

Project

”BrainWasher – a mathematical Quiz”

Note: correction & additions since last version are marked in
Red inside this document.

Process:

From a mobile app, the user will configure any number of structured mathematical quizz'es, which will be saved on a cloud fileshare.

The quizzes will be uploaded from the fileshare to a facebook page by a Media Specialist.

A function on the app, will generate the quizz content which will be returned as a matrix. The matrix will be published by the app as a formatted .png file, based on the configuration in the app.

App concept:

1. The mobile app consists of only one form, where the user can update some parameters.
2. The user will update the parameters and click "Generate" and then the app will call a function with the parameters from the form.
3. This function will return a matrix of numbers let's say 5x3 numbers.
4. The function will be developed by us.
5. Now, the app will take the returned matrix output from the function and use it to generate a formatted .PNG file with the matrix values.

(The formatting of the .PNG file will also depend on the parameters the user updated in the form)
6. Once the .PNG file is generated, the app will send it to a fileshare on our remote server in Germany
7. That's all!

App environment:

1. The app is for internal use by employees of the company. Therefore It should be available for IOS only, as we all use Iphones.
2. We will develop a function to provide quiz numbers for the quiz. We prefer to do this in Python. So in fact we will deliver the function to you.
3. Programming languages can be: .net, c# or python – free choice. What is the optimum solution for this app? But the function should then be developed in the same language?
4. Please note that we can fill in a Retention period in the form on the next slide.

We did not provide any functionality for this input field. Here is how this should be treated:

Each time the app form is run, you should check the dates in the files names of the .png files, e.g. "2021-12-01_01p" If this date is older than todays date minus the retention period, it should be deleted.

Example : Filename : "2020-12-01_01p". Retention period : 365 days.

So when the app is run on 2022-12-01 or later, this file will be deleted from the files share.

App fields:

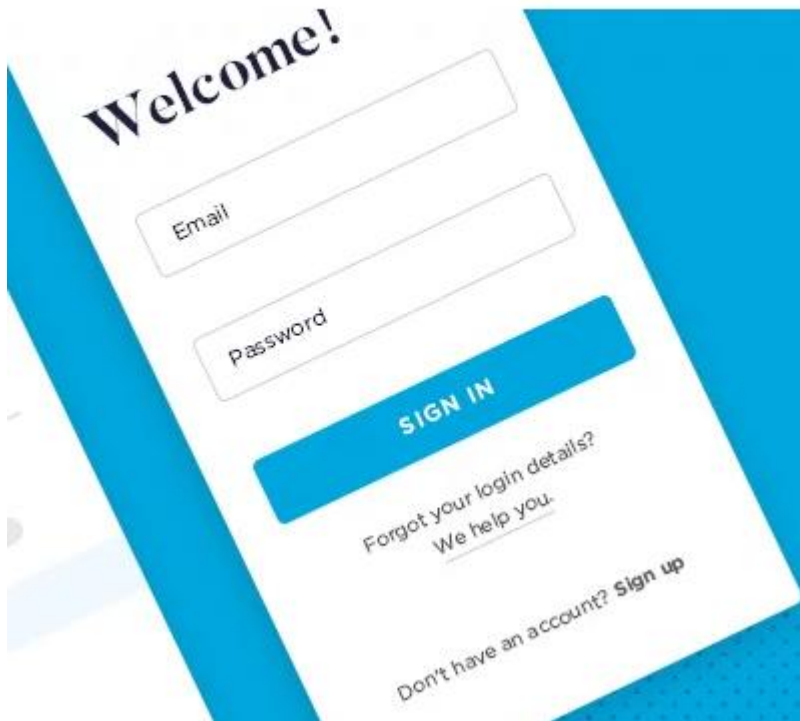
Input: A form containing the following inputs:

1. Quizz type: Sequential (s) or Progression (p) (drop down)
2. No. of Artifacts, default = 5 , Maximum = 100
Naming: <date> <versionNumber><quizType> e.g. "20211211_01p"
Each new day, the version number will be reset to "01"
3. Level of difficulty : Green Blue Red default: "Blue"
4. Background image: Solid (s) or Image (i)
Choose file:<abc.jpeg> default: defaultimage.jpg
Solid Background color;<color> (choose color from palette), default = Blue
5. Background transparency (0-100%), default = 0%
6. Font name, default = Ariel (Font drop down box)
7. Font color, default = White (Choose color from palette)
8. Font size, default = 25
9. Bold (Y/N), default = N
10. Minimum retention period = 270, default=270
11. Path / url to fileshare, default = https://...

Buttons : Generate Cancel Exit

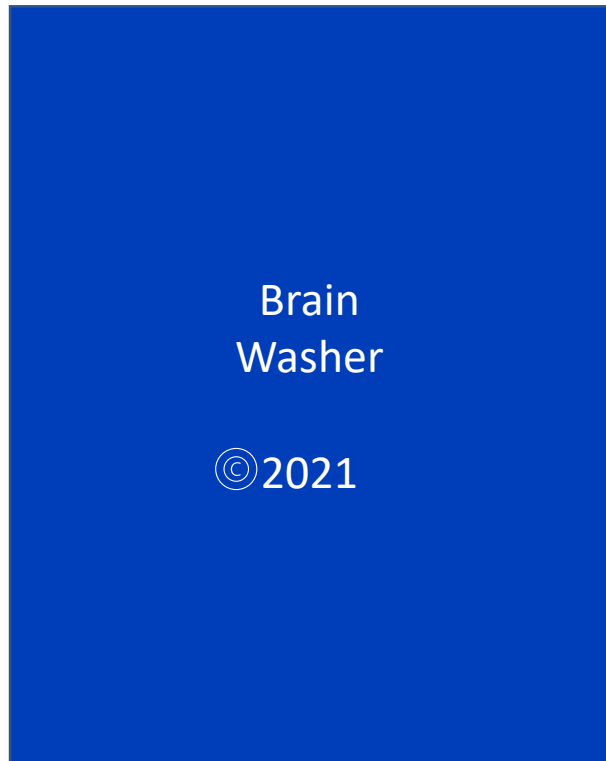
Warning : "Are you sure you want to generate 5 Artifacts?" Yes No , default = Yes
Return message : "5 Artifacts successfully generated"

App form layout



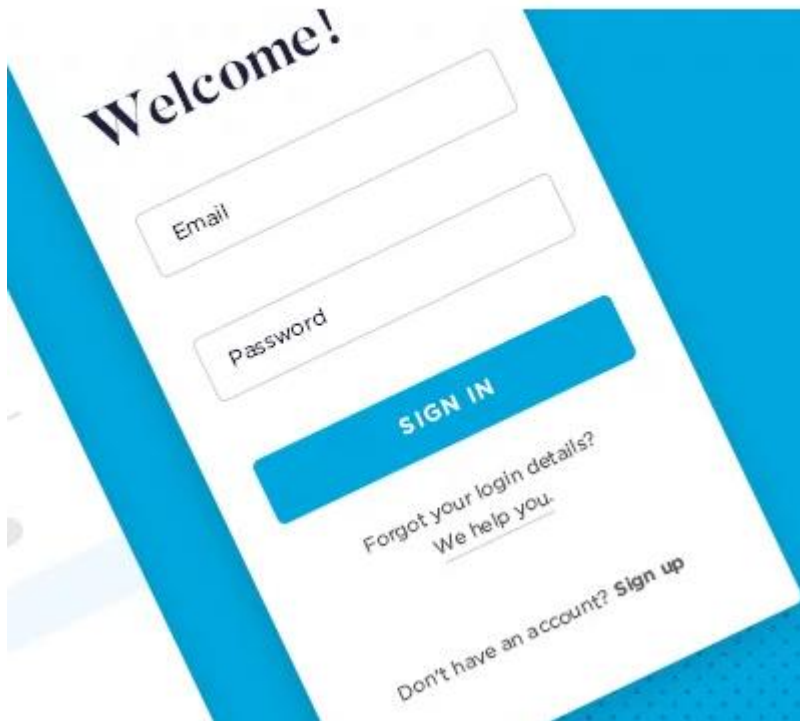
The form should be designed in a modern way like shown, e.g. with help texts within each field etc.

App form layout

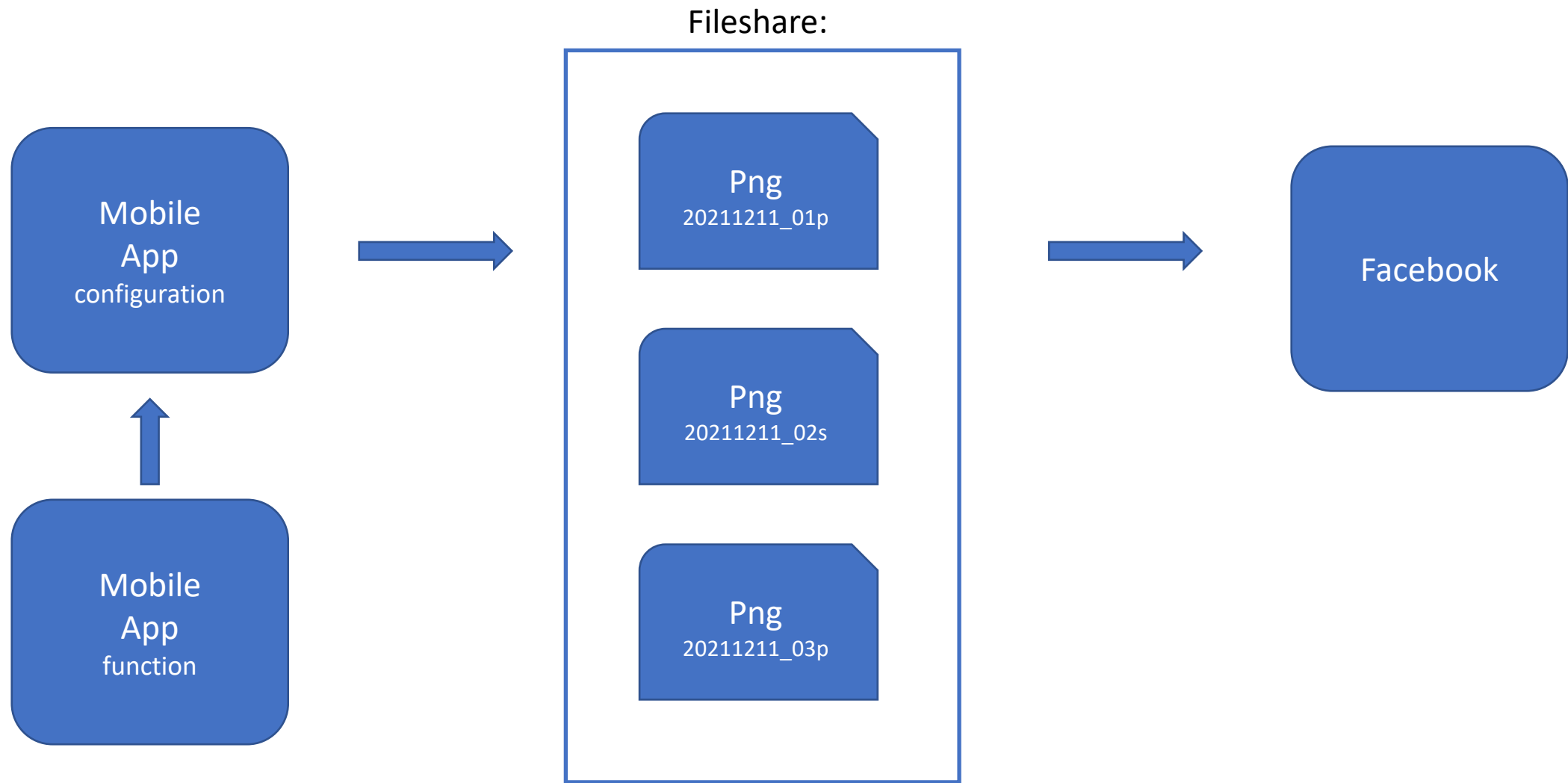


When the app is opened, the logo is flashed, then the form (see net slide) is started.

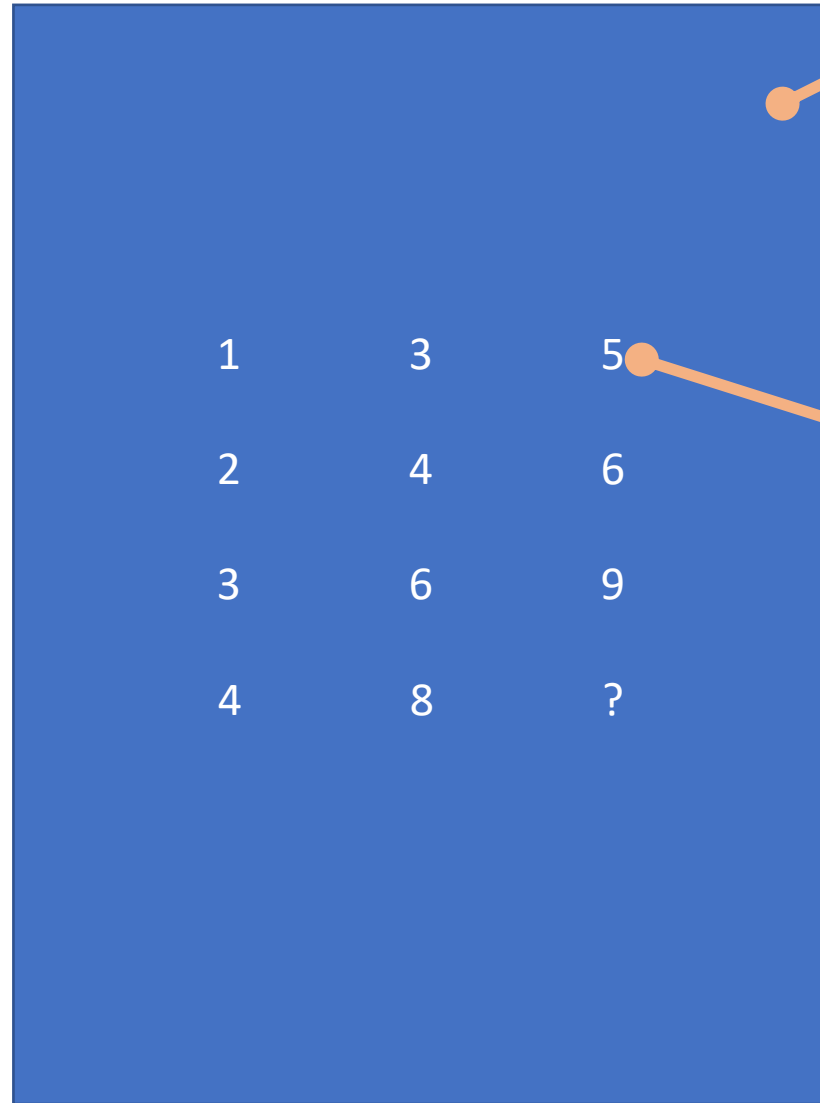
App form layout



The form should be designed in a modern way like shown, e.g. with help texts within each field etc.



Output: Progression quizz



The diagram shows a blue rectangular box representing a quiz output. Inside the box is a 4x3 grid of numbers. An orange line points from the text 'Background color & transparency' to the top-right corner of the box. Another orange line points from the text 'Font name, size & color (Bold or Normal)' to the number '5' in the first row, third column of the grid.

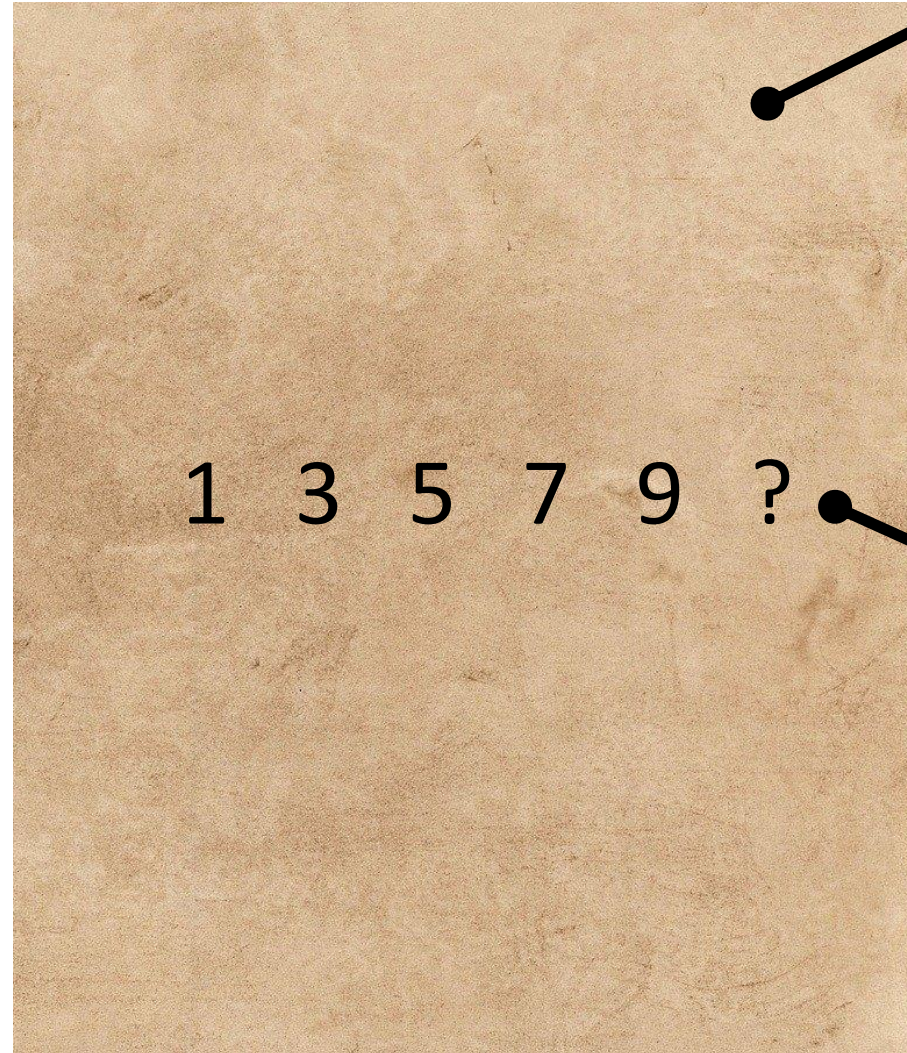
1	3	5
2	4	6
3	6	9
4	8	?

Background color & transparency

Font name, size & color
(Bold or Normal)

Output: Sequential quizz

Background Image & transparency



Font name, size & color
(Bold or Normal)