Adel Gazarin
Y10B

Coursework (CMS)

Background:

I am Adel Gazarin an I.C.T business consultant hired by Mr. Amr Gazarin, the manager of a local school canteen called A.G cafe to design and create a sales system which will be used by the canteen staff.

A.G cafe's is located in a corner in the schools AstroTurf, the orders are made from a small window where student line up in front of every break time. The cues are usually long as there is one window which many students order from.

Problem Definition:

The manager of A.G cafe is having a problem with the existing system because they are currently using a manual method to record their sales, this is very time consuming and it also makes calculating profits gained more difficult and many errors are made using this manual meth od.

The canteen has many meals which are regularly produced but are not popular in the market and they also have products which are very popular in the market but the canteen has a shortage in this product such as the chicken parmesan in A.G cafe. The product I will design and produce will not only help my end-user calculate the profit gained throughout the year. The product will also help, record stocks and provide invoices to customers. I am planning to design a "sales system" product.

Alternatives:

I have three alternatives to create the 'sales system' the first alternative, I could design a spread sheet with macros and formulas, the spreadsheet will help the manager calculate the profits gained using complex formulas, macros and graphs and it will help compare the profit gained between last year and this year using charts. Another alternative is using a database, the database will help record stocks in an organised way, which will be easy to view and store data. The third and final alternative is using FrontPage and creating a website which will contain Tables, charts, surveys and questionnaires which will be useful because it will help the A.G Cafe manager find out more about his customers and the products they prefer or dislike.

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I have chosen to use Microsoft Office Excel, in order to use its many attractive and useful features. The key factors of spreadsheet which I am planning to make use of are generating graphs to help organise stocks and calculate the profit gained. I am also planning to explo it many complex formulas such as V-look up and if statements. Using spreadsheet I will also be able to print using macros which will speed up the printing process.

Objectives:

My objectives are for my sales system to include all the features needed by my end user, therefore I intend to include extended features such as:

- **Creating charts:** using spreadsheet I will create graphs which will help organise the stocks and calculate the sales of a certain week.
- **Dropdown validation lists:** dropdown validation lists will help avoid mistakes while typing and they will also help the employees choose the product needed at a greater speed.
- **Entering text and numeric data:** my spreadsheet will include text and numeric data to make it appear informative.
- **Using validation:** validation will make it much simpler for me to check and correct my work and it will stop me from making errors
- **Using complex formulas:** I am planning to use complex formulas such as the v-look up which allow my end user to link and identify information from different tables
- **Using macros:** macros will speed up the process of receiving receipts because macros help speed up the printing process.

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Software Details:

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S/W description/name	Version	publisher	description	How was it used
Microsoft office Excel 2003	Microsoft windows 2003	Microsoft	A text and numeric processor	I transferred all the saved data which was related to the profits that were gained throughout the years to Microsoft Office Excel. I then processed all the numeric data I had into tables and charts which were then used to help my end user Mrs. Amr Gazarin calculate the profits gained throughout the past year, weak or month. Finally I have used if statements to help speed up my up calculation and printing using macros which will speed up the printing process of receipts. These Excel features will help supply A.G cafe customers with their receipt and change in the quickest most efficient way possible. Spreadsheet will be more suitable for this project than another software such as publisher because Microsoft Excel enables me to Generate graphs to organise my stocks and it also helps with complex formulas such as V-lookup whereas publisher has does not obtain the qualities needed to create an efficient sales system.
Microsoft internet explorer	6.0	Microsoft	A world wide web browser.	I located A.G Café's website using the help of a search engine on internet explorer. I then explored the large menu that A.G Café offers and transferred all the information that I thought was useful to my hard drive. The information was used to calculate the profit gained throughout the week. I have also took advantage of the use of search engines by locating pictures which where then placed in the sales system to help make it seem more eye-catching.

Hardware details:

H/W Description/Name	Model	Manufacturer	Specification	How was it used…?
LaserJet printer	Hp 1320	Hewlett Packard	Printing speed: Up to 22 ppm Printing quality: Up to 1200 x 1200 dpi Size:3x5 to 8.5x14 Dimensions: 13.8x14x10.1 in	I have collected a list of the products and their prices, all of which Cilantro offers and have inserted them in Microsoft Excel, then I used the information collected and printed out menus with 1200x1200dpi quality which was what my End-user required. The printer was also used to print out receipts in a fast and efficient way
Desktop	VAIO-PCV RX6	Sony	Speed: 260GHZ RAM memory: 512mb Hard drive: 160Gb	All the data collected for my spreadsheet will be saved on my desktops hard drive, The information was accessed quickly since the desktop works at a speed of 260ghz

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				and large amount of RAM memory.
Monitor	VAIO LS25E	Sony	Type: Flat panel display - TFT active matrix Size:19in Resolution:1680	The monitor was used to view all the information I have and the actual Sales system. The Monitor information visible with high resolution.
Graphics card	NVIDIA Quadro FX 4500	Apple	Memory interface: 256-bit Frame buffer memory: 512MB GDDR3 SDRAM Memory bandwidth: 33.6GB/s Ports: Two dual-link DVI, one stereo 3D	The Graphics card was essential in order to make all the graphics and images in my sales system such as the A.G Café logo perfect.
-Keyboard -Mouse	VAIO PCV	Sony	Connectivity: Wireless	The keyboard and the mouse were used to help me navigate around the computer. The keyboard was particularly essential because it was used to help me type in all the information needed for my sales system.

Data sources:

Data (Description)	Data Type	Where Used?	**Example**
A picture/logo.	JPEG Image	All sheets in product.	
List of A.G café products.	TEXT (Arial Brown/Size 10)	On the sales sheet.	**A.G club** **Smoked turkey** **Cheese burger** **Hot dog** **Roast beef** **Smoked salmon**

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Prices of items in canteen.	Numeric data times new roman/size 12	On the sales sheet.	EGP 10.00 EGP 9.50 EGP 8.75 EGP 8.25 EGP 11.25 EGP 12.25
Stock.	Numeric data.	On sales sheet.	50 50 50 50 50 50

Data collection:

I am planning to collect all the Data needed for the sales system that will satisfy my End-user through ways such as the internet, I will use the internet to figure out people's views and ideas of cilantro and its products , I will also use it to obtain information needed from My END -USER via email. I will collect all the information needed for the sales system using a data capture form created by my End -User which will contain information such as the names and prices of products and details about A.G café's stocks

Data input:

The sales system I am creating contains dropdown validation lists which I have created so that I can reduce the risk of error . All the data in the sales system I have inputted manually to avoid many mistakes. I then used the spelling check to input my data. All the data that was inputted in the sales system I have received from my end-user through a data capture form as my end-user is a reliable account and the data was validated using the spelling and grammar check. The main devices used when inputting the data was the keyboard to type in the data and the mouse to help choose items from the dropdown validation lists.

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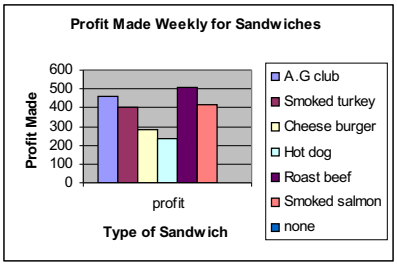
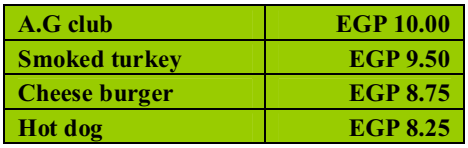
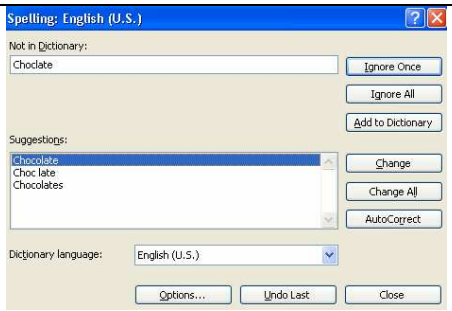
Data processing:

Data	How was it processed	Example
Numeric data showing the amount profit made from each item.	The data was manipulated to create a chart showing the weekly profit made by the café, to help the end-user identify his strength and weaknesses in sale and keep a financial record	
Data in the form of text showing the names of the products which the café offers.	The data was used to create dropdown validation lists, to reduce the risk of error and help the employees choose the products needed at a greater speed.	
Numeric data and text	The data was inserted in a table to identify the range of products and their prices offered by A.G café.	
All data in the form of text	The data was validated and corrected using computer methods such as 'spelling'.	
Numeric data and text showing the prices and names of the products that A.G café offers.	The data was manipulated to create complex formulae such as the V-lookup so as to the data to the receipt.	

A.G club	**EGP 10.00**
Smoked turkey	**EGP 9.50**
Cheese burger	**EGP 8.75**
Hot dog	**EGP 8.25**

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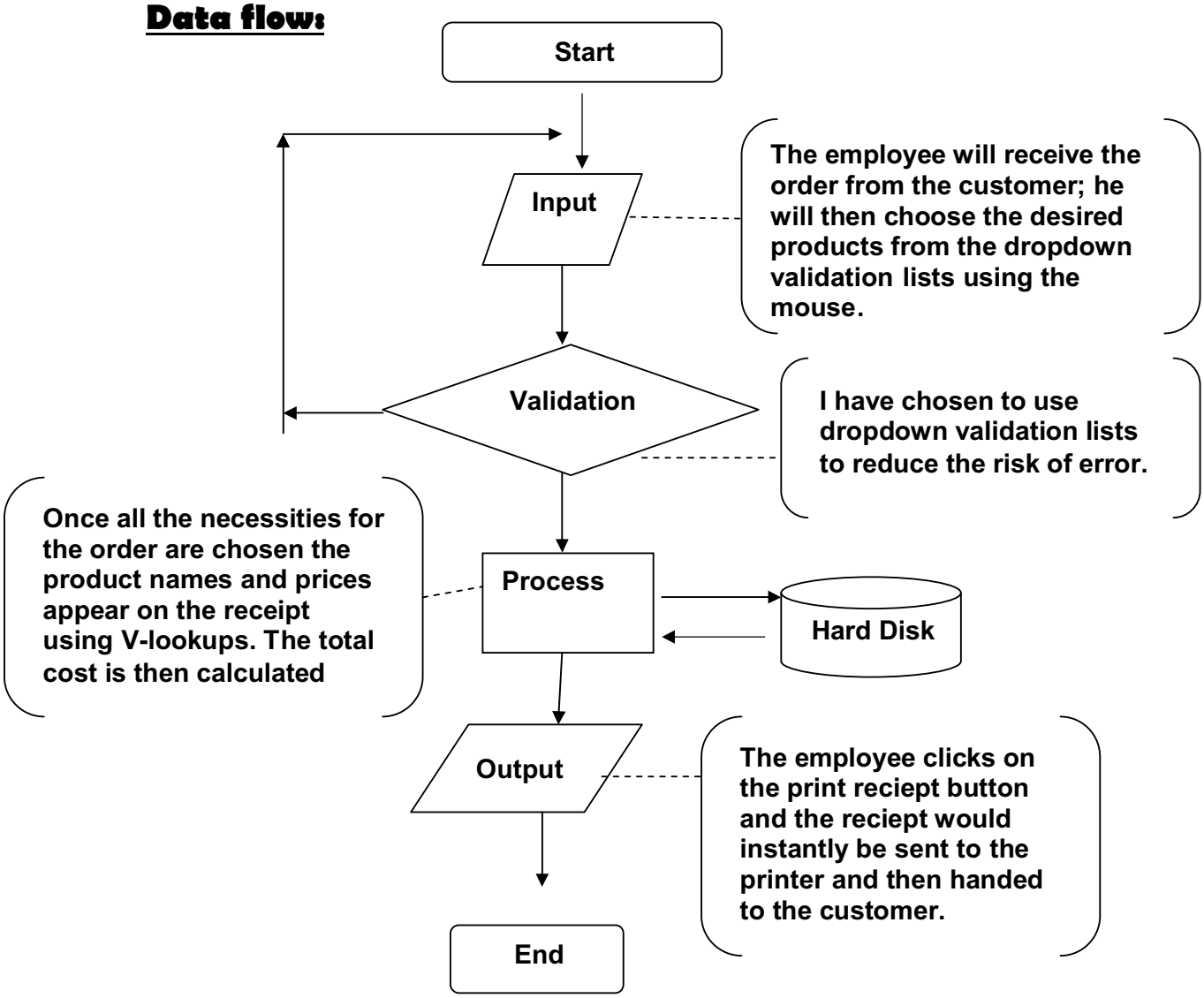
Data flow:



Data output:

The sales system I am producing has very simple procedures such as browsing through the dropdown validation lists and choosing the items required then clicking on the print receipt macro button in order to satisfy the customer and provide them with a proper invoice at t he greatest speed. The receipt will be the only item which I will output as a hardcopy using a printer. The receipt is mainly printed to keep financial records, to keep the customers aware of the money they are consuming and the café aware of the profit they are gaining. All the other features of my sales system will be outputted visually such as the dropdown validation lists, charts showing weekly profit and other data concerning stock.

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Test plans:

Test #/Name	Purpose of test	Test data	Expected result	Actual result
Macro test#1	To see whether the macros were working properly.	My end-user viewed my sales system using spreadsheet and clicked on every macro button.	That all macros would be working properly and correctly.	Unfortunately both my macros were not able to work since the security level was set at high.
V-lookup test#2	To check that there is no problem with the V-lookup functions	I browsed through the system choosing products from the combo lists, to see if they were properly linked to the receipt.	That most V-lookups will be working properly	Thankfully most V-lookups were working properly except one which, displayed #NA in the cell as the cell link was incorrect
Dropdown validation lists test#3	To check the Dropdown validation lists displayed the correct information	My end-user viewed the sales system and used every dropdown validation list.	That they all would be displaying the correct information.	All dropdown lists were showing the correct information except for one as the input range was incorrect
Chart test#4	To check the charts were presenting the correct information	My end-user carefully viewed and analysed the charts.	Chart would be presenting correct information.	The chart was presenting the correct information
Formula test#5	To check that all formulas were accurate	I carefully checked all my formulas to see if they working correctly	That most formulas would be working properly.	The formulas were all working properly as all data was in range.

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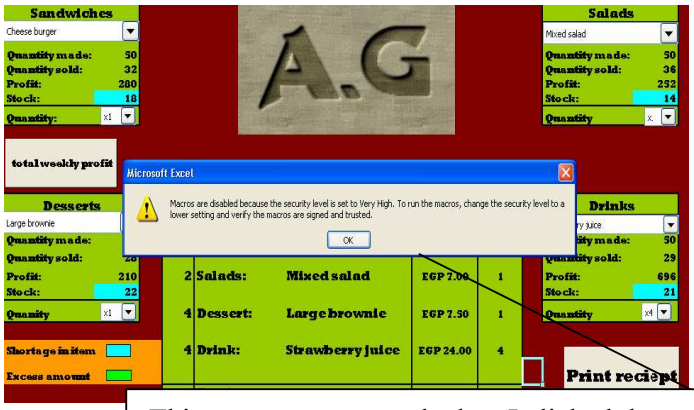
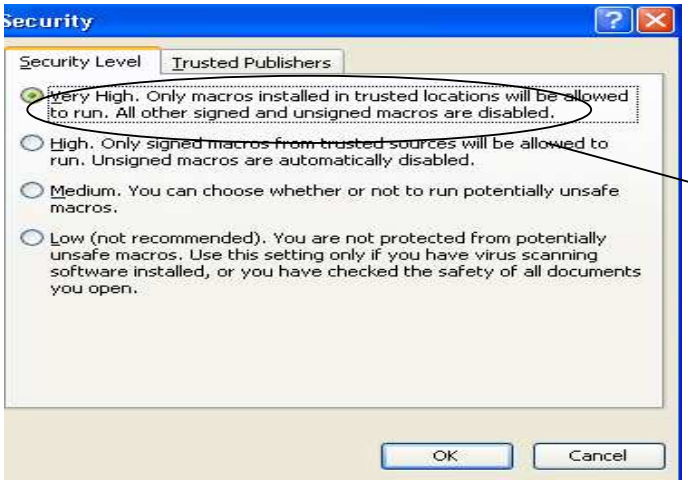
Macro test#1:

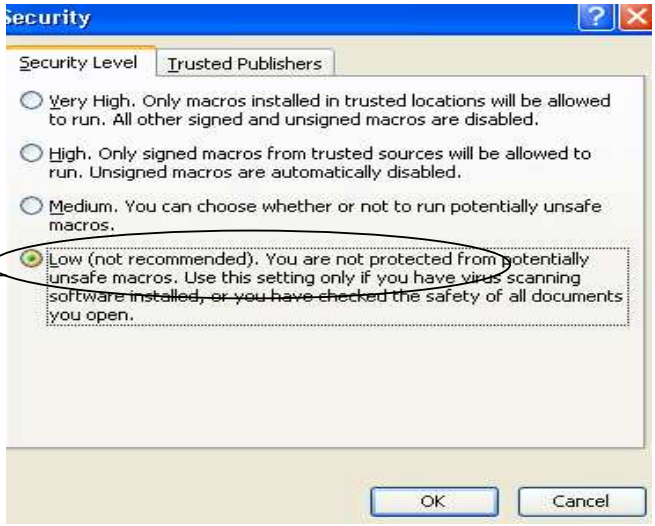


This message appeared when I clicked the macro button giving a warning that macros were disabled because of high security.



I noticed that the security level was set to very high.

I changed the security level to low so that the macros would then work properly.



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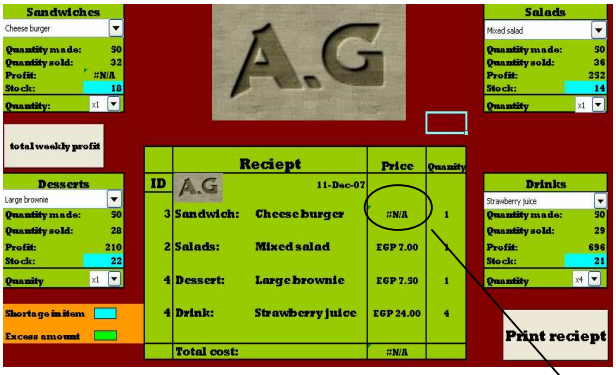
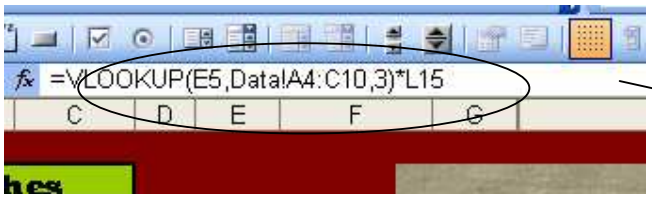
V-lookup test#2:

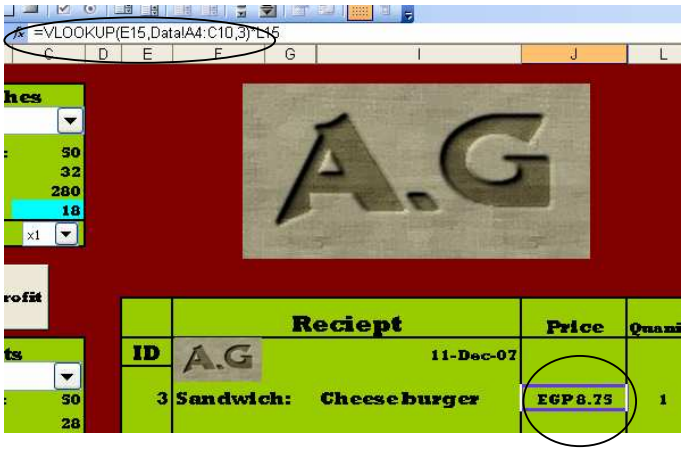


The Text #NA appeared in the cell that had the V-look up



I then clicked on the cell to take a closer look and discovered that the lookup value was incorrect

I changed the lookup value to the correct one and the v-lookup started functioning properly.



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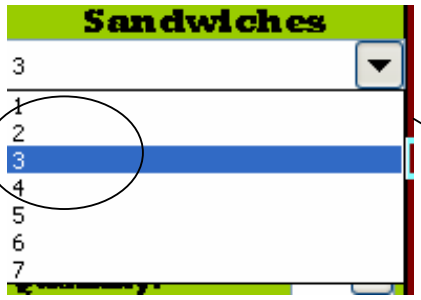
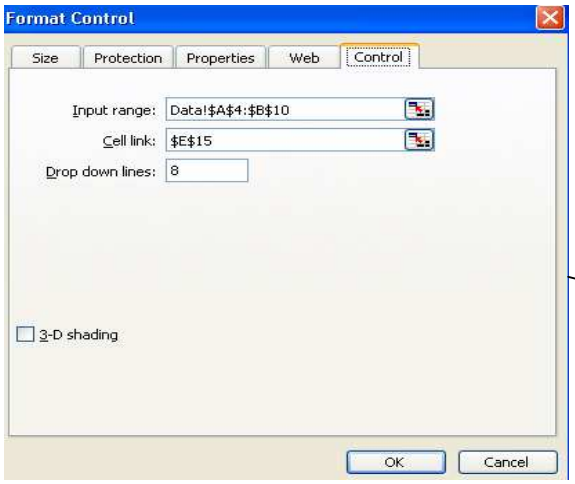
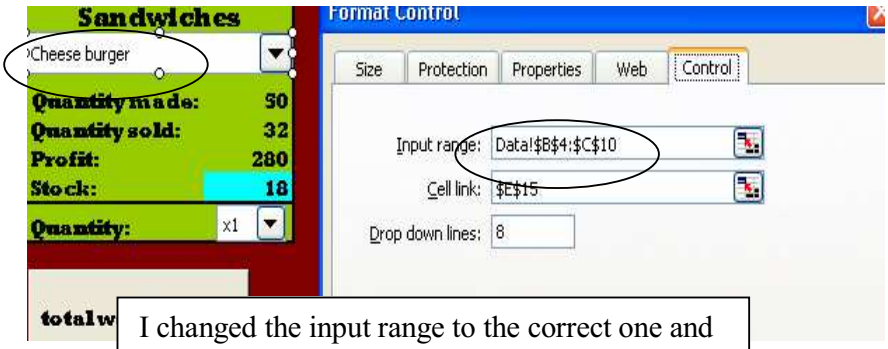
Dropdown validation list test#3:



That dropdown validation list is displaying the product ID number where it is supposed to be displaying the product name.

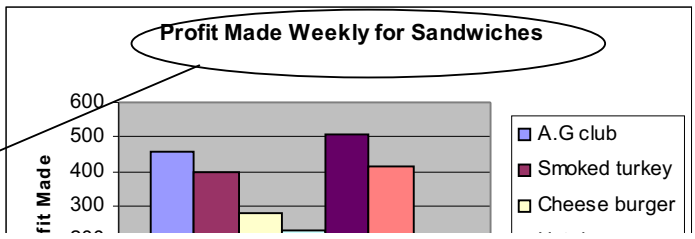


I then clicked on the format control link to see what the problem is and realised that the input range was incorrect.



I changed the input range to the correct one and now the dropdown validation list is displaying the product name not the ID number.

Chart test#4:



The chart was displaying the correct

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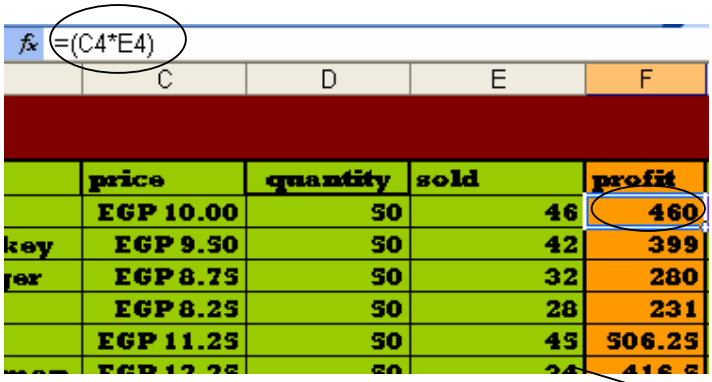
Formula test#5:



The formula was correct and the data was in range.

Effectiveness:

I have a few objectives which I aimed for concerning the A.G café sales system; my objectives are:

- Entering text and numeric data,

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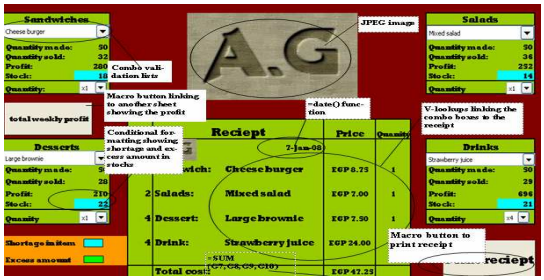
- Creating dropdown validation lists
- Creating charts
- Using complex formulae
- Using macros
- Using Validation

The problem with A.G cafes old sales system is that it was a manual system, due to this issue customers were complaining and not satisfied and employees were having hard time:

- Slow service
- Mathematical and spelling errors on receipt
- Shortage in many products due to manual organisation of stock
- Employees not able to calculate profit

My sales system product was very effective it managed to solve all my End-users problems, I managed to solve the issue of speed of service using dropdown validation lists in order to simplify and speed up the process of choosing products and I used macros to speed up the process of printing. The issue of Mathematical errors was solved using simple functions such as sum; the same method was used to help calculate profit.

I inserted conditional formatting in order to identify the user if there is a shortage in stock in a certain product so stock organisation became much simpler. I used the help of validation tom make sure that there are no spelling errors on the receipt in order to raise A.G cafes image. I included complex formulae such as V-lookup to link and identify information from other tables to the receipt. In conclusion I successfully and effectively managed to obtain my objectives to satisfy my End-users needs and have managed to insert all my End-users ideas which I have received in my memos.



Improvements

Although I have a created a sales system of many fine features, I believe that I could have added some extra features or altered the design slightly

to give the overall sales system a more a more professional and sophisticated display such as:

- Generate graphs to show increase/decrease in profit
- Use more complex formulae
- Include my end-user more through the process

Use of tools

V-lookups

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I used v-lookups to link the combo boxes and data with the receipt:

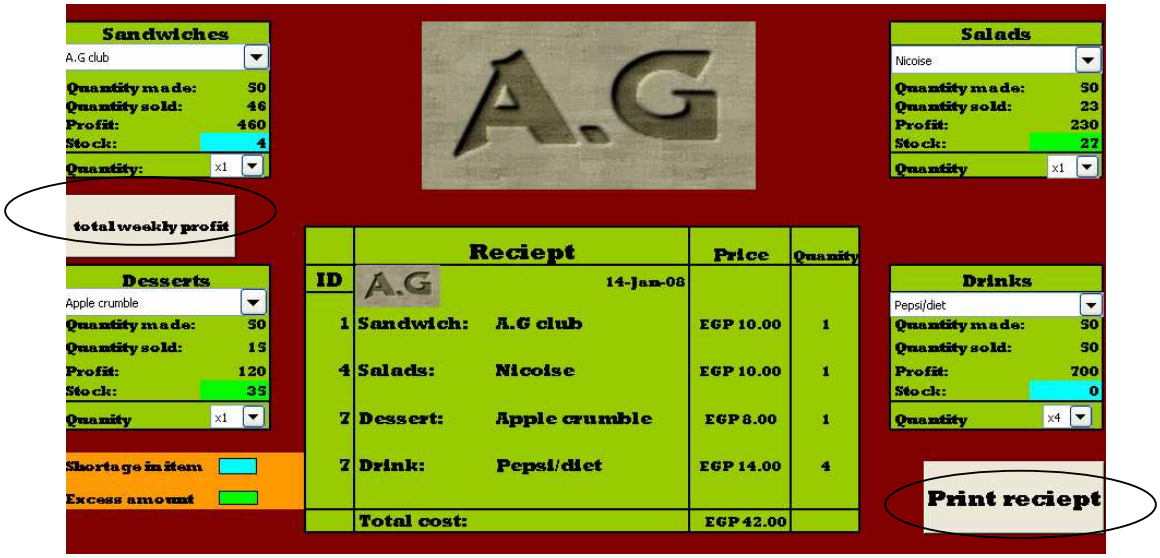
```
=VLOOKUP(E15,Data!A4:C10,2)

=VLOOKUP(E17,Data!G4:I11,2)

=VLOOKUP(E19,Data!A19:C26,2)

=VLOOKUP(E21,Data!G19:I28,2)
```

Macros
I used Macros to speed up the process of printing and to link to other data:



Dropdown validation lists
I used dropdown validation lists to display the A.G café products and to reduce the risk of any typing errors and to increase the process of choosing the products needed:

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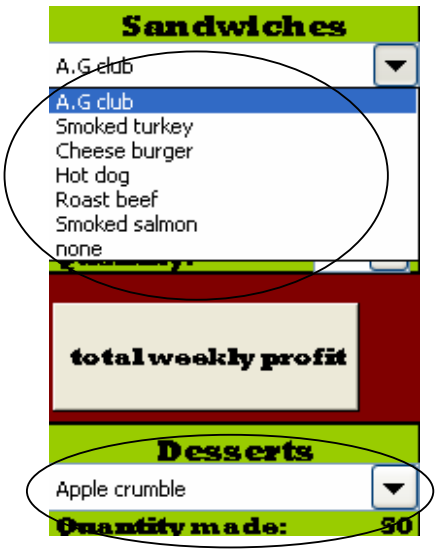

Charts
I used charts to display the weekly profit gained from a certain area of sale: