# Linkedin Learning Notes

# Stack data structure

Top is only easy access point like stack of plates, last in first out (LIFO)

Push add to the top. Pop remove an item,peek see item at top, is\_empty to see if stack empty

Useful for; Reverse polish notes, Stack used for syntax passing, Used in recursion

### 2d list

Used

Tabular data, game board pieces etc.

Basically when 0,1,2 of first number just points to a separate list

Graphs- we have nodes and edges within them, types are directed and undrected, can also have weighted

Representing grids and graphs

Cartesian coordinates, so 4,2 is 4 down and 2 across opposite of usual

But negative and positive parts of y axis are opposite bottom right is ++

Astrix used as blockers

If \_\_name\_\_=’\_\_main\_\_’ means that if this is main file, allows you to reuse functions in other programs

## Breadth First search algorithm

Config and explore maze gui, press s to start

Go back over depth first search as maze shown I din’t get it

Interesting ad vsualisation of maze explains behaviour, queues in clockwise direction and goes to start of queue for next ‘dequeue’

# Priority queue

Useful for resources needing to be allocated based on rules of precedence e.g. hospital

Used a lot in AI like A\* searchalgorithm

Get retrieved highest priority, put adds to queue

inner working not our business, point of abstract data type

#outputs lowest priority