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Assignment 1 – Uses and Features of Spreadsheet Software Packages

Introduction

Uses and Features of Spreadsheet Software Packages

Before you create the spreadsheet, the football club's managers would like some information about how spreadsheets are used in the real world.

He has asked you to review two different kinds of spreadsheets and to prepare a short presentation discussing the strengths and weaknesses of each of the spreadsheets.

The two spreadsheets should be designed for different purposes, for example:

- +cost modelling
- analysis of data
- tracking learners progress and recording results
- creating league timetables and match results
- stock control.

Create the presentation using PowerPoint® slides and notes. Make sure the presentation describes the below.

- The purpose of both spreadsheets.
- The purpose of the tools and techniques of both spreadsheets, e.g., to aid usability, to increase productivity, to improve accuracy and to present output data.
- How the tools and techniques of both spreadsheets are used, e.g., cell replication and formatting, page setup and user interfaces.

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You should also:

- Review how the features (e.g., functions, layout and structure) could improve productivity, accuracy and usability in both spreadsheets.
- Discuss the strengths and weaknesses of both spreadsheets.

Spreadsheet 1 Ticket Sales

	A	B	C	D	E	F
				Adult Cost:	£25.00	
		Ticket Sales		Child Cost:	£8.00	
				Discounted Cost:	£10.00	
				Anticipated Guest Count:	100	
		Football match		Total Tickets Sold:	1	
				Total Ticket Sales:	£8.00	

Name	Adult	Child	Discounted
Person 1		1	
Person 2			
Person 3			
Person 4			
Person 5			
Person 6			

Pass

Purposes of Spreadsheet 1: to show and calculate the cost of tickets for either children or adults for the football match

Cost modelling

Analysis of data

Name:

Tracking learner process

Recording results

League tables

Stock control

Use of spreadsheet software tools and techniques, e.g.:

Tools and techniques

Tool / technique	Used in Ticket spreadsheet?	Where / how?

Name:

cell manipulation (e.g., entering and editing data, autofilling, replication, conditional formatting (to highlight outcomes))	Autofill could have been used to populate the Names column			
		Name	Adult	Child
		Person 1		1
		Person 2		
		Person 3		
		Person 4		
		Person 5		
		Person 6		

Name:

cell formatting (e.g., colours, shading, merging cells, alignment)	Key cells have been coloured. Widths has been adjusted to fit text. Column D., etc have been aligned to centre	
data manipulation (e.g., filters, sorts, pivot tables)	N/A	N/A
formulae (e.g., add, subtract, divide, multiply)	Calculate the total amount of the valued ticket sold	
functions (e.g., sum, average, count and countIF, lookup, index)	N/A	N/A

Name:
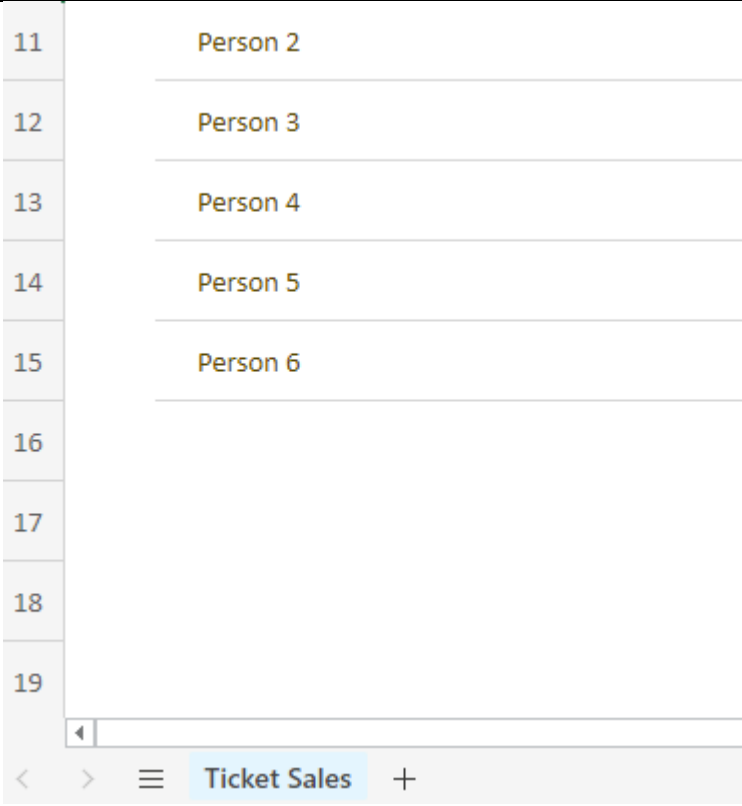
logical functions (e.g., IF, AND, OR, NOT)	To compare statements and output a true or false value (BOOL)	
data validation	N/A	N/A
relative and absolute cell referencing	N/A	N/A
boxes (e.g., lists, drop-down)	N/A	N/A

Name:

data entry forms	Where there is data in one or more cells with records	
lookup tables	N/A	N/A
nested IF functions	N/A	N/A
cell protection	N/A	
types of charts and graphs (e.g., bar, pie)	N/A	N/A
chart and graph formatting (e.g., titles, resizing, labels)	N/A	N/A

Name:

worksheets (e.g., headers, page breaks, links)	The number of pages within a workbook	
conditional formatting	N/A	N/A
named ranges	N/A	N/A
goal seek – what if function	N/A	N/A
macros	N/A	N/A

11	Person 2
12	Person 3
13	Person 4
14	Person 5
15	Person 6
16	
17	
18	
19	

Ticket Sales +

Name:

Spreadsheet 2 Gaming Company

Name:

Inventory List
Gaming Company

For reorder	Inventory ID	Name	Description	Unit price	Quantity in stock	Inventory value	Reorder Level	Reorder time in days	Quantity in reorder	Discontinued?
	IN0001	Battlefield 2042	Desc 1	£51.00	100	£5,100.00	29	13	50	
⚐	IN0002	FIFA23	Desc 2	£93.00	50	£4,650.00	231	4	50	
	IN0003	World of Warfare	Desc 3	£57.00	151	£8,607.00	114	11	150	
	IN0004	The Forrest 2	Desc 4	£19.00	186	£3,534.00	158	6	50	
	IN0005	Modern Warfare 2 Gold ultimate Edition	Desc 5	£75.00	62	£4,650.00	39	12	50	
⚐	IN0006	Star Wars Jedi :Fallen Order	Desc 6	£11.00	5	£55.00	9	13	150	
	IN0007	Disney Infinity	Desc 7	£56.00	58	£3,248.00	109	7	100	Yes
⚐	IN0008	Hogwarts Legacy	Desc 8	£38.00	101	£3,838.00	162	3	100	
	IN0009	Shadow of the Tomb Raider	Desc 9	£59.00	122	£7,198.00	82	3	150	
⚐	IN0010	Star Wars Jedi :Fallen Order	Desc 10	£50.00	175	£8,750.00	283	8	150	
⚐	IN0011	Age of The Empires IV	Desc 11	£59.00	176	£10,384.00	229	1	100	
⚐	IN0012	Monopoly	Desc 12	£18.00	22	£396.00	36	12	50	
⚐	IN0013	Animal Crossing	Desc 13	£26.00	72	£1,872.00	102	9	100	
⚐	IN0014	Sniper Elite 4	Desc 14	£42.00	62	£2,604.00	83	2	100	
	IN0015	LOGO Board Game Second Edition	Desc 15	£32.00	46	£1,472.00	23	15	50	
⚐	IN0016	Call of Duty Modern Warfare	Desc 16	£90.00	96	£8,640.00	180	3	50	
⚐	IN0017	Star Wars : The Old Republic	Desc 17	£97.00	57	£5,529.00	98	12	50	
⚐	IN0018	Smart Ass Board Game	Desc 18	£12.00	6	£72.00	7	13	50	
⚐	IN0019	Black Noir Murder Escape	Desc 19	£82.00	143	£11,726.00	164	12	150	
	IN0020	Minecraft	Desc 20	£16.00	124	£1,984.00	113	14	50	
	IN0021	Apex Legend	Desc 21	£19.00	112	£2,128.00	75	11	50	
	IN0022	Red Dead Redemption II	Desc 22	£24.00	182	£4,368.00	132	15	150	
⚐	IN0023	Grand Theft Auto V	Desc 23	£29.00	106	£3,074.00	142	1	150	
	IN0024	Final Fantasy VII	Desc 24	£75.00	173	£12,975.00	127	9	100	
	IN0025	PUBG	Desc 25	£14.00	28	£392.00	21	8	50	

Name:

Purposes of Spreadsheet 2: to track the latest games revenue and how popular they are

Cost modelling

Analysis of data
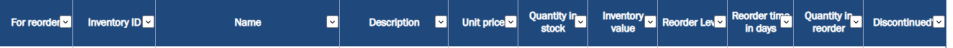
Tracking learner process

Recording results

League tables

Stock control

Use of spreadsheet software tools and techniques, e.g.:

Tools and techniques

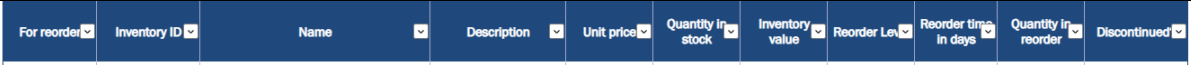| Tool / Technique	Used in Ticket spreadsheet?	Where / how?
cell manipulation (e.g., entering and editing data, autofilling, replication, conditional formatting (to highlight outcomes))	N/A	N/A

Name:

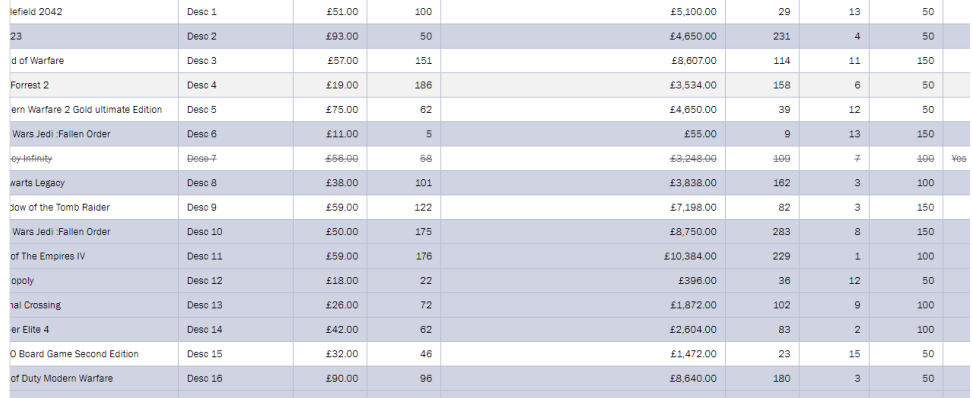| cell formatting (e.g., colours, shading, merging cells, alignment)	Key cells have been coloured. Widths has been adjusted to fit text. Column D., etc have been aligned to centre	
data manipulation (e.g., filters, sorts, pivot tables)	Making sure data is more organised	
formulae (e.g., add, subtract, divide, multiply)	N/A	N/A

Name:

functions (e.g., sum, average, count and countIF, lookup, index)	Proform calculations using specific data in a specific way	=IFERROR(([@[Quantity in stock]]<=[@[Reorder Level]])*([@[Discontinued?]]="")*@valHighlight,0)
logical functions (e.g., IF, AND, OR, NOT)	N/A	N/A
data validation	N/A	N/A

Name:

relative and absolute cell referencing	N/A	N/A
boxes (e.g., lists, drop-down)	Help users filter the data	<table><tr><td>For reorder▼</td><td>Inventory ID ▼</td><td>Name ▼</td><td>Description ▼</td><td>Unit price▼</td><td>Quantity in stock▼</td><td>Inventory value▼</td><td>Reorder Lev▼</td><td>Reorder time in days▼</td><td>Quantity in reorder▼</td><td>Discontinued▼</td></tr></table>
data entry forms	N/A	N/A
lookup tables	N/A	N/A
nested IF functions	N/A	N/A
cell protection	N/A	
types of charts and graphs (e.g., bar, pie)	N/A	N/A
chart and graph formatting (e.g., titles, resizing, labels)	N/A	N/A

Name:

worksheets (e.g., headers, page breaks, links)	The number of pages within a workbook	
conditional formatting	Helps make patterns and trends better to see	
named ranges	N/A	N/A
goal seek – what if function	N/A	N/A
macros	N/A	N/A

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Merit

Review how the features (e.g., Functions, layout and structure) could improve productivity, accuracy and usability in both spreadsheets. Explain how the tools using in this spreadsheet make it easier than using pen and paper.

The spreadsheet has some productive layouts which mean that it can be more productive than pen and paper. It has over 400 functions default which makes calculating easier. You can add subtract multiply and divide easier compared to pen and paper. You can improve productivity by not only making tables but adding filters to make it easier to understand. Using conditional formatting to organise the data and use colour coding to see trends in data. Not only that, but you can also convert data to graphs. You can alter fonts and make things the way you like, you can't do that with pen and paper. You can type as many numbers as you want as you can tell the computer to calculate the amounts for you. You are limited on paper as you can make mistakes. You can do things such as data manipulation, name ranges, cell formatting etc. Tools in spreadsheets make it easier to manage and store data rather than pen and paper as you can put as much as you want in the workbook, not only that, but you can also have multiple worksheets for multiple purposes in the one excels file.

Distinction

Discuss both strengths and weaknesses of both spreadsheets.

Strengths

1. **Football match ticket sales spreadsheet**
   - Data organisation: data is organised and easy to read
   - Calculations: using formulas to calculate easily for total ticket sales
   - Budgeting and forecasting: can predict and estimate number of people attending
   - Sharing: easy to share to different people and beneficial

2. **Game inventory list (gaming company)**
   - Easy to use easy to input games and data, easy to read
   - Data organisation: excel provides tools to filter data and sort data

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- Simple collaboration: people within the company that has access doesn't need to be trained to use the spreadsheet and can easily use it
- History tracking: can keep historical data for the games and can help to understand how the games evolved over time
- Conditional formatting: this allows to show data with a particular trend

Weaknesses

1. **Football match ticket sales spreadsheet**
- Data entry errors: human error during data entry leads to inaccuracies in sales and calculations of ticket sales as well as customer information
- Limited scalability: may have trouble handling large data sets
2. **Game inventory list (gaming company)**
- Scalability: excel not suited for very extreme number of datasets
- Version control: managing different versions of the same file can be challenging and leads to confusion
- Concurrency issues: excel may not be able to handle multiple team members to enter data all at the same time, conflicts therefore may arise
- Limited automation; may not provide a level of automation required for advanced game development
- Dependency on spreadsheet skills: effective use of spreadsheets requires skills from experts that know excel to a
- Having more than 1 copy: same games at a different price may lead to confusion and possible inequalities