPostcodeCan	Text (5)	Postcode		Postcode of the candidate's city
tCityCan	Text (60)	City		City of the candidate
dBirthdayCan	Date	DoB		Date of birth of the candidate
tMailCan	Text (50)	Mail	Not null	Email address of the candidate
tProfExpCan	Text (20)	Prof. exp.	Not null, indexed with duplicates. Combo box limited to : "N/A", "1 year", "2 years"," 3 years", 4 years", "5 years or more".	Candidate's professional experience (None, 1 year, 2 years, 3 years, 4 years, 5 years and more)
dRegistrationCan	Date	Registration	Not null	Day of the candidate's registration
bFileCan	Boolean	File complete?	Default value = 0, indexed with duplicates	Candidate's file is complete

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D. Applications - 5 points

Contests (skills in competitions) chosen by the candidate.

Name of the table: **Application**.

Field name	Data type	Caption	~~Contraintes~~Constraints / field ~~propriétés~~properties	Description
ptSkiApp	Text (3)	Chosen contest	Foreign key, Not null. Combo box displaying the sorted skill names.	Code (name) of the contest (skill in competition) chosen by the candidate
pnlCanApp	Number Long Integer	Candidate	Primary key, foreign key, Not null. Combo box displaying the surnames and first names of the sorted candidates, concatenated in a single column.	Id (SURNAME first name) of the candidate
tDecisionApp	Text (8)	Decision	Not null, default value "Pending", Indexed with duplicates. Combo box limited to "Pending", "Accepted", and "Refused".	Decision / status of the application (Pending, Accepted, Refused)
dDecisionApp	Date	Decision date		Date of the decision / status

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3. Relationships and referential integrity rules – 3 points

Using the following relationships diagram, you will define the relationships between tables. You will also find and apply the necessary referential integrity constraints.

⇒ **SkillCategory** (pnlCat, tCat)

⇒ **Skill** (ptSki, tSki, nlCatSki)

⇒ **Candidate** (pnlCan, tTitleCan, tSurnameCan, tFirstNameCan, tAddressCan, tPostcodeCan, tCityCan, dBirthdayCan, tMailCan, tProfExpCan, dRegistrationCan, bFileCan)

⇒ **Application** (ptSkiApp, pnlCanApp, tDecisionApp, dDecisionApp)

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4. Data

You will find below the necessary information in order to edit and input data in each of the 4 tables.

A. General skill categories – 1 points

Input the following general skill categories:

Id	Name
1	Craft
2	Food
3	Industry
4	ICT
5	Services

B. Skills - 3 points

Add data to the "**Skill**" table using the "**SkillTableData.txt**" file.

C. Candidates – 5 points

Add data to the table "**Candidate**" using the "**CandidateAndApplicationTableData.xml**" file.

D. Applications – 7 points

Add data to the "**Application**" table using the "**CandidateAndApplicationTableData.xml**" and create an append query which you will name "**qInsertApplicationData**".

5. Queries

A. List of accepted applications by general skill category and by skill contest – 9 points

In order to monitor applications to skill contests, you must create a list of the number of accepted application for each general skill category and for each skill contest.
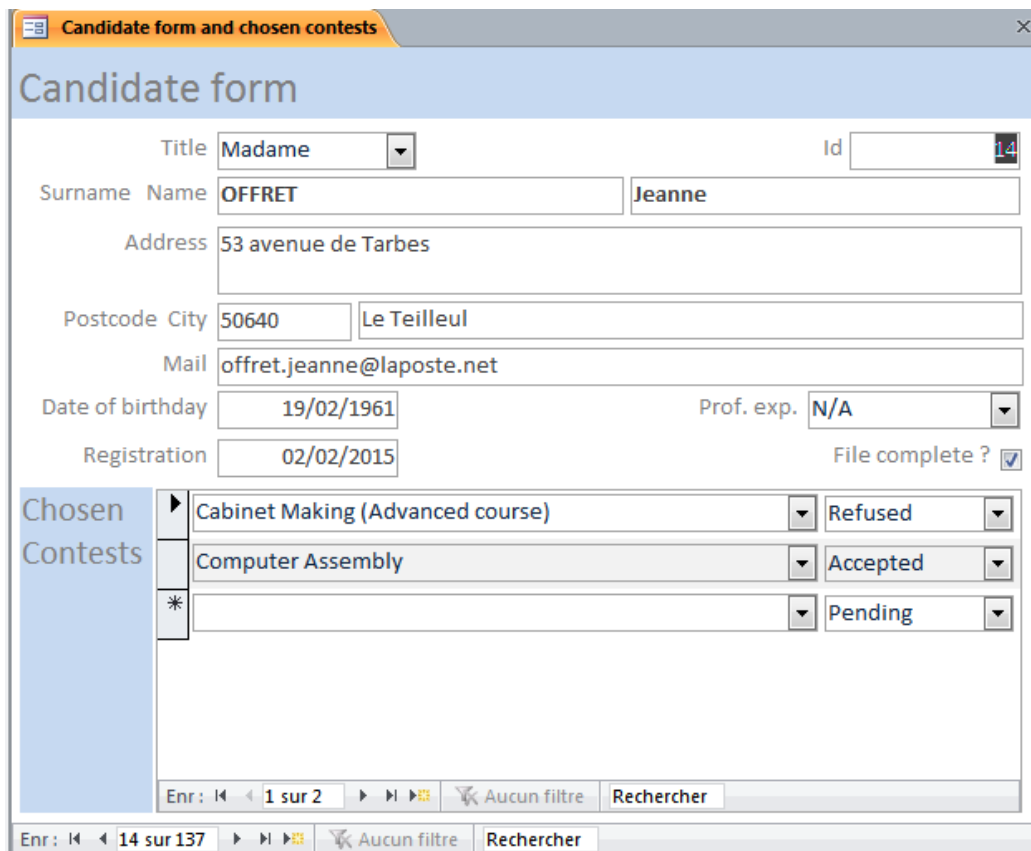
You will name this query "**qNumberOfAcceptedCandidateByCategoryAndSkill**", and its content will correspond to the following excerpt:

Skill category	Skill / contest	Nb candidates
Craft	V01 - Basket Making	3
Craft	V02 - Cabinet Making (Advanced course)	9
Craft	V04 - Crochet Work	1
Craft	V05 - Embroidery	1
Craft	V06 - Floral Arrangement	1
Craft	V08 - Landscape Gardening (Group of 2)	3
Craft	V09 - Painting	2
Craft	V10 - Pottery	3
Craft	V11 - Silk Painting	3
Craft	V12 - Waste Reuse	2
Craft	V13 - Wood Carving	3
Food	V14 - Bakery (cake)	3
Food	V15 - Cooking	4
Food	V16 - Restaurant Service	1
Industry	V30 - Aircraft Maintenance	1
Industry	V31 - Bicycle Assembly	1
Industry	V33 - CAD Industrial Design	2

Enr : 29 sur 42   Aucun filtre   Rechercher

6. Forms

A. Candidate sheet with chosen contest – 10 points

Create a form with a sub--form allowing the management (add, remove, modify) of candidates and of chosen contests. You will name the main form "**fCandidateForm**" and its sub--form "**fCandidateFormSfChosenContests**". Its content and its formatting will be conform to the following model:

B. Applications management - 25 points

In order to simplify access and management of these information, you will create an "all-in-1" form for **managing applications to skills in competition.**

For each **contest** (1st top left zone of the model, see next page), display of:

- The list of **candidates to the contest** (2nd zone to the left)
- The **sheet of the selected candidate** in the list of the **candidates to the contest** and his **chosen contests** (3rd zone to the right)

This "all-in-1" form will be name "**fContest**".

The form containing the list of the **candidates to the contest** will be named "**fContestSfApplications**" (zone 2).

You will use the form "**fCandidateForm**" and its pre-created sub-form for the **sheet of the candidate with chosen contests** (zone 3).

A button "**Add new candidate**" will open the **sheet of the candidate with chosen contests** so as to input a new candidate and the contests which he chose.

The content and the formatting of this form will be conform to the following model:

1

3

Administration of candidates

Administration of candidates and contests in competition

Add new candidate

Code	Contest / skill	Skill category
V02	Cabinet Making (Advanced course)	Craft

Contest candidates

Candidate	Décision	Decision date
GUINTINI Nicolas	Accepted	12/01/2015
GAULLET Sofiane	Accepted	30/01/2015
OFFRET Jeanne	Refused	10/02/2015
BIDAUD Aude	Accepted	13/02/2015
CATUSSE Cecile	Accepted	19/01/2015
VERDUN Audrey	Accepted	13/02/2015
VERNHES Jérôme	Accepted	03/02/2015
ORTIZ Sébastien	Accepted	21/01/2015
PAWLOWSKI Sylvain	Accepted	26/01/2015
ARGELIES Catherine	Accepted	05/03/2015
PERROT Philippe	Refused	30/01/2015
*	Pending	

Enr : 11 sur 11   Aucun filtre   Rechercher

Candidate form

Title: Monsieur   Id: 136
Surname Name: PERROT   Philippe
Address: 82 Bd Rodin
Postcode City: 30100   ALES
Mail: perrot.philippe@wanadoo.fr
Date of birthday: 01/08/1983   Prof. exp.: 1 year
Registration: 03/09/2014   File complete ?

Chosen Contests

	Refused
Cabinet Making (Advanced course)	Refused
Aircraft Maintenance	Refused
*	Pending

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Enr : 1 sur 1   Aucun filtre   Rechercher

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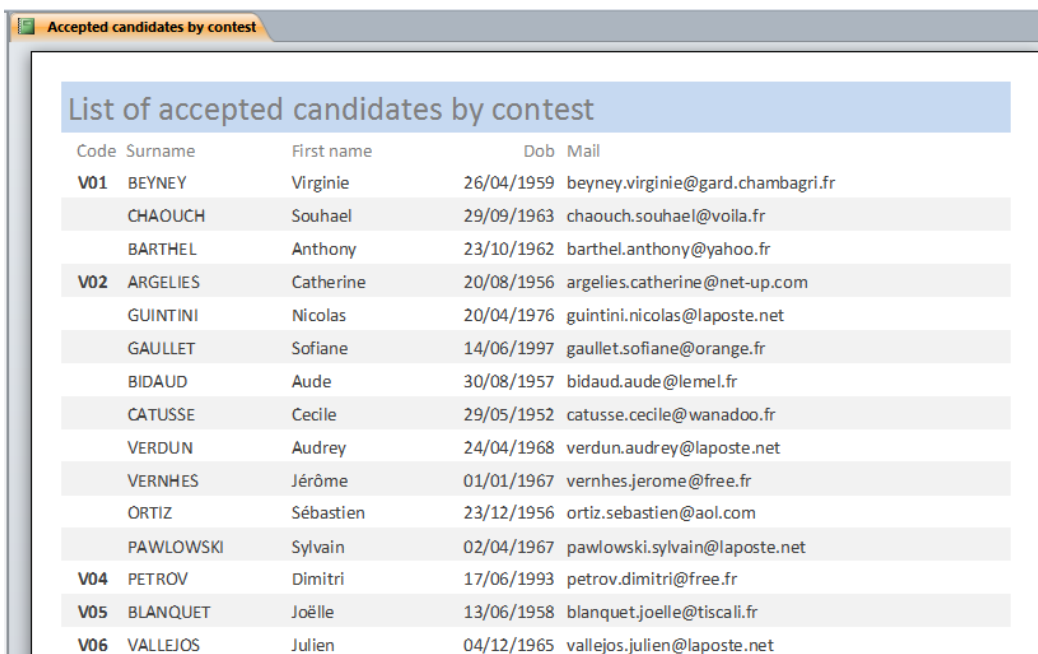
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7. Reports

A. List of accepted applications by skill contest – 5 points

In order to contact the selected candidates, you will create a report conform to the following excerpt.

You will name it "**rAcceptedCandidatesByContest**".

Excerpt of the report:

Accepted candidates by contest

List of accepted candidates by contest

Code	Surname	First name	Dob	Mail
V01	BEYNEY	Virginie	26/04/1959	beyney.virginie@gard.chambagri.fr
	CHAOUCH	Souhael	29/09/1963	chaouch.souhael@voila.fr
	BARTHEL	Anthony	23/10/1962	barthel.anthony@yahoo.fr
V02	ARGELIES	Catherine	20/08/1956	argelies.catherine@net-up.com
	GUINTINI	Nicolas	20/04/1976	guintini.nicolas@laposte.net
	GAULLET	Sofiane	14/06/1997	gaullet.sofiane@orange.fr
	BIDAUD	Aude	30/08/1957	bidaud.aude@lemel.fr
	CATUSSE	Cecile	29/05/1952	catusse.cecile@wanadoo.fr
	VERDUN	Audrey	24/04/1968	verdun.audrey@laposte.net
	VERNHES	Jérôme	01/01/1967	vernhes.jerome@free.fr
	ORTIZ	Sébastien	23/12/1956	ortiz.sebastien@aol.com
	PAWLOWSKI	Sylvain	02/04/1967	pawlowski.sylvain@laposte.net
V04	PETROV	Dimitri	17/06/1993	petrov.dimitri@free.fr
V05	BLANQUET	Joëlle	13/06/1958	blanquet.joelle@tiscali.fr
V06	VALLEJOS	Julien	04/12/1965	vallejos.julien@laposte.net

B. Chart of skill contests by general skill category – 10 points

This report is a summarizing chart of the skill contests by general skill category (columns), it must be contained within a single page and must be conform to the requirements (see copy below).

You will name this report "**rContestsBySkillCategory**".

9th IA - 50 CONTESTS DIVIDED INTO 5 SKILL CATEGORIES

	CRAFT		FOOD		ICT		INDUSTRY		SERVICES
V01	Basket Making	V14	Bakery (cake)	V17	Administration and Management of Network Systems	V30	Aircraft Maintenance	V41	Artificial Limb Socket Making
V02	Cabinet Making (Advanced course)	V15	Cooking	V18	Character Design	V31	Bicycle Assembly	V42	Cleaning services
V03	Cabinet Making (basic course)	V16	Restaurant Service	V19	Computer Assembly	V32	CAD Architecture	V43	Dental Technician
V04	Crochet Work			V20	Computer Programming	V33	CAD Industrial Design	V44	Dress Making (advanced course)
V05	Embroidery			V21	Creating Web Pages	V34	Electrical Connexion	V45	Dress Making (basic course)
V06	Floral Arrangement			V22	Data Processing (Advanced Course)	V35	Electrical Installation	V46	Hairdressing
V07	Hand Knitting			V23	Data Processing (Basic Course)	V36	Electronic Assembly (Advanced Course)	V47	Jewelry
V08	Landscape Gardening (Group of 2)			V24	Desktop Publishing	V37	Electronic Assembly (Basic Course)	V48	Leather Goods Making
V09	Painting			V25	E-Sport	V38	Motorcycle Mechanics	V49	Optician
V10	Pottery			V26	Photography Outdoor	V39	Welding	V50	Tailoring
V11	Silk Painting			V27	Photography Studio	V40	Mechatronic (Group of 2)		
V12	Waste Reuse			V28	Poster Design				
V13	Wood Carving			V29	Word Processing				

8. Main menu of the app – 10 points

Finally, you must make you app user-friendly.

You will create a main menu for the app and respect a few restrictions:

1. The menu must be user-friendly, intuitive and aesthetically pleasing.
2. It must open automatically when the application starts (opening of the database).
3. It must contain all of the 4 ~~developped~~developed features (screens):
    a. Applications management (form),
    b. Number of accepted applications by general skill category and by skill contest (query),
    c. List of accepted application by skill contest (report),
    d. Chart of skill contests by general skill category (report).

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Well done!

You're almost finished!

Please save your finished database on your workstation and on a USB flash drive that you will give to the judge.

CONGRATULATIONS!

Thank you for your participation!