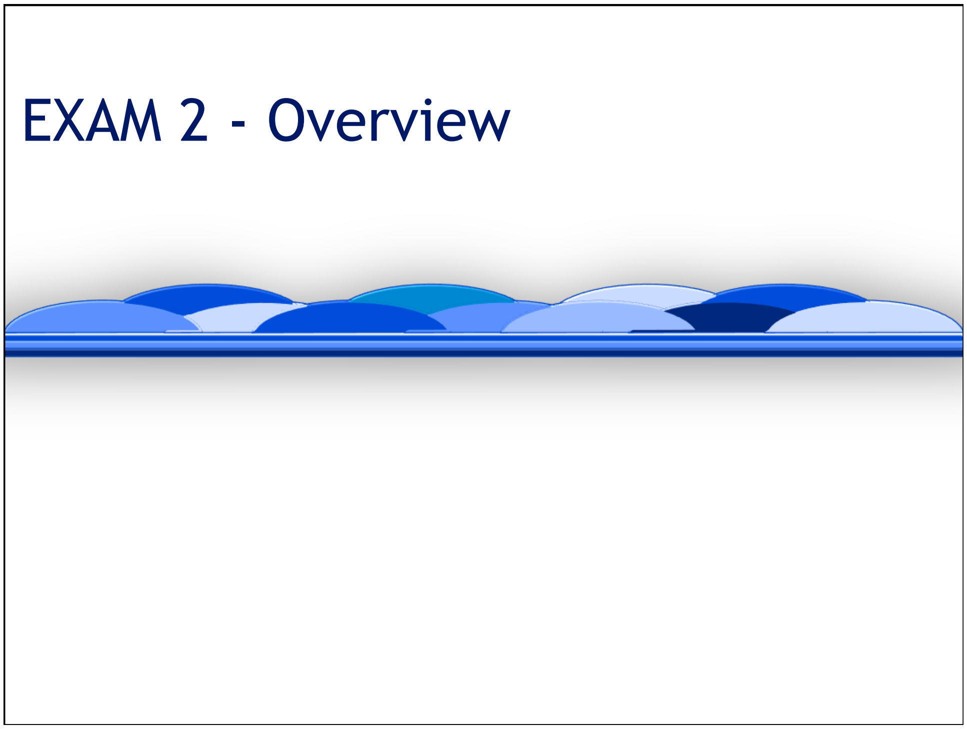
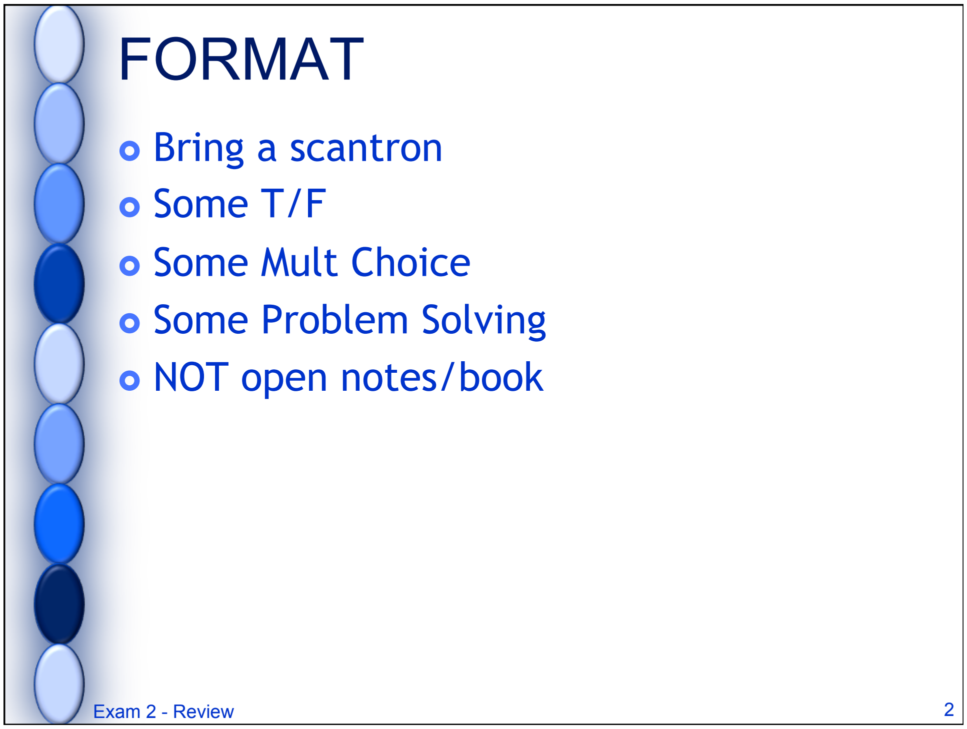
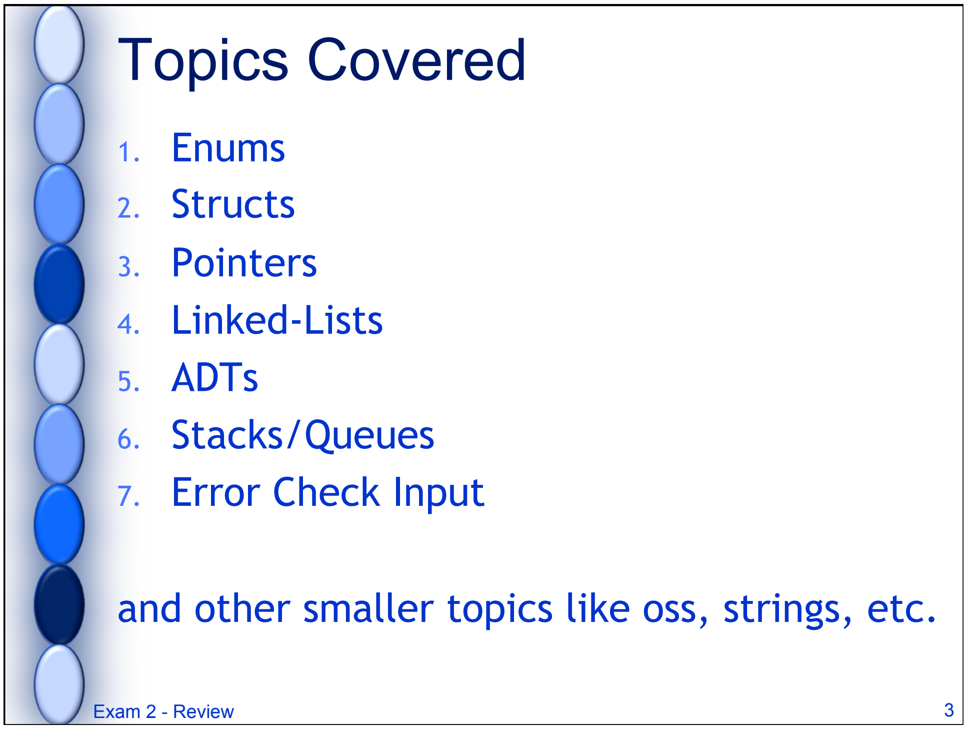


EXAM 2 - Overview



FORMAT

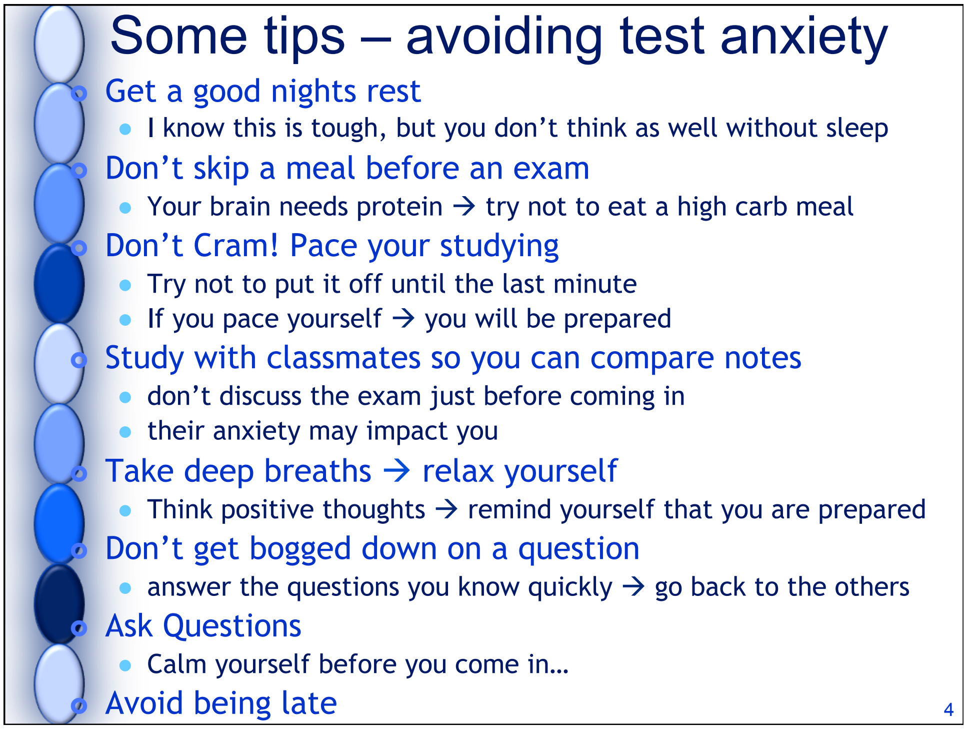
- Bring a scantron
- Some T/F
- Some Mult Choice
- Some Problem Solving
- NOT open notes/book



Topics Covered

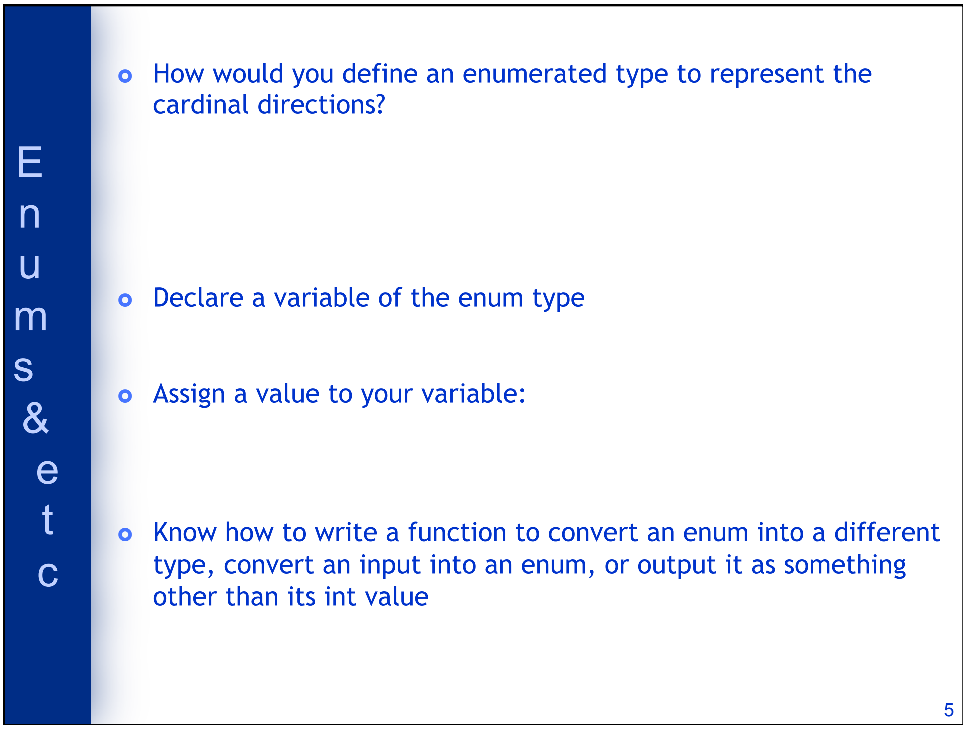
1. Enums
2. Structs
3. Pointers
4. Linked-Lists
5. ADTs
6. Stacks/Queues
7. Error Check Input

and other smaller topics like oss, strings, etc.



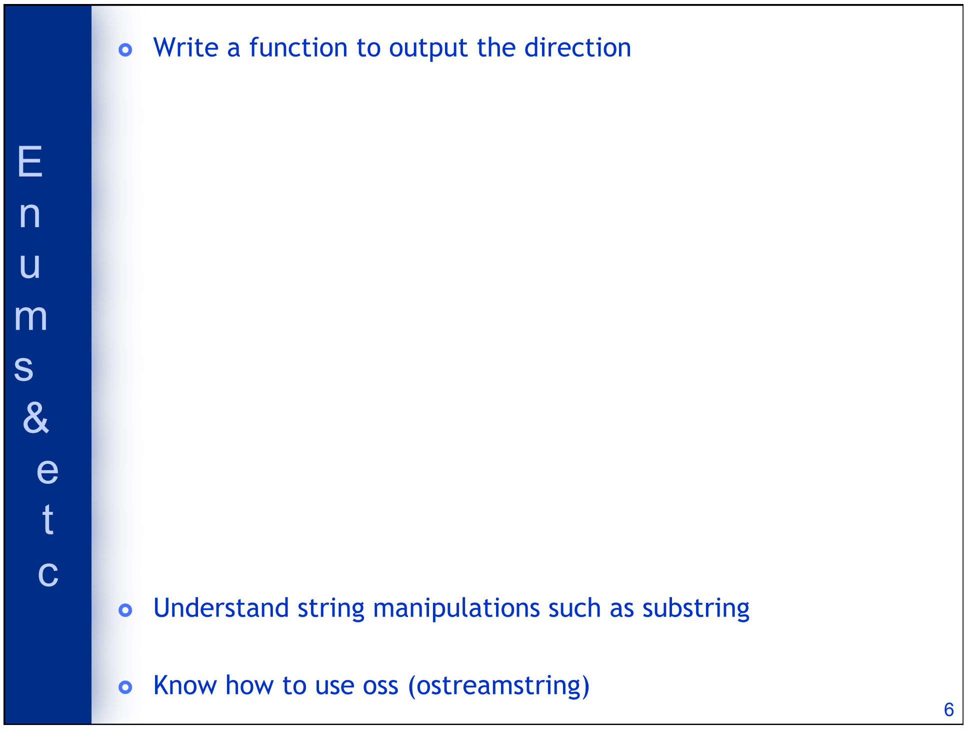
Some tips – avoiding test anxiety

- Get a good nights rest
  - I know this is tough, but you don't think as well without sleep
- Don't skip a meal before an exam
  - Your brain needs protein → try not to eat a high carb meal
- Don't Cram! Pace your studying
  - Try not to put it off until the last minute
  - If you pace yourself → you will be prepared
- Study with classmates so you can compare notes
  - don't discuss the exam just before coming in
  - their anxiety may impact you
- Take deep breaths → relax yourself
  - Think positive thoughts → remind yourself that you are prepared
- Don't get bogged down on a question
  - answer the questions you know quickly → go back to the others
- Ask Questions
  - Calm yourself before you come in…
- Avoid being late



Enums & etc

- How would you define an enumerated type to represent the cardinal directions?
- Declare a variable of the enum type
- Assign a value to your variable:
- Know how to write a function to convert an enum into a different type, convert an input into an enum, or output it as something other than its int value



Enums & etc

- Write a function to output the direction
- Understand string manipulations such as substring
- Know how to use oss (ostreamstring)

Structs

- What is the advantage of using structs?
- What is a member?
- Are aggregate operations allowed on structs?
- Can you pass structs by value or reference?
- Can structs be a return type?
- How do you access a member of a struct?
- What if you are using pointers

POINTERS

- What is a pointer?
- Given the following contents in memory
  What would these statements output?

cout << intPtr;

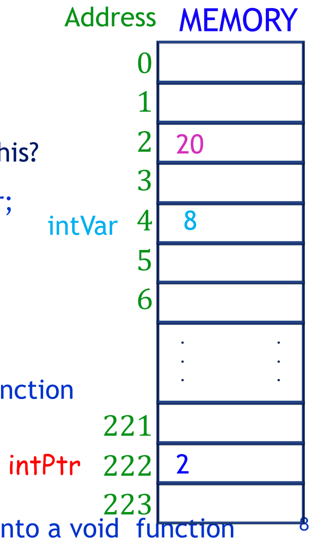
cout << *intPtr;

cout << &intPtr;

What if we have this?

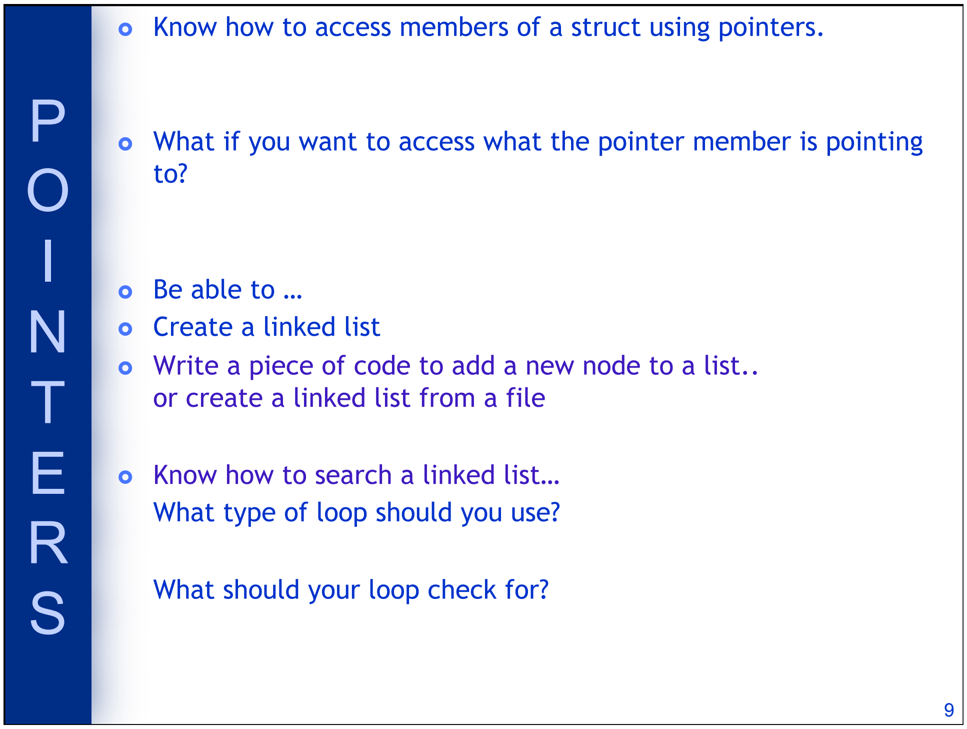
cout << &intVar;

cout << intVar;



	Address	MEMORY
	0	
	1	
	2	20
	3	
intVar	4	8
	5	
	6	
		. . .
	221	
intPtr	222	2
	223	

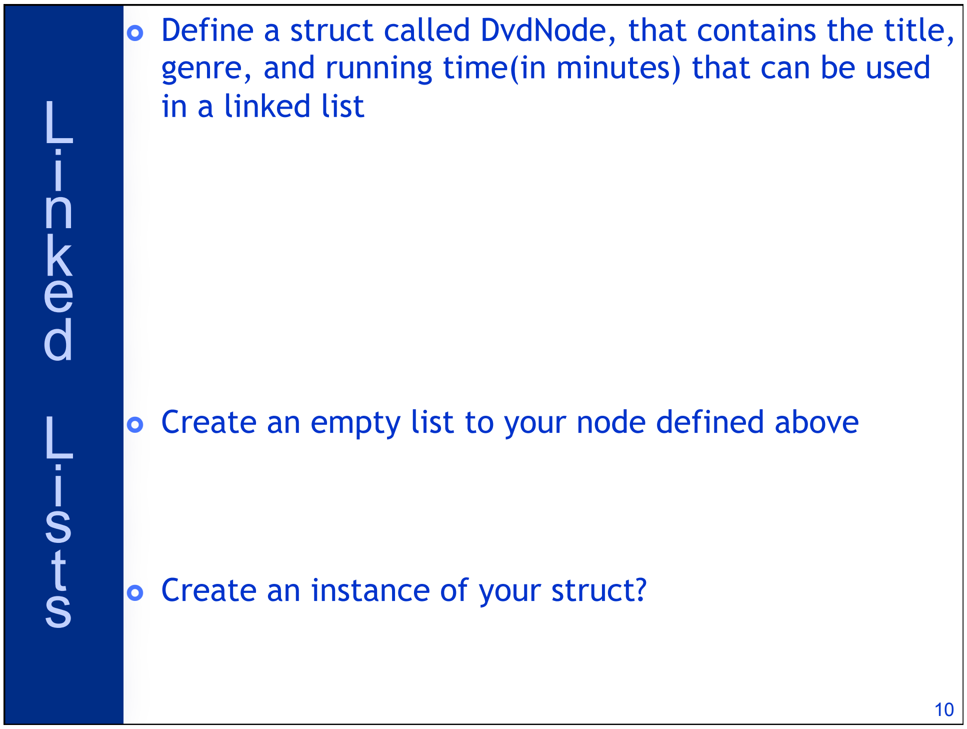
- How would you pass intPtr into a void function called MyFunc?
- How would you pass intPtr by reference into a void function called MyFunc?



POINTERS

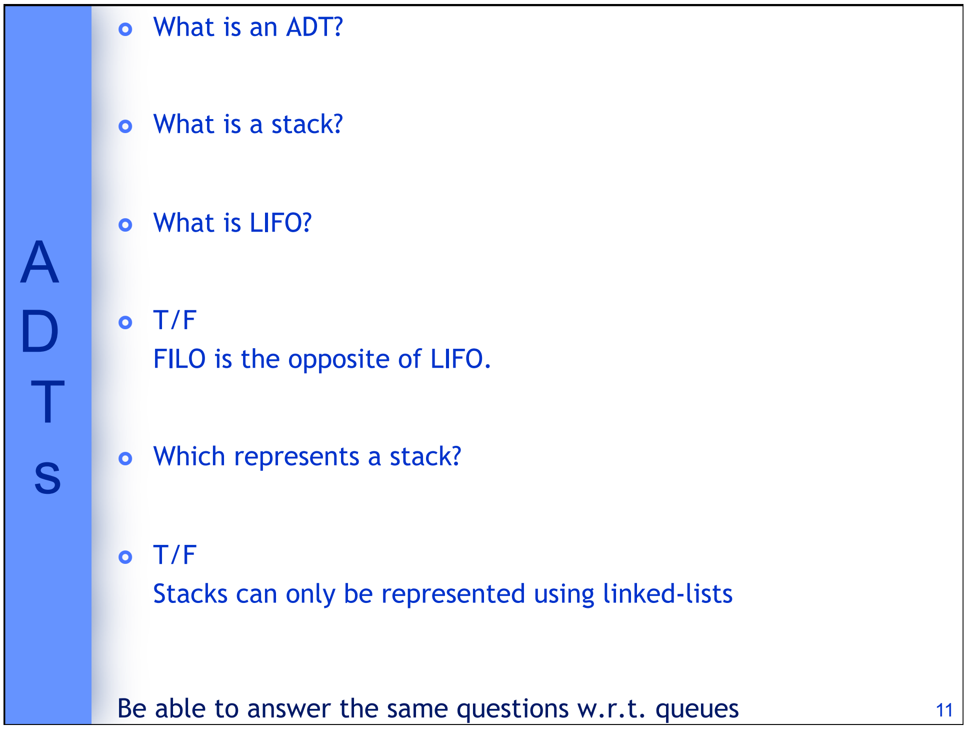
- Know how to access members of a struct using pointers.
- What if you want to access what the pointer member is pointing to?
- Be able to …
- Create a linked list
- Write a piece of code to add a new node to a list.. or create a linked list from a file
- Know how to search a linked list…
  What type of loop should you use?

  What should your loop check for?



Linked Lists

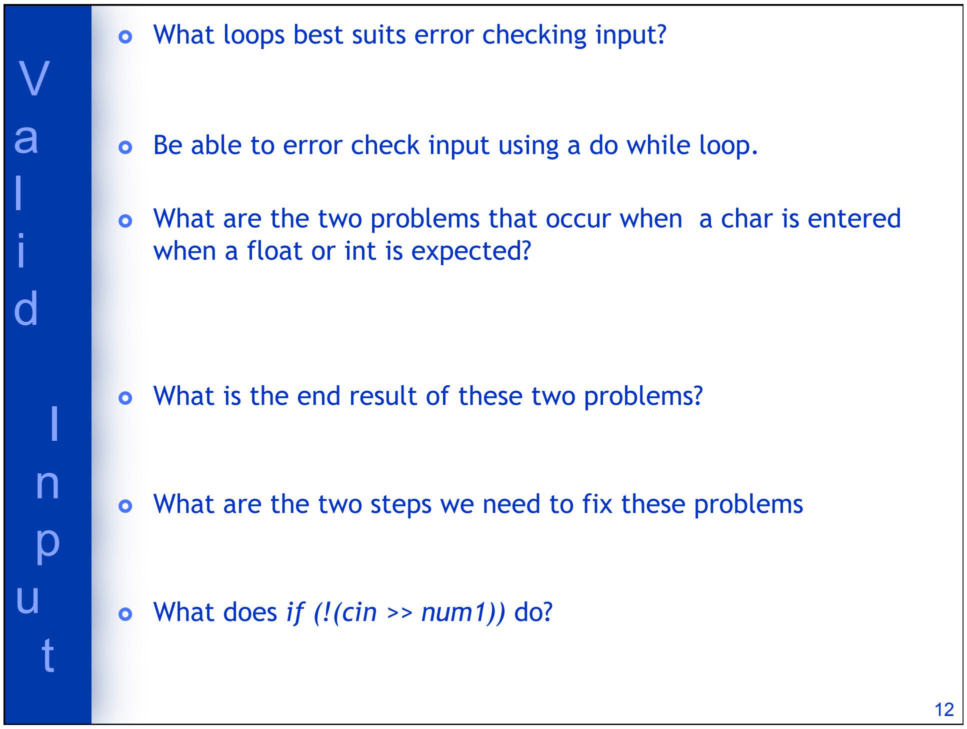
- Define a struct called DvdNode, that contains the title, genre, and running time(in minutes) that can be used in a linked list
- Create an empty list to your node defined above
- Create an instance of your struct?



ADTs

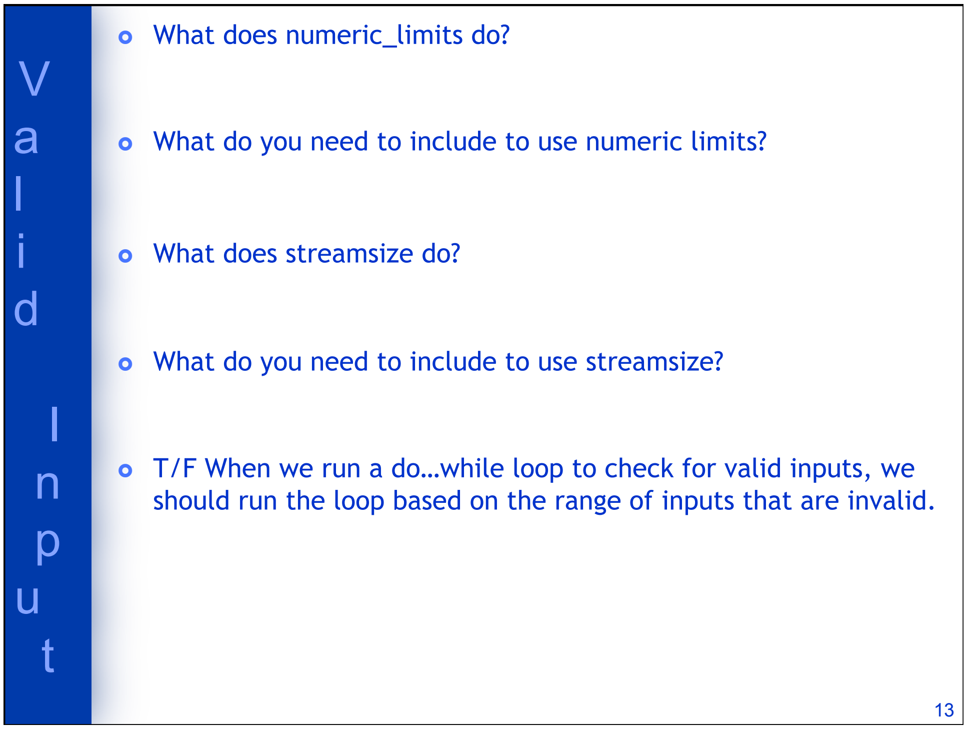
- What is an ADT?
- What is a stack?
- What is LIFO?
- T/F
  FILO is the opposite of LIFO.
- Which represents a stack?
- T/F
  Stacks can only be represented using linked-lists

Be able to answer the same questions w.r.t. queues



Valid Input

- What loops best suits error checking input?
- Be able to error check input using a do while loop.
- What are the two problems that occur when a char is entered when a float or int is expected?
- What is the end result of these two problems?
- What are the two steps we need to fix these problems
- What does *if (!(cin >> num1))* do?



Valid Input

- What does numeric_limits do?

- What do you need to include to use numeric limits?

- What does streamsize do?

- What do you need to include to use streamsize?

- T/F When we run a do…while loop to check for valid inputs, we should run the loop based on the range of inputs that are invalid.