

## Compilers:

What is a compiler?

What are the advantages to using it?

What are the various phase of compilation from source to executable?

What is the difference between static and dynamic compilation?

What are two advantages of each?

What is the advantage of employing a compiler that performs type checking?

Describe 3 different ways in which a compiler enables memory allocation?

What type of memory allocation can the compiler do?

What is the advantage of this?

Why can't all allocation be done by the compiler?

Describe how the compiler enables one function to call another?

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## Operating Systems:

Describe three major services an operating system provides?

Why use an OS?

In what situation would you not want to implement an OS?

What are the ramifications of doing this? (pros and cons)

Describe how an OS can implement a file system?

How is the data layed out on the disk?

How is file found?

What is virtual memory and why is it important?

How is it commonly implemented?

In a paging system, describe 2 different ways in which pages are replaced when new pages are brought in.

What happens when an operating system requires space of its own? How is this implemented?