Shopping List

Making you daily shopping easier

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INTRODUCTION

This assignment's main goal aims to give the students a superficial view of mobile device programming. In this particular case, the focus was developing a user-friendly application for Android-based mobile devices. The application implementation was carried out in the Android Developer Tool, a variation of Eclipse, and Java was the language chosen.

DESCRIPTION

All students must have developed a program for managing shopping lists on mobile phones. Therefore, several functionalities were implemented following the programming exercise guideline. The implemented items are:

- ✓ Basic configuration – up to 20 marks
- ✓ Tracking weekly shopping – up to 20 marks
- ✓ Tracking shopping cost – up to 15 marks
- ✓ Price comparison – up to 10 marks
- ✓ Auto-removal of purchased items – up to 5 marks
- ✓ Product memory – up to 10 marks
- ✓ Auto-completion – up to 10 marks
- ✓ Managing user preferences – up to 5 marks
- ✓ Native App demonstration – up to 5 marks
- ✓ **Product list sharing – up to 15 marks**

Basic Configuration

During the basic configuration, the application was supposed to manage a simple shopping list, which allowed the user to type in a set of shopping items. Each item contains a name and the quantity to be purchased. In addition to theses features, the list should give the users the option to mark each product purchased in the list.

At the initial stage of development, this software in question already allowed the user to manage a variety of shopping lists and, each one, containing numerous items, quantities and even the product price – *Tracking weekly shopping* and *Tracking shopping Cost*.

Throughout contextual menus, the application user was already able to *Open, Edit,* and *Delete* the items and the shopping lists. Unfortunately, during the

first application demonstration, the names were confusing and the contextual menus had to be changed.

Price Comparison

This feature is very interesting as it allows the user to import an item's best price if the same item was inserted before, even if it was added to other lists. That is, whenever the user enters the price of a purchased item the application looks for earlier saved items searching the one with the best price. **If the user wishes, s/he is able to disable this function**.

Items Auto-removal

This item was implemented according to the guideline specification: "*This feature supports the user when shopping by automatically removing from the shopping list any item that has been purchased. As a result, the list is gradually reduced in size until it potentially becomes empty. The auto-removal of purchased items should not interfere with the persistent storage of information, i.e. it is only limited to the interface of the application.* ***The user should be able to enable/disable this feature***". If the option is not enabled, the purchased item is moved to the bottom of the list, making it easier to the user to check which items remain unpurchased.

Product Memory and Auto-completion

The application has a data table created simply to store all the items already inserted. In other words, the system records numerous items the user has purchased and provides auto-completion when the user starts typing. **The user is capable of disabling the auto-completion functionality**.

Managing preferences

The software developed gives the user the option of setting his/her preferences concerning all the optional functionalities and behave in accordance to the chosen preferences. No additional preference regarding the application look was created.

Product list sharing – Extra Functionality

This functionality was created in order to exchange list of items with other mobile devices through USB cable, wireless network and/or Bluetooth. The user can export a list currently stored in the application database to the Android memory card, and then share it via one of the options mentioned before. As the file transfer is complete, different mobile device user can browse his/her phone memory card and import the list. The assignment guideline demanded the lists to be shared utilizing interoperable formats, such as XML and JSON. The latter was utilized in this application.

The following pages contain some screenshots taken when the software was being utilized and tested.