Q1. There are 50 dice. 20 of them are facing 4. Remaining 30 are facing 3. You can't see which dice is facing what number. Write pseudo code to separate these 50 dice into 2 groups, so that both groups have the same number of 4's.

Solution:

```
//the sum of the opposite sides of a dice =7. So, if back=3 then face of the dice=4.
```

```
function group(back[50]: back of the dices)
       declare cluster1[40], cluster2[40]
       declare and set count=0,i=0,j=0;
       for i = 0 to i < 50
               if count<10 then
                       set cluster1[i]=back[i]
                       if back[i]=3
                              increment count
                       end if
               else
                       set cluster2[j]=back[i]
                       increment j
               end if
       increment i
       end for
end
```

Q2. A comma separated file(csv) has 5 columns and 10 rows. Write shell commands to extract the value of 3rd column 5th row and output the result into a text file.

awk -F, 'FNR == 5 {print \$3}' Sample.csv > Result.txt

```
shk@unika:~/Downloads$ awk -F , 'FNR == 5 {print $3}' Sample.csv > Result.txt
shk@unika:~/Downloads$
```

Fig1: shell command

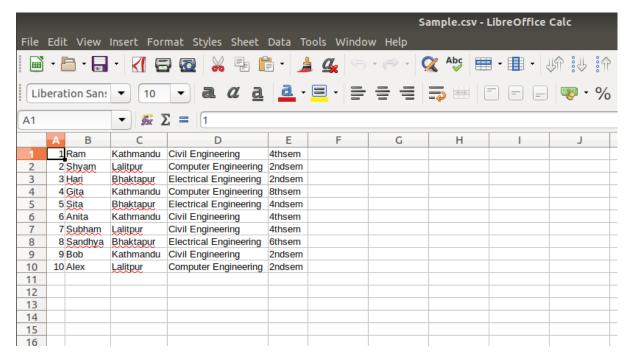


Fig2: Sample.csv



Fig3: Result.txt

Q3. Create a React Native app to show weather for the current week. You can use any open api available for fetching weather data.

// I used api.weatherunlocked.com, this site did not have Nepal's weather so I used London's latitude and longitude

The code for this is in the folder.

Screenshots:

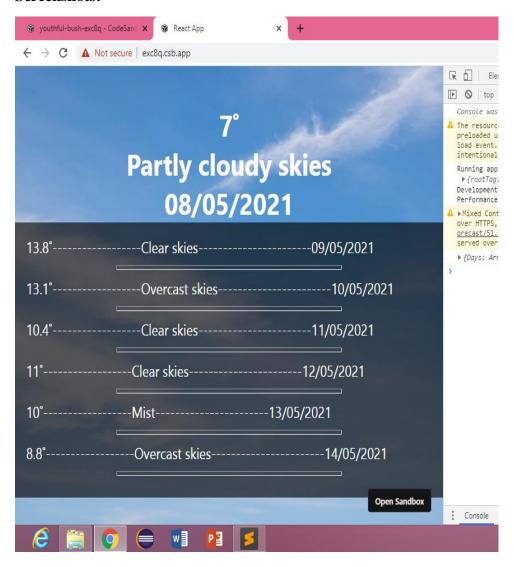


Fig4:Output

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         ▼ Timeframes: Array(8)
           ▶0: {date: "08/05/2021", time: 0, utcdate: "08/05/2021", utctime: 0, wx_desc: "Partly cloudy skies", ...}
           ▶ 1: {date: "08/05/2021", time: 300, utcdate: "08/05/2021", utctime: 300, wx_desc: "Overcast skies", ...}
▶ 2: {date: "08/05/2021", time: 600, utcdate: "08/05/2021", utctime: 600, wx_desc: "Moderate rain", ...}
           ▶ 3: {date: "08/05/2021", time: 900, utcdate: "08/05/2021", utctime: 900, wx_desc: "Moderate rain", ...}
▶ 4: {date: "08/05/2021", time: 1200, utcdate: "08/05/2021", utctime: 1200, wx_desc: "Light drizzle", ...}
           ▶ 5: {date: "08/05/2021", time: 1500, utcdate: "08/05/2021", utctime: 1500, wx_desc: "Overcast skies", _.} ▶ 6: {date: "08/05/2021", time: 1800, utcdate: "08/05/2021", utctime: 1800, wx_desc: "Sunny skies", _..}
            ▶ 7: {date: "08/05/2021", time: 2100, utcdate: "08/05/2021", utctime: 2100, wx_desc: "Clear skies", ...}
            length: 8
            ▶ __proto__: Array(0)
           date: "08/05/2021"
           humid_max_pct: 97
           humid_min_pct: 62
           moonrise_time: "04:39"
           moonset_time: "17:00"
           precip_total_in: 0.4
           precip_total_mm: 9.1
           prob_precip_pct: 94
           rain_total_in: 3
           rain_total_mm: 9
           slp_max_in: 30.04
           slp_max_mb: 1014.4
           slp_min_in: 29.67
           slp_min_mb: 1002
           snow_total_in: 0
           snow total mm: 0
           sunrise_time: "05:19"
           sunset_time: "20:36"
           temp_max_c: 17.3
           temp_max_f: 63.2
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Fig: json fetched from api