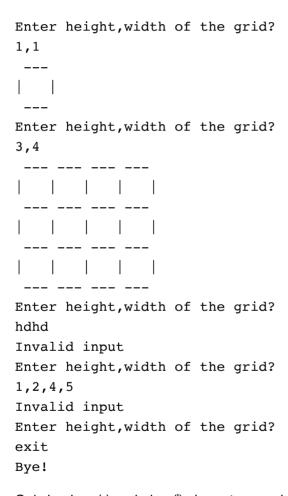# 1 Grid Problem

- Please submit two files for this assignment - `FIRSTNAME_LASTNAME_grid_1.py` and `FIRSTNAME_LASTNAME_grid_2.py`.

Part 1 :

- Write a function taking two arguments `height` and `width` as input and prints a grid of dimensions `height x width`.
- Write a script to take `height` and `width` as input in a REPL (infinite loop) and print out grid after each set of inputs. You can take them together or in separate lines... Up to you.
- Have some keyword for exiting the loop like "x" or "exit".
- In case of invalid input you should give an error message.

Example :

```
Enter height,width of the grid?
1,1
 ---
|   |
 ---
Enter height,width of the grid?
3,4
 --- --- --- ---
|   |   |   |   |
 --- --- --- ---
|   |   |   |   |
 --- --- --- ---
|   |   |   |   |
 --- --- --- ---
Enter height,width of the grid?
hdhd
Invalid input
Enter height,width of the grid?
1,2,4,5
Invalid input
Enter height,width of the grid?
exit
Bye!
```

- Only hyphen (-) and pipe (|) characters are being used. And of course space - " ".

Part 2:

- Modify the previous function to take another input special_cells which should be a list of lists of coordinates which are the coordinates of some cells in the grid. For ex : `[[1,2],[0,1],[2,3]]` .
- Print "X" in the corresponding cell if it is present in `special_cells` .
- Modify the previous script REPL to also take the coordinates as input. How you take the input is up to you again.
- Again in case of invalid input you should give an error message and ask for input again. You can start from the beginning - i.e. If someone gives height and width correctly, but messes up `special_cells` you can just restart from height and width.

Example :

```
Enter height,width of the grid?
1,1
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt
0,0
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt

 ---
| X |
 ---
Enter height,width of the grid?
2,2
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt

 --- ---
|   |   |
 --- ---
|   |   |
 --- ---
Enter height,width of the grid?
3,2
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt
2,1
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt
0,0
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt

 --- ---
| X |   |
 --- ---
|   |   |
 --- ---
|   | X |
 --- ---
Enter height,width of the grid?
ghs,2
Invalid input
Enter height,width of the grid?
3,3
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt
2,23
Invalid cells - they are outside grid!
Enter height,width of the grid?
3,3
Enter special cell as 'ROWNUM,COLNUM' (zero-indexed) or an empty line to pri
nt
```

```
fhfh
Invalid input
Enter height,width of the grid?
exit
Bye!
```

Hints : Functions, Built-in Functions, Loops, break and continue, Conditions, Lists