

Computing

Lesson 6: Conditional Formatting

Spreadsheets

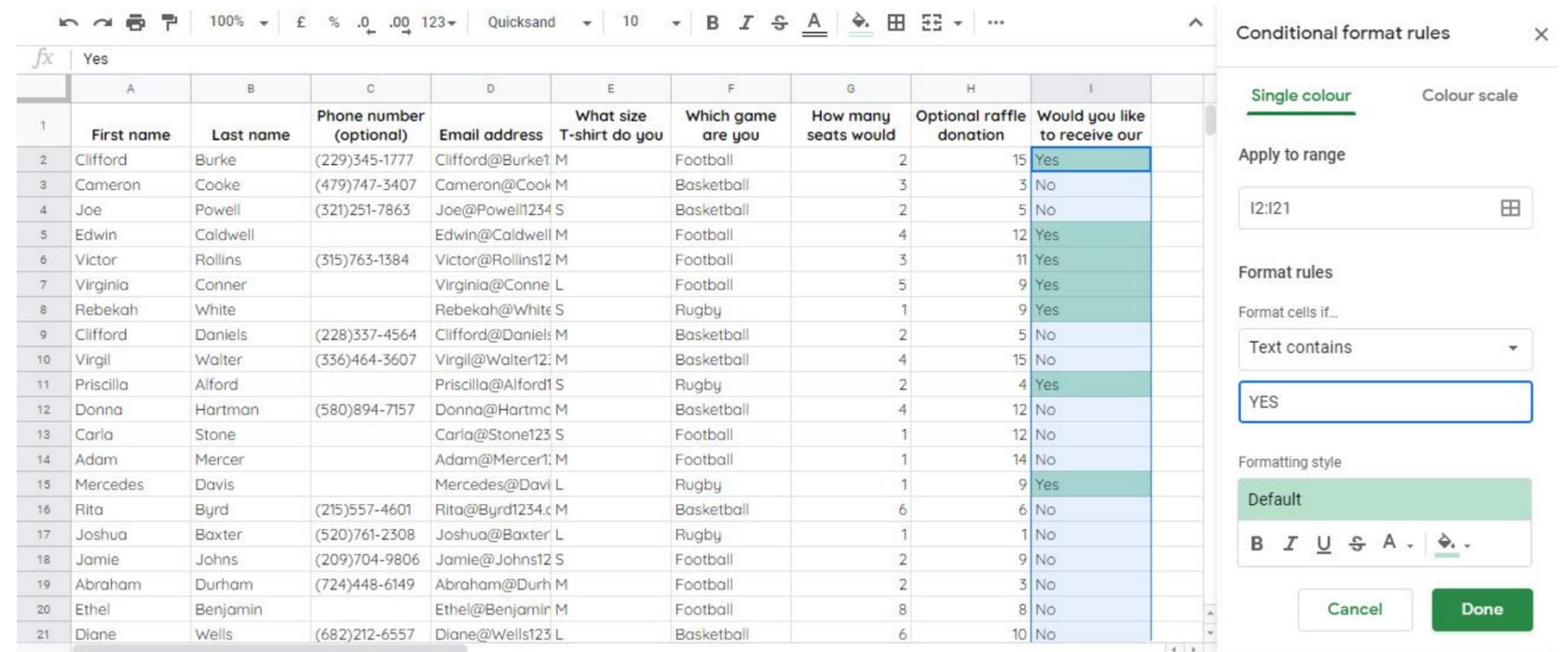
Halima Bhayat

Materials from the Teach Computing Curriculum created by the National Centre for Computing Education



Conditional Formatting

- This is when the spreadsheet highlights cells of a similar criteria.
- Conditional Formatting is good for analysing data.
- Conditional formatting can be set to certain values so that they can be highlighted as seen in the image on the next slide.



Credit: Google Sheets screenshot: Halima Bhayat



Task 2 - Conditional Formatting

The screenshot shows a Google Sheets spreadsheet with the following data:

| | A | B | C | D | E | F | G | H | I |
|----|------------|-----------|-------------------------|-------------------|--------------------------|--------------------|----------------------|--------------------------|-------------------------------|
| 1 | First name | Last name | Phone number (optional) | Email address | What size T-shirt do you | Which game are you | How many seats would | Optional raffle donation | Would you like to receive our |
| 2 | Clifford | Burke | (229)345-1777 | Clifford@Burke1 | M | Football | 2 | 15 | Yes |
| 3 | Cameron | Cooke | (479)747-3407 | Cameron@Cook | M | Basketball | 3 | 3 | No |
| 4 | Joe | Powell | (321)251-7863 | Joe@Powell1234 | S | Basketball | 2 | 5 | No |
| 5 | Edwin | Caldwell | | Edwin@Caldwell | M | Football | 4 | 12 | Yes |
| 6 | Victor | Rollins | (315)763-1384 | Victor@Rollins12 | M | Football | 3 | 11 | Yes |
| 7 | Virginia | Conner | | Virginia@Conne | L | Football | 5 | 9 | Yes |
| 8 | Rebekah | White | | Rebekah@White | S | Rugby | 1 | 9 | Yes |
| 9 | Clifford | Daniels | (228)337-4564 | Clifford@Daniels | M | Basketball | 2 | 5 | No |
| 10 | Virgil | Walter | (336)464-3607 | Virgil@Walter123 | M | Basketball | 4 | 15 | No |
| 11 | Priscilla | Alford | | Priscilla@Alford1 | S | Rugby | 2 | 4 | Yes |
| 12 | Donna | Hartman | (580)894-7157 | Donna@Hartma | M | Basketball | 4 | 12 | No |
| 13 | Carla | Stone | | Carla@Stone123 | S | Football | 1 | 12 | No |
| 14 | Adam | Mercer | | Adam@Mercer1 | M | Football | 1 | 14 | No |
| 15 | Mercedes | Davis | | Mercedes@Davi | L | Rugby | 1 | 9 | Yes |
| 16 | Rita | Byrd | (215)557-4601 | Rita@Byrd1234.c | M | Basketball | 6 | 6 | No |
| 17 | Joshua | Baxter | (520)761-2308 | Joshua@Baxter | L | Rugby | 1 | 1 | No |
| 18 | Jamie | Johns | (209)704-9806 | Jamie@Johns12 | S | Football | 2 | 9 | No |
| 19 | Abraham | Durham | (724)448-6149 | Abraham@Durh | M | Football | 2 | 3 | No |
| 20 | Ethel | Benjamin | | Ethel@Benjamin | M | Football | 8 | 8 | No |
| 21 | Diane | Wells | (682)212-6557 | Diane@Wells123 | L | Basketball | 6 | 10 | No |

The 'Conditional format rules' panel on the right shows the following configuration:

- Rule type: Single colour
- Apply to range: 12:121
- Format rules: Text contains
- Text to match: YES
- Formatting style: Default (Green background)

Credit: Google Sheets screenshot: Halima Bhayat



Task 1 - U Tub data

| | A | B | C | D | E | F |
|----|------------|-------|---------------------------------|--------|-------------|----------------|
| 1 | U Tub data | | | | | |
| 2 | RANK | GRADE | DISPLAY NAME | VIDEOS | SUBSCRIBERS | VIEWS |
| 3 | 3 | A+ | 5-Minute Crafts | 3,412 | 59,337,958 | 15,069,859,766 |
| 4 | 16 | B+ | Ariana Grande | 132 | 37,220,124 | 862,868,661 |
| 5 | 4 | A++ | Cocomelon - Nu | 446 | 53,793,367 | 34,214,512,261 |
| 6 | 12 | A+ | Ed Sheeran | 151 | 41,210,557 | 17,609,857,376 |
| 7 | 14 | B | EminemMusic | 117 | 38,524,091 | 729,125,080 |
| 8 | 22 | A | Felipe Neto | 1,906 | 33,867,076 | 7,648,974,332 |
| 9 | 13 | B+ | HolaSoyGerman | 137 | 39,620,014 | 3,981,831,901 |
| 10 | 8 | B+ | Justin Bieber | 134 | 46,084,462 | 626,754,957 |
| 11 | 21 | B- | Katy Perry | 97 | 34,593,278 | 361,592,357 |
| 12 | 5 | A++ | SET India | 31,919 | 52,967,189 | 37,433,981,397 |
| 13 | 20 | B | Taylor Swift | 166 | 35,111,601 | 256,341,730 |
| 14 | 23 | A | TheEllenShow | 10,563 | 33,610,763 | 16,702,718,867 |
| 15 | 7 | A+ | WWE | 42,676 | 46,883,085 | 34,561,137,762 |
| 16 | | | | | | |

Credit: Google Sheets screenshot: Halima Bhayat



U Tub data

- You will need to recreate the spreadsheet shown.
- Sort the data into alphabetical order for the column 'display name'?
- Add a conditional format on the column 'vedios' where all cells that start with 1 have a colour?
- Filter the data to find all A+ Grades and then unfilter?

The screenshot shows a Google Sheet with a table titled 'U Tub data'. The table has columns for RANK, GRADE, DISPLAY NAME, VIDEOS, SUBSCRIBERS, and VIEWS. The 'VIDEOS' column is highlighted in light blue, indicating a conditional format rule. The 'Conditional format rules' panel on the right shows the rule 'Single colour' applied to the range 'D3:D15' with the condition 'Text starts with 1'.

| RANK | GRADE | DISPLAY NAME | VIDEOS | SUBSCRIBERS | VIEWS |
|------|-------|-----------------|--------|-------------|----------------|
| 3 | A+ | 5-Minute Crafts | 3,412 | 59,337,958 | 15,069,859,766 |
| 16 | B+ | Ariana Grande | 132 | 37,220,124 | 862,868,661 |
| 4 | A++ | Cocomelon - Nu | 446 | 53,793,367 | 34,214,512,261 |
| 12 | A+ | Ed Sheeran | 151 | 41,210,557 | 17,609,857,376 |
| 14 | B | EminemMusic | 117 | 38,524,091 | 729,125,080 |
| 22 | A | Felipe Neto | 1,906 | 33,867,076 | 7,648,974,332 |
| 13 | B+ | HolaSoyGerman | 137 | 39,620,014 | 3,981,831,901 |
| 8 | B+ | Justin Bieber | 134 | 46,084,462 | 626,754,957 |
| 21 | B- | Katy Perry | 97 | 34,593,278 | 361,592,357 |
| 5 | A++ | SET India | 31,919 | 52,967,189 | 37,433,981,397 |
| 20 | B | Taylor Swift | 166 | 35,111,601 | 256,341,730 |
| 23 | A | TheEllenShow | 10,563 | 33,610,763 | 16,702,718,867 |
| 7 | A+ | WWE | 42,676 | 46,883,085 | 34,561,137,762 |

Credit: Google Sheets screenshot: Halima Bhayat



Task 2 - U Tub Function and formula

fx | =IF(E3>50000000,"Over 50 million subs!","Too low")

| | A | B | C | D | E | F | G | H | I | J |
|----|-------------------|-------|-----------------|--------|-------------|----------------|--------------------------|---|------------------------------|---------|
| 1 | U Tub data | | | | | | | | | |
| 2 | RANK | GRADE | DISPLAY NAME | VIDEOS | SUBSCRIBERS | VIEWS | Check | | Ranking | Answers |
| 3 | 3 | A+ | 5-Minute Crafts | 3,412 | 59,337,958 | 15,069,859,766 | Over 50 million subs! | | The highest value is | |
| 4 | 16 | B+ | Ariana Grande | 132 | 37,220,124 | 862,868,661 | Autofill all this column | | The lowest value is | |
| 5 | 4 | A++ | Cocomelon - Nu | 446 | 53,793,367 | 34,214,512,261 | | | The average value is | |
| 6 | 12 | A+ | Ed Sheeran | 151 | 41,210,557 | 17,609,857,376 | | | Number of Non-blank cells | |
| 7 | 14 | B | EminemMusic | 117 | 38,524,091 | 729,125,080 | | | | |
| 8 | 22 | A | Felipe Neto | 1,906 | 33,867,076 | 7,648,974,332 | | | | |
| 9 | 13 | B+ | HolaSoyGerman | 137 | 39,620,014 | 3,981,831,901 | | | Grade | Answers |
| 10 | | B+ | Justin Bieber | 134 | 46,084,462 | 626,754,957 | | | Count how many A++ there are | |
| 11 | 21 | B- | Katy Perry | 97 | 34,593,278 | 361,592,357 | | | Count how many A+ there are | |
| 12 | 5 | A++ | SET India | 31,919 | 52,967,189 | 37,433,981,397 | | | Count how many A there are | |
| 13 | 20 | B | Taylor Swift | 166 | 35,111,601 | 256,341,730 | | | Count how many B+ there are | |
| 14 | 23 | A | TheEllenShow | 10,563 | 33,610,763 | 16,702,718,867 | | | Count how many B there are | |
| 15 | 7 | A+ | WWE | 42,676 | 46,883,085 | 34,561,137,762 | | | Count how many B- there are | |
| 16 | | | Total | | | | | | | |
| 17 | | | | | | | | | | |

Credit: Google Sheets screenshot: Halima Bhayat



U Tub Function and formula

- You will need to recreate the spreadsheet shown.
- Add an IF formula as shown in column 'G' then autofill this?
- Use the SUM formula to work out the total amount of 'Videos'
- Use the AVERAGE, MAX, MIN, COUNTA formula to answer the 'Ranking' questions?
- Use the COUNTIF formula to answer the 'Grade' questions?

The screenshot shows a Google Sheet with the following data:

| U Tub data | | | | | | | | | |
|------------|-------|-----------------|--------|-------------|----------------|--------------------------|---------------------------|---------|--|
| RANK | GRADE | DISPLAY NAME | VIDEOS | SUBSCRIBERS | VIEWS | Check | Ranking | Answers | |
| 3 | A+ | 5-Minute Crafts | 3,412 | 59,337,958 | 15,069,859,766 | Over 50 million subs! | The highest value is | | |
| 16 | B+ | Ariana Grande | 132 | 37,220,124 | 862,868,661 | Autofill all this column | The lowest value is | | |
| 4 | A++ | Cocomelon - Nu | 446 | 53,793,367 | 34,214,512,261 | | The average value is | | |
| 12 | A+ | Ed Sheeran | 151 | 41,210,557 | 17,609,857,376 | | Number of Non-blank cells | | |
| 14 | B | EminemMusic | 117 | 38,524,091 | 729,125,080 | | | | |
| 22 | A | Felipe Neto | 1,906 | 33,867,076 | 7,648,974,332 | | | | |
| 13 | B+ | HolaSouGerma | 137 | 39,620,014 | 3,981,831,901 | | | | |
| | B+ | Justin Bieber | 134 | 46,084,462 | 626,754,957 | | | | |
| 21 | B- | Katy Perry | 97 | 34,593,278 | 361,592,357 | | | | |
| 5 | A++ | SET India | 31,919 | 52,967,189 | 37,433,981,397 | | | | |
| 20 | B | Taylor Swift | 166 | 35,111,601 | 256,341,730 | | | | |
| 23 | A | TheEllenShow | 10,563 | 33,610,763 | 16,702,718,867 | | | | |
| 7 | A+ | WWE | 42,676 | 46,883,085 | 34,561,137,762 | | | | |
| | | Total | | | | | | | |

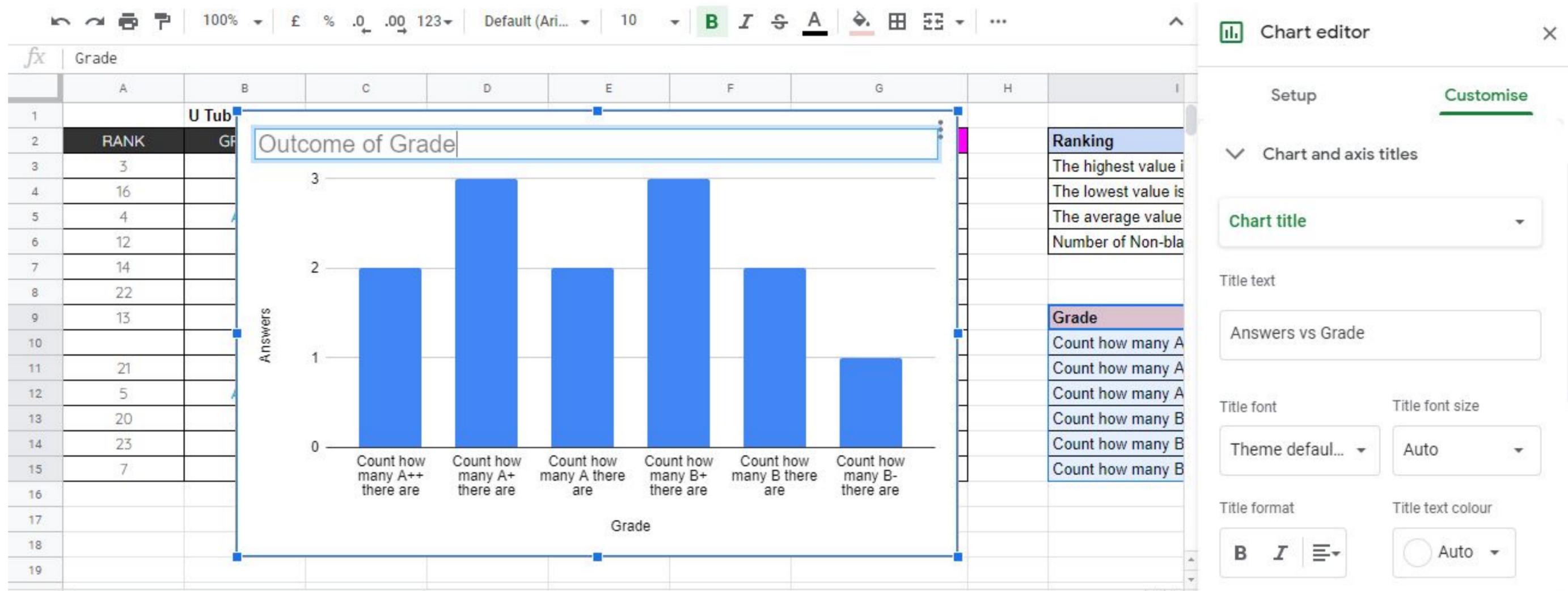
Summary statistics on the right:

| Grade | Answers |
|------------------------------|---------|
| Count how many A++ there are | |
| Count how many A+ there are | |
| Count how many A there are | |
| Count how many B+ there are | |
| Count how many B there are | |
| Count how many B- there are | |

Credit: Google Sheets screenshot: Halima Bhayat



Task 3 - U Tub Grade chart



Credit: Google Sheets screenshot: Halima Bhayat



U Tub Chart

- You will need your spreadsheet from Task 2.
- Create a bar chart to analyse data on 'Grades'.
 - **Tip:** highlight the grades in the seperate table you made.
- Which grades have been used the most?



Credit: Google Sheets screenshot: Halima Bhayat

