Lab 1

End goal: Build Marauder"s map for DAIICT
Objective:

1. Hands-on shell scripting
2. Apply IO-redirection, pipes, shell commands

Commands you need to be aware of : `cat`, `head`, `tail`, `cut`, `sort`, `uniq`, `grep`, `date`, `more` and then some more...

Data preparation(already done):

1. Use Short timetable to create 2 sheets(sheet1.csv, sheet.csv).
2. Join two sheets to get final timetable.

```
import pandas as pd
s1 = pd.read_csv("sheet1.csv")
s2 = pd.read_csv("sheet2.csv")
```

```
timetable_df = s2.merge(s1, left_on='Slot', right_on='Slot')
timetable_df = timetable_df[["Day",     "Time", "Course",
"Instructor","Room"]]
timetable_df.to_csv("timetable.csv", index=False)
```

Lab 1 assignment (use `timetable.csv`)

Basic Operations

1. Display Specific Day's Schedule:
   Write a bash script(`todays_schedule.sh`) that displays the schedule for `today`.
   Usage: `todays_schedule.sh`
2. Count Courses per Instructor:
   Write a bash script that counts the number of courses each instructor is teaching.
   Usage: `instructor_course_count.sh instructor_name`
3. List Courses in a Specific Room:
   Write a bash script that lists all the courses that are held in a specific room.
   Usage: `room_course_list.sh room_name`
4. Extract Timetable for a Specific Course:
   Write a bash script that extracts and displays the timetable for a specific course.
   Usage: `course_timetable.sh`

Intermediate

1. Find out when a room is empty during the week.
   Usage: `room_empty_slots.sh CEP-207`
2. Count Classes per Room per Day:
   Write a bash script to count how many classes are held in each room for each day.
   Usage: `room_class_count.sh`
   Output:

```
Room, Day, Count
CEP-207, Monday,3
CEP-103, Tuesday,5
...
```

3. Find out where an instructor would be at current time? Display "office" in case not in class hard-code daytime to test.
   Usage: `instructor_location.sh instructor_name`

Advanced (Worthy of being added into CV if completed)

1. Write a script that takes student id and locate that student in college in real time.
   - Augment csv file and add batch_ids(202412, 202411 etc) corresponding to each course.
   - Write script to locate the batch , batch gives away the student

Future work

Map people to actual positions on a graphical map.