Dimitri Gielis

Developing APEX apps in 2018

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Dimitri Gielis

- Founder & CEO of APEX R&D
- 19+ years of Oracle Experience (OCP & APEX Certified)
- Oracle ACE Director
- “APEX Developer of the year 2009” by Oracle Magazine
- “Oracle Developer Choice award (ORDS)” in 2015
- Author Expert Oracle APEX
- Presenter at Conferences

APEX R&D

research & development

AOP

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Dimitri Gielis Blog (Oracle Application Express - APEX)

I created this Blog to share my knowledge especially in Oracle Application Express (APEX) and my feelings ...

FRIDAY, SEPTEMBER 26, 2014

APEX 4.2.6 patch available

Oracle released APEX 4.2.6 yesterday, it's also available from My Oracle Support as a patch set 19595896.

Here's the table of bug fixes.

Table 6 Bugs Fixed in the Oracle Application Express 4.2.6.00.03 Patch Set

Bug Number	Description
18393429	Importing pre-4.2 application with data loading results in runtime error
18609856	`APEX_WEB_SERVICE.CLOBBASE642BLOB` converts incorrectly
18658967	Corrupted HTML mail messages are created from `APEX_MAIL.SEND`
18719750	`ORA-01858` during application import
18733989	Errors picking up session with cookie when `TOP CALL` is not `F`, `SHOW`, or `ACCEPT`
19021052	Oracle Application Express 4.2.4 throwing error while generating check boxes
19313700	Check box fails with `ORA-06502` after upgrade from release 4.0 to 4.2.4
19482775	`ORA-06502` when importing application containing translations

Applying the patch took less than 7 minutes.

```
Session altered.

...Validating Application Express
...Database user "SYS", database schema "APEX_040200", user# "106" 20:48:40
...Compiled 0 out of 3014 objects considered, 0 failed compilation 20:48:40
...271 packages
...263 package bodies
...452 tables
...11 functions
...16 procedures
...3 sequences
...457 triggers
...1320 indexes
...211 views
...0 libraries
...6 types
...0 type bodies
...0 operators
...0 index types
```

My next public appearances:

- Oracle Open World: 27-SEP/2-OCT-2014
- ORCLAPEX-BE Meetup: 19-NOV-2014
- ODTUG KScope: 21/25-JUN-2015

About Me

Dimitri Gielis

Passionate about Oracle and especially Oracle Application Express (APEX). Building applications with love @ APEX R&D.

View my complete profile

ORACLE ACE Director

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Agenda

- From idea to Oracle APEX app
- Create the Oracle Database Objects
- Build a starter APEX app with Blueprint
- Enhance the APEX app

From idea to Oracle APEX app

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SATURDAY, AUGUST 05, 2017

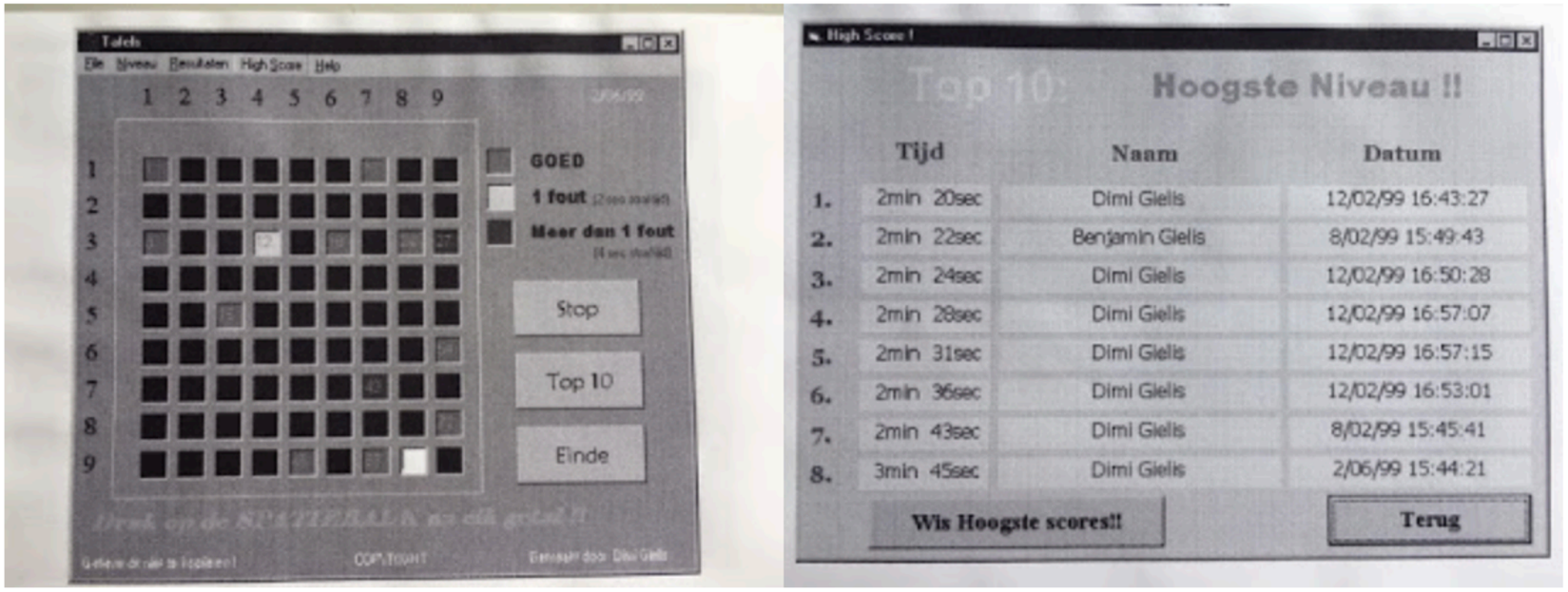
From idea to app or how I do an Oracle APEX project anno 2017

For a long time I had in mind to write in great detail how I do an Oracle APEX project from A to Z. But so far I never took the time to actually do it, until today :)

So here's the idea; I love building projects that help people and I love to share what I know, so I will combine both. I will write exactly my thoughts and things I do as I'm moving along with this project, so you have full insight what's happening behind the scenes.

Background

Way back, in the year 1999, I build an application in Visual Basic to help children study the multiplication tables. My father was a math teacher and taught people who wanted to become primary school teachers. While doing the visits of the primary schools, he saw the problem that children had difficulties to automate the multiplications from 1 till 10, so together we thought about how we could help them. That is how the Visual Basic application was born. I don't have a working example anymore of the program, but I found some paper prints from that time, which you see here:



We are now almost 20 years later and last year my son had difficulties memorizing the multiplication tables too. I tried sitting next to him and help him out, but when things don't go as smooth as you hope... You have

My next public appearances:

- Montreal Oracle Dev Day: 25-OCT-2017
- APAC Tour: New Zealand and Australia: 17/28-NOV-2017

About Me

Dimitri Gielis

Passionate about Oracle and especially Oracle Application Express (APEX). Founder and CEO of APEX R&D, a company that provides Development, Training and Consulting in APEX.

View my complete profile

ORACLE ACE Director

Printing in Oracle APEX?

Check APEX Office Print.

Multiplication Table - mtable.online

x	1	2	3	4	5	6	7	8	9
1	1								9
2				8	10				
3				12			21	24	
4					20		28		36
5	5					30		40	45
6		12							
7	7								
8				32	40				
9			27		45			72	81

http://dgielis.blogspot.be/2017/08/from-idea-to-app-or-how-i-do-oracle.html

The application helps children (typically between 7 and 11 years old) to automate multiplications between 1 and 10. It also helps their parents to get insight in timings and mistakes of their children's multiplications.

Timeline

No project without deadline, so I've set my go-production date to August 20th, 2017. So I've about 2 weeks, typically one sprint in our projects.

Following along and feedback

I will tweet, blog and create some videos to show my progress. You can follow along and reach me on any of those channels. If you have any questions, tips or remarks during the development, don't hesitate to add a comment. I always welcome new ideas or insights and am happy to go in more detail if something is not clear.

High level break-down of plan for the following days

- Create user stories and supporting ERD
- List of the tools I use and why I use them
- Set up the development environment
- Create the Oracle database objects
- Set up a domain name
- Set up reverse proxy and https
- Create a landing page and communicate
- Build the Oracle APEX application: the framework
- Refine the APEX app: create custom authentication and authorization scheme
- Refine the APEX app: adding the game
- Refine the APEX app: improve the flow and navigation
- Refine the APEX app: add ability to print results to PDF
- Set up build process
- Check security
- Communicate first version of the app to registered people
- Check performance
- Refine the APEX app: add more reports and statistics
- Check and reply to feedback
- Set up automated testing
- A word on debugging
- Refine the APEX app: making final changes
- Set up backups
- Verify documentation and lessons learned
- Close the loop and Celebrate :)

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Blog Archive

- ▼ 2017 (20)
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    - Build the Oracle APEX application: the framework
    - Set up domain and launch page
    - Create the Oracle database objects
    - Set up an APEX development environment
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Create the ERD
& Database Objects

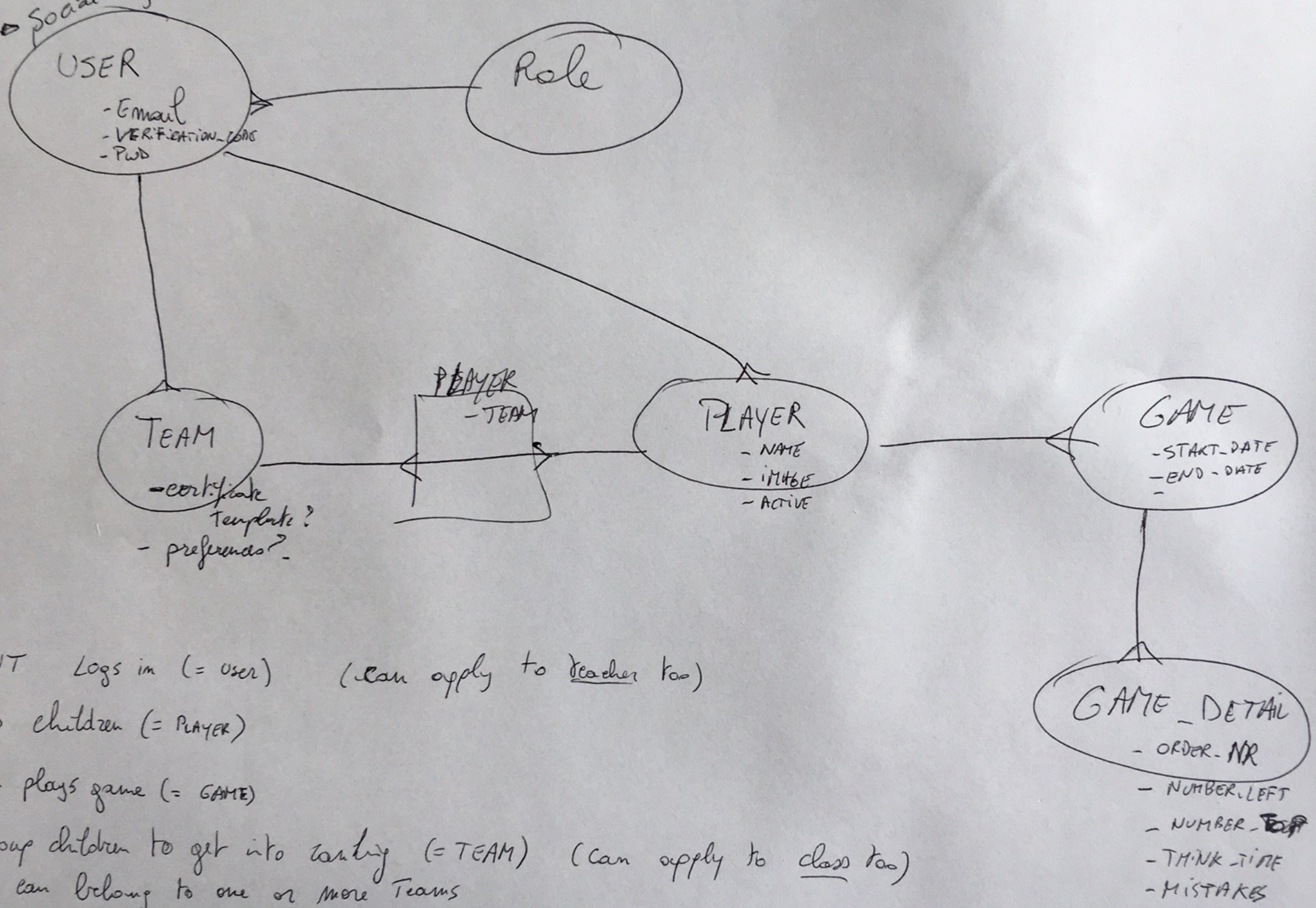
APEX 5.2

↳ Social login : FB / Tw. / ...

MULTIPLICATION TABLES

TABLES v1.0

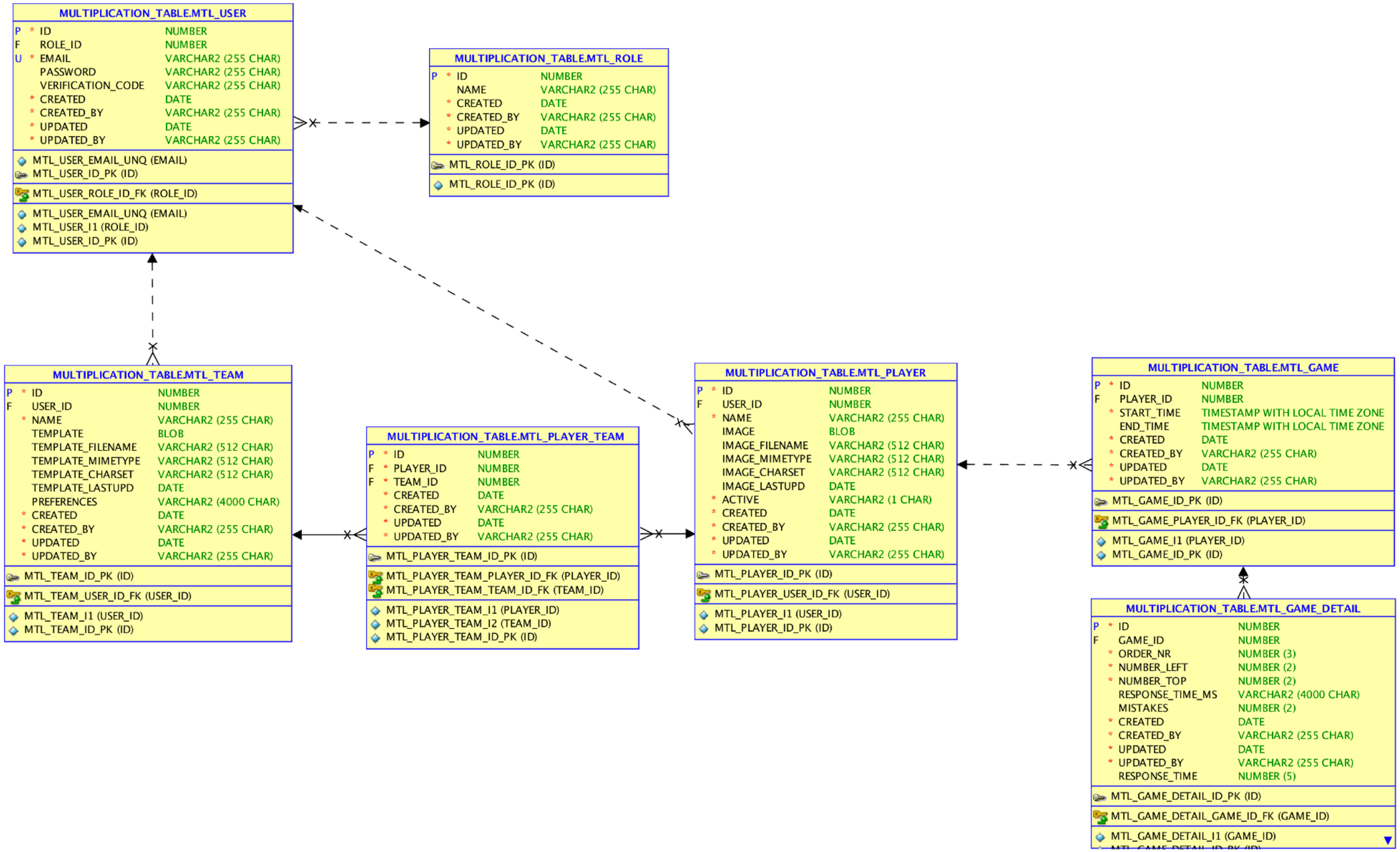
②



IDEA

- PARENT Logs in (= User) (can apply to teacher too)
- Creates children (= PLAYER)
- Children plays game (= GAME)
- Group children to get into ranking (= TEAM) (can apply to class too)
  Child can belong to one or more Teams

SQL Developer Data Modeler



Quick SQL

Quick SQL

Saved Models | Administration | Help | dgielis@apexrnd.be

AA6R.2

Save | Generate SQL

Worksheet | Clear | Syntax and Examples

```
#prefix: mtl, auditcols: true, apex: true

role
  name

  user
    email              /nn /lower /unique
    password           vc(255)
    verification_code vc(255)

    player
      name   /nn
      image  file
      active vc(1) /cc Y, N /default Y

      game
        start_time tswltz /nn
        end_time   tswltz

        game_detail
          order_nr         num(3) /nn
          number_left      num(2) /nn
          number_top       num(2) /nn
          response_time_ms
          mistakes         num(2)

    team
      name        /nn
      template    file
      preferences

player team
  player id /nn
  team id   /nn

view player_team_vw player team player_team
```

Settings

```
-- drop objects
drop table MTL_ROLE cascade constraints;
drop table MTL_USER cascade constraints;
drop table MTL_PLAYER cascade constraints;
drop table MTL_GAME cascade constraints;
drop table MTL_GAME_DETAIL cascade constraints;
drop table MTL_TEAM cascade constraints;
drop table MTL_PLAYER_TEAM cascade constraints;
drop view MTL_PLAYER_TEAM_VW;

-- create tables
create table MTL_ROLE (
    ID                              NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY
                                    constraint MTL_ROLE_ID_PK primary key,
    NAME                            VARCHAR2(255),
    CREATED                         DATE not null,
    CREATED_BY                      VARCHAR2(255) not null,
    UPDATED                         DATE not null,
    UPDATED_BY                      VARCHAR2(255) not null
)
;

create table MTL_USER (
    ID                              NUMBER GENERATED BY DEFAULT ON NULL AS IDENTITY
                                    constraint MTL_USER_ID_PK primary key,
    ROLE_ID                         NUMBER
                                    constraint MTL_USER_ROLE_ID_FK
                                    references MTL_ROLE on delete cascade,
    EMAIL                           VARCHAR2(255)
                                    constraint MTL_USER_EMAIL_UNQ unique not null,
    PASSWORD                        VARCHAR2(255),
    VERIFICATION_CODE               VARCHAR2(255),
    CREATED                         DATE not null,
    CREATED_BY                      VARCHAR2(255) not null,
    UPDATED                         DATE not null,
    UPDATED_BY                      VARCHAR2(255) not null
)
;

create table MTL_PLAYER (
```

Demo

Build a starter APEX app with Blueprint

Create an Application

What type of application would you like to create?

Blueprint

Desktop

Mobile

Websheet

From a spreadsheet · Copy an existing application

About

Cancel Help

Next

Demo

Enhance the APEX app

Blueprint as basis

- Use Blueprint as starting point
- then enhance…

Different ways to enhance

- Using different components (Cards, Lists, …)
- Use of APEX Plug-ins
- Using APEX APIs
- Changing Universal Theme (Theme Roller, Template Options, …)
- Custom CSS
- Including JavaScript

Printing & Exporting

https://www.apexofficeprint.com

APEX Office Print (AOP release 3.0) on APEX 5.1

Feedback DGIELIS@APEXRND.BE

Examples: See AOP in action

Overview
Start
Tour
Examples
Doc
More
Support

Reports

- Custom Report (SQL)
- Classic Report
- Classic with Totals
- Tabular Form
- Interactive Report
- Combo: Classic and IRs
- Interactive Grid
- More Examples

Features

- Native Office Charts
- JET Charts
- Other Charts (HighCharts, ...)
- Images
- QR and Barcodes
- HTML (Rich Text) Editor
- Markdown Editor
- Inline PDF

Backend

- Dynamic Print
- Mailings: Mail Merge - Labels
- Send Print by Email
- PL/SQL API
- Scheduled Print
- Print in Batch
- Multiple Prints to Zip
- Tag Count

Testing

- Process Plug-in
- Dynamic Action Plug-in
- Office Types
  Word, Excel, Powerpoint
- HTML and Markdown
- Plug-in Template and Data Types
- Error Testing
- AOP Usage
- Automated Tests

APEX Office Print (AOP) Sample Application

Recap

- From idea to Oracle APEX app
- Create the Oracle Database Objects
- Build a starter APEX app with Blueprint
- Enhance the APEX app

Q&A

APEX R&D
research & development

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Consulting, Development, Training

- Looking for consulting, training and development in Oracle Application Express (APEX)?
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