ASSIGNMENT 2: DESIGN SPREADSHEET FOR CAFENET

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BETC LEVEL 2 EXTENDED CERTIFICATE IN INFORMATION AND CREATIVE TECHNOLOGY |

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Assignment 2 – Designing a Spreadsheet

Introduction

Pass P2, P3

Create a Design

Investigate what information is typically involved in season-ticket applications and study the scenario. Consider what outputs are possible and useful to the club and produce a summary of the purpose of your spreadsheets and your specific user requirements.

Your design documentation should include a detailed:

- worksheet structure diagram indicating data validation (including lists),

e.g., multiple worksheets, cell referencing, input messages, error messages, macros, cell protection and navigation between multiple worksheets.

- description of the tools/techniques to be applied, e.g., cell formatting, functions, formulas, calculations, IF statements
- description of the input and output data presenting the results/outcome.

The design documentation should also provide:

- a description of the user requirements and intended purpose of the spreadsheet.
- a description of some alternative design ideas, e.g., choice of calculations and style
- test plan and data, e.g., test, expected result, actual result.
- design justification explaining how the design will meet the intended purpose and user requirements (note any constraints in the design)

- explain why alternative designs were rejected and consider any constraints.

Design documents, including:

- a statement of intended purpose and list of user requirements
- detailed worksheet structure diagram outlining fields, calculations, and functions, named ranges etc.
- input and output data descriptions – lists, charts, and graphs
- a test plan and test data
- a short report justifying your final design decisions and explaining why alternative design ideas were rejected and any constraints.

P2 Statement of intended purpose and user requirements.

1. Explain what is the spreadsheets used for?

   Worksheet 1 is going to be used to take the attendee's information for example their names, address, postcode etc. the ticket that they are buying which could be **Adult, Child or Concessionary.** Which match data the ticket is for **pricing** and whether the ticket purchase was **successful or not**, if yes then **output a unique ticket code + seating number**. **Worksheet 2** shows the **total amount of ticket applications submitted and ticket allocations**. **Worksheet 3** should also include the **age and height restriction** and the **number of seats available in each seating area**.

   Worksheet 1 requires us to use of calculations and tools and techniques. The data output should be user friendly, seats automatically allocated. Worksheet 2 requires us to make use of calculations and data output such as charts. Worksheet 3 requires us to have several outputs of information and considerate formatting is to be used here.

   Who are the potential users for your created design?

   the people that may use this is football managers as they may want to maybe know beforehand what to expect. Catering to see how many people would need to have food and drink. Stewards to make sure the people entering have the correct tickets and not bunking.

Admin to make sure data is correct and up to date. Sales and marketing to advertise and make sure that the people are being billed the correct amount per ticket.

P3 Produce a design for a spreadsheet including**:**

Worksheet Structure Diagram : Excel file Workbook structure diagram

Worksheet 1 - Ticket Holder Details

column headings	Range and Values	comments
name	strings	
address		must be formatted correctly
phone number	integer	
ticket type	adult, child, concessionary	string + 3 ticket types only (Limited
requested seat	requested	3 number seat
allocated seat	random	3 number seat
price of ticket	list drop down with price, intiger	must display ticket price
successful or not	Boolean value	
ticket code	unique number	ticket type + seat + number
expiray ticket	DD/MM/YYYY	needs to be according to what ticket they buy

Worksheet 3 - Season-ticket Type Details

column headings	Range and Values	comments
ticket type	adult,child,concessionary	3 ticket types
price of ticket	currency, intiger	dropdown
restrictions	string	
seats available per seating area	string + intiger	set value

Worksheet 2 - Summary Of Information

column headings	Range and Values	comments
game title	string	string + dropdown
total of application	intiger	must count the total amount of applications
ticket allocations	intiger	show how many tickets are valid

Worksheet structure - design

Format choice	description
font	Calibri
borders	thin outside, thick outline
color and shading	green,orange,blue
column alligment	separate rows seperated
Date	DD/MM/YYYY
Currency	Pound £
Headers	Bold and centered
onscreen navigation	to be implimented

How input and output is presented: Inputs are what the user enters, and the output is what is the result of the users input.

Input:

1. data validation
   makes sure the data has a limit e.g., ticket types are limited to 3 types.
2. conditional formatting
   makes sure that cells that have a trend are highlighted and clear.
3. functions formulas
   can be used to perform calculations instead of repeating it repeatedly.
4. data entry forms
   makes entering data much easier for the end user.

5. Data manipulation
   Making data easier to understand for the user.

Output:

1. Calculation results (functions and formula)
   Shows the result of the calculation, maybe a calculation to find an average?
2. Charts and Graphs
   A way to show data visually, data from a table perhaps?
3. Reports and Summaries
   A great way to present data which is relevant to someone or some people.
4. Formatted Data
   Use colour to represent data , conditional formatting ? make text clear to see and correct text size

A Test Plan : is on another document Test Plan

Merit

M2 Produce detailed designs for the spreadsheets, including:

1. Alternative solutions
2. Detailed worksheet structure diagram
3. Test data (not given)

Worksheet 1 - Ticket Holder Details

Header name	Calculations/Functions	Validations	Named Range?
1. Name			NO
2. Address (Email)		M24 1LE Letter ,2 numbers , number , 2 letters	NO
3. Phone number		07827925526 - limit number length + the area code	NO
4. Ticket type	Ticket type conditional formatting	only pick one ticket type per person , (3 ticket types)	YES
5. Requested seat		As per the spreadsheet	NO
6. Allocated seat		IF REQUESTED == ALLOCATED	NO
7. Price of ticket	must be a fixed price	fixed price must be set and linked with ticket type	YES
8. successful or not	if statement / function	if every field was entered	NO
9. Ticket code	ticket type+seat+2 numbers	RANDOM CODE	NO
10. Expiry date		if the data is passed , change status to invalid in RED	NO

MACROS	Filter the Concession and Family tickets	
CHARTS + GRAPHS		
NAVIGATION BUTTONS	Needs to direct user to the correct page	
LINKS	takes uers to website	

Worksheet structure - design

Format choice	description
font	Calibri
borders	thick outline
color and shading	teal,blue,
column alligment	no rows seperation
Date	DD/MM/YYYY
Currency	Pound £
Headers	Bold and centered , font Arial
onscreen navigation	to be implimented

Worksheet 2 - Summary Of Information

Header name	Calculations/Functions	Validations	Named Range?
Ticket type	none	Adult , Child , Concession	NO
Sum of price	Tickets sold per ticket	Maybe	NO
Child tickets	If status == successful	Add child ticket details in a separate table	NO
Average	Add up / how many	Maybe....	NO

CHARTS + GRAPHS		Shows trends I data
PIVOT TABLES		Easeir way to show trends in data
NAVIGATION BUTTONS		Needs to direct user to the correct page

Worksheet 3 - Season Ticket Holder Details

Header name	Calculations/Functions	Validations	Named Range?
1. Name		none	NO
2. Address		M24 1LE Letter ,2 numbers , number , 2 letters	NO
3. Phone number		07827925526 - limit number length + the area code	NO
4. Ticket type	conditonal formatting	Adult , child , concession	YES
5. Requested seat		format : Letter followed by 3 numbers	NO
7. Price of ticket		fixed price must be set and linked with ticket type	YES
8. successful or not		if every field was entered	NO
9. Ticket code	ticket type+seat+2 numbers	2 letters of the ticket, seat number ,2 numbers ADF02301	NO
10. Expiry date	current data + 1	if the data is passed , change status to invalid in RED	NO
11. restrictions		age limit over age of 13	NO
12. seats available per seating area		fixed limit	NO

CHARTS + GRAPHS		Shows trends I data
NAVIGATION BUTTONS		directs users to next and previous page

To conclude this, the design I have gone for is the design for M2, which contains more functions and formulae. P3 has 2 formulas whilst M2 has 4 functions in which automate ticket code, calculate averages for each ticket (Adult, Child, and Concession). M2 introduces the implementation of charts and graphs, macros, pivot tables, navigation buttons and links. All these are essential for this spreadsheet to be easily accessible and so that users can move around easily without the need of any training. P3 doesn't meet requirements as it doesn't have any of this. M2 has more simple colors that are easy to see, this means that text can be overlayed and therefore readable, P3 has 3 colors which would be too much and would ruin the spreadsheet.

Commented [AG1]: Acted on feedback , by providing a second different design for the spreadsheet

Distinction

D2 Justify the final design decisions including:

How the spreadsheet solution will fulfil the stated purpose and user requirements

The spreadsheet is used to store the details of people buying tickets for a football match, it solves the problems of writing on paper as its easily editable and available whenever possible and formatting is limitless. The spreadsheet expects the user to enter their details such as name and phone number to seat selection and type of ticket they would like to purchase. This design makes the user who is doing this feel at ease when doesn't have little to no experience. Format is well shown and shows where things must go. The spreadsheet uses key features such as functions and formulas such as if statements. These help to determine the result displayed to the user. Validation makes sure that the data entered is correct. The sheet is split into 3 sheets which are:

1. Worksheet 1. Users' information
2. Worksheet 2: summary of information
3. Worksheet 3: season ticket holder details

This makes the spreadsheet more organised and easier to find data. It will also include a menu worksheet to navigate to the worksheets as well as buttons on each page to make navigating easier. The spreadsheet is tailored to meet requirements as it has automation to generate things such as seats and ticket codes. This spreadsheet is effective and makes sure that data is valid and helps to improve productivity as well as streamline tasks that would've been done manually. Little to no training required for this spreadsheet as it easy to put the data in. The spreadsheet is easily expandable and if applicable the format may need to be changed.

In conclusion, the spreadsheet does meet user requirements and works as intended. Not much training as the spreadsheet is easy to use. Functions and formulas to make calculations nice and automated. Validations to make sure data is entered correctly. Formatting makes the design more user friendly.

1. Any constrains to the design.

1. If there needs to be an extra couple of rows, may be abit messy and if so may need to consider a redesign.
2. Very hard to add more features as it may become more complex and very big and hard to manage e.g. merging too many cells
3. Trying to maintain a user-friendly interface will be hard to do as it gets more and more complicated.
4. Spreadsheets from time to time as you update, some things may be updated and may break things which can be hard to resolve and may take more time to do
5. If you use charts, then the data may become more complex and hard to read