Tute 4: Graphs & Standard Library

Review: Graphs

What is a graph?

What is an adjacency list?

How would you store a graph in a data structure to ensure safe automatic freeing of memory?

Programming Concepts: Vectors

What is a vector?

How can a vector be used to store and retrieve data?

How can data from a file be read to/from a vector?

How can the standard library be used to select random elements from a vector?

Compilation: None this week

Errors: Seg Faults

What is a seg fault?

What is an easy seg fault you can introduce to a program?

Debugging: Stack Frames

How can we see a list of the current stack frames when a program crashes?

How can we analyse an individual stack frame?

How can we analyse an individual variable when inside a stack frame?

Exercises:

Write a program to iterate through a vector of ints, pushing them onto a stack. Then pop them off the stack, printing each to the console.