North Island College

Development Foundations - DGL-104-CVS1

MIT App Inventor Project

App: My Restaurant. (Version 2)

Name: Juan Montalvo

Date: February 2024.

My Restaurant App is an application for cell phones in which you can order food in a restaurant. This application has three screens:

Screen1: This screen has the following components:

- Logo
- Qualification
- Dropdown list to select the table number
- Button to start the new order
- Button to review the history of orders saved in a database

Order: This screen has the following components:

- Order date (date the order is placed).
- Title with pre-selected table number.
- Logo
- Drop-down list of dishes (5 pre-established dishes).
- Drop-down list of drinks (5 pre-set drinks).
- Multi-line text field to record order observations.
- Button to add item to the order.
- Button to register the complete order in a database.
- Section where all order items are recorded

Historical: This screen has the following components:

- Qualification
- logo
- Three labels that act as a header for order history information
- Section with order information previously saved in the database

Functionality

Screen Screen 1

On the Screen1 screen, users will be able to register orders for each table. Users must select a table number and click on the “Start new order” button (if you have not selected a table number, you will get a message indicating “Select a table number "), after clicking you will go to the second screen 'Order'. On the Screen 1 screen, the user will also be able to review the order information registered in the database, for which they must click on the “Check order history” button, which will take them to the “Historical” screen.

Order Screen

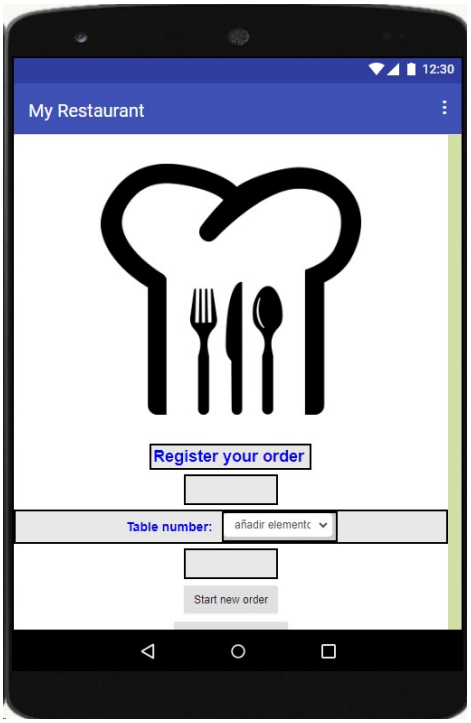
On the Order screen, the user must select the dish and drink desired in their order and can register an observation about the dish, then they must click on the “ADD” button (if they have not selected a dish and a drink, they will get a message indicating “please the dish and drink fields”) and the information will be added at the bottom of the screen, if the user wishes they can register more dishes to their order by following the previous steps. Once the user has selected all the dishes and drinks in their order, they can register their order information in the database by clicking on the “CONFIRM” button. He can also go back to the Screen1 screen by clicking on the back of the phone.

Historical Screen

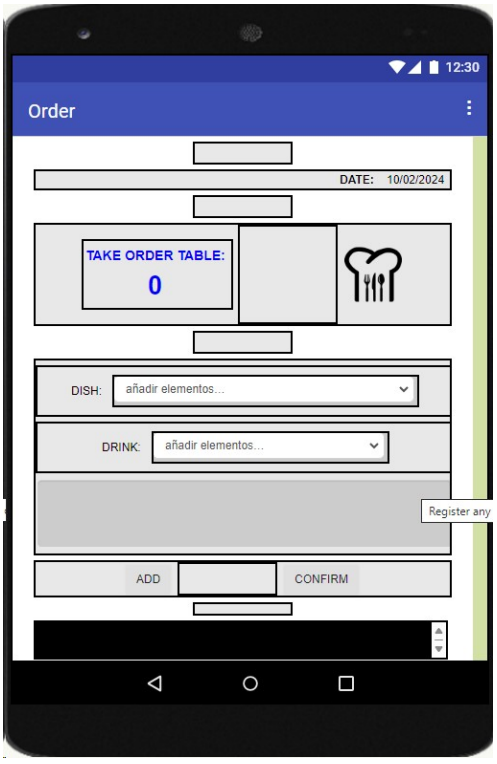
The user will be able to access the Historical screen from the “Check order history” button, in which they will be able to review the details of the orders previously recorded in the database. On this screen there is a “Delete BD” button where the user can delete all data from the database by clicking. The user will return to the “Screen 1” home screen by clicking the back button on the phone.

Below are the design screens and code blocks:

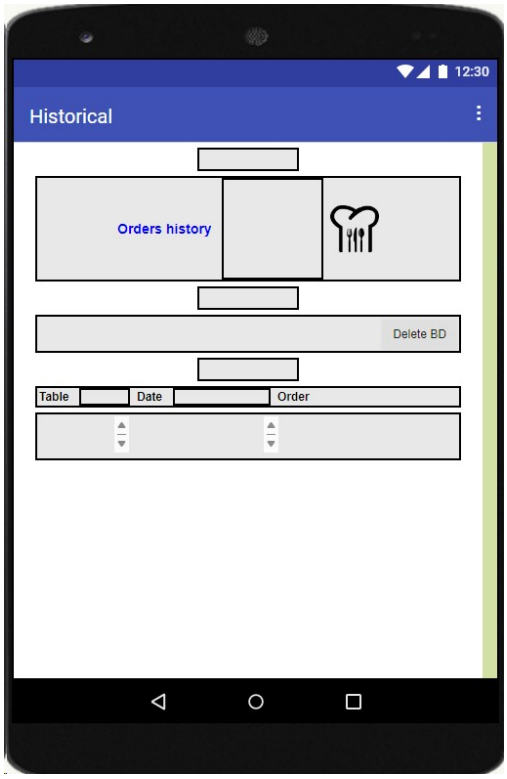
Screen1:



Order:



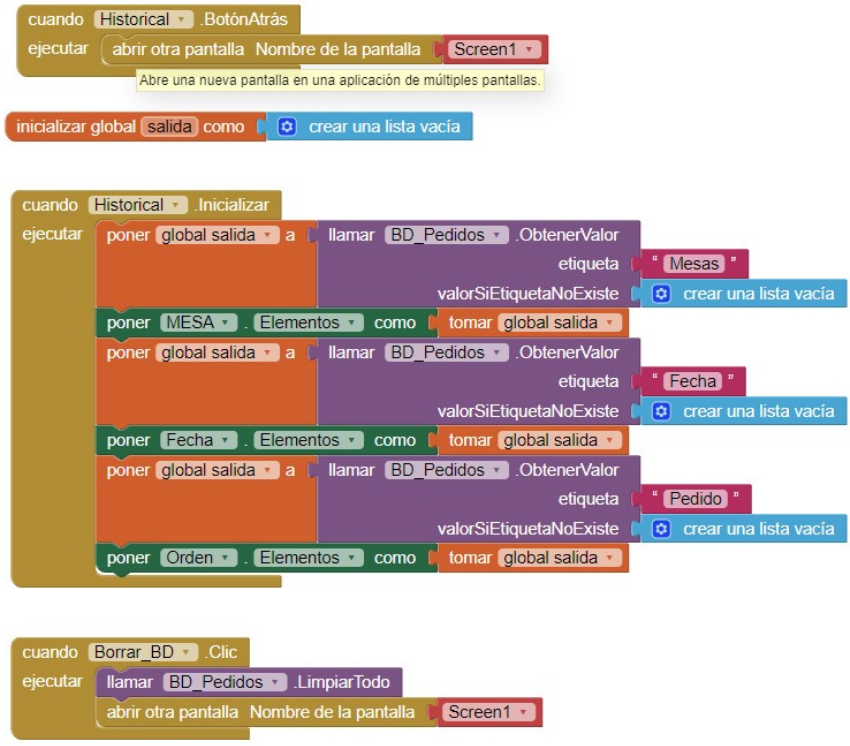
Historical:



Below are some fragments of the code blocks, for more details you should review the restaurant.aia file:

Screen "Screen 1":

Screen “Historical”:



Application development

To make this application, some App Inventor tutorials on YouTube were reviewed and some functional tests were carried out. In these tests, adjustments were made to the code blocks. In addition, tests were carried out on the use of the design; adjustments were made to the design and the texts until verifying that they are easy to understand for users

Application review.

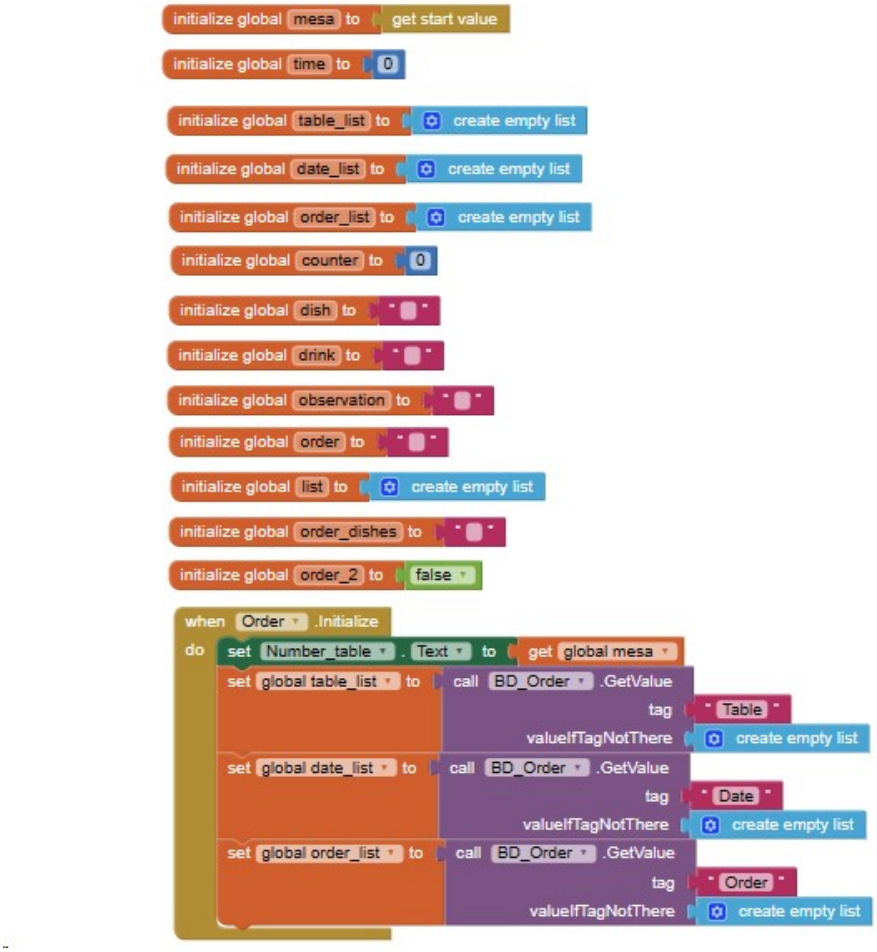
A classmate (Jhon) reviewed the application and indicated that he considers the application to be very intuitive, that he liked the design and functionalities, however he made some observations about the design of the database information shown in the “Historical” screen because it was not possible to read the information properly, and he also suggested that the application should have an option to delete the database. Given Jhon's observations, some adjustments were made to the code and design to better read the information in the database (historical) and to add the option to delete the database with a “Delete BD” button on the historical screen.

Refactoring.

A refactoring process was carried out on the block code of the first version of this application, which resulted in the following:

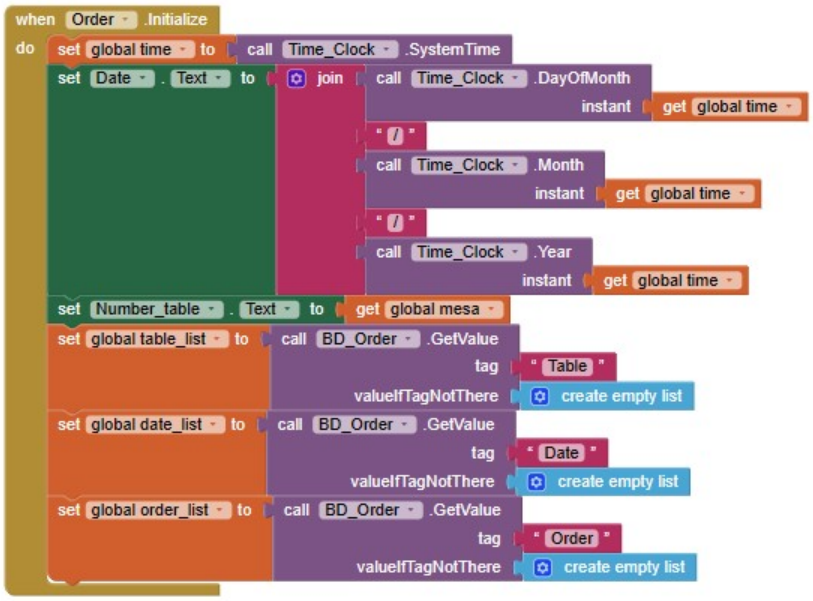
- The name of several components in the design of the application was changed, in addition in the blocks section the names of the variables were changed and in general all the code was placed in English, before this refactoring there was information in Spanish, the purpose to make this name change is to have a standardized code in the same language, this will facilitate maintenance in the future.

- The code blocks were organized, before the refactoring there were variables declared in some places of the block panel, now all the variables are declared at the beginning of the code, in addition the code was ordered in such a way that the blocks are more understandable for a future maintenance:

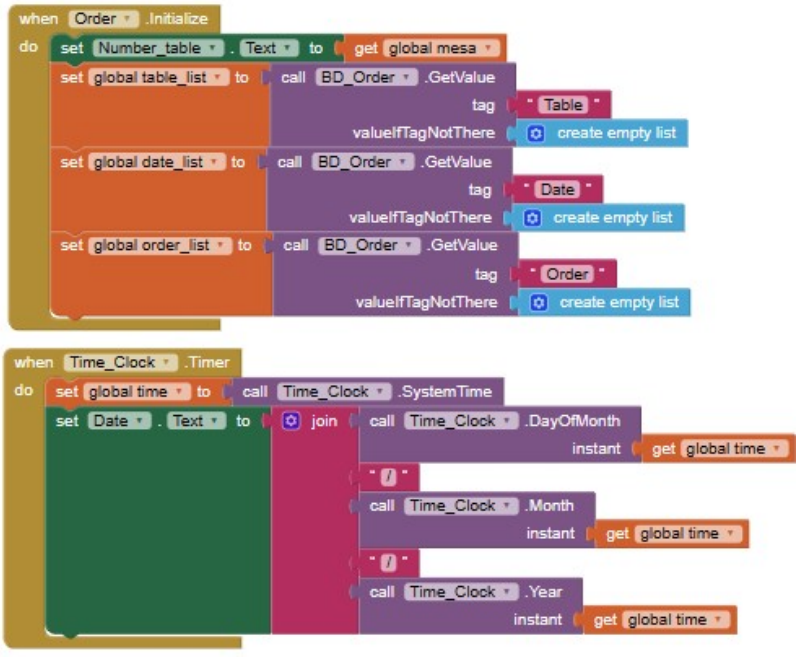


- The code was reviewed and it was verified that there were very large blocks of code, so the feasibility of dividing a block into two parts was seen. Before this block was large and difficult to understand, now it is more understandable.

Before refactoring (only one block existed):



After refactoring (there are two blocks that have the same functionality as before):



References

https://www.youtube.com/watch?v=zIzLOtZEx1g&list=PLwMWARFV3qSr_B0dIewfvIExuuYogisHP

https://www.youtube.com/watch?v=iikDKBFMiQI

https://www.youtube.com/watch?v=rl2GX_Ghl-o