Describe briefly the three main stages in the evolution of operating system designs.

Early Operating systems were designed in an unstructured way as a collection of procedures. Any procedure can be called by any other procedure. Maintenance was very difficult. The second generation were designed using structured design methods. An inner layer (the kernel) communicates with hardware.No other layer can access hardware directly. The inner layer was only accessible by a second layer via Application Programming Interfaces. The second layer consisted of utilities and a shell. The user could interact with the computer via the shell. The third layer was application programs. Which could interact with the hardware via APIs.

The third generation Used object-oriented design principles. Where the operating system is designed as a set of interacting objects. Each object belongs to a class which defines specific behaviour.