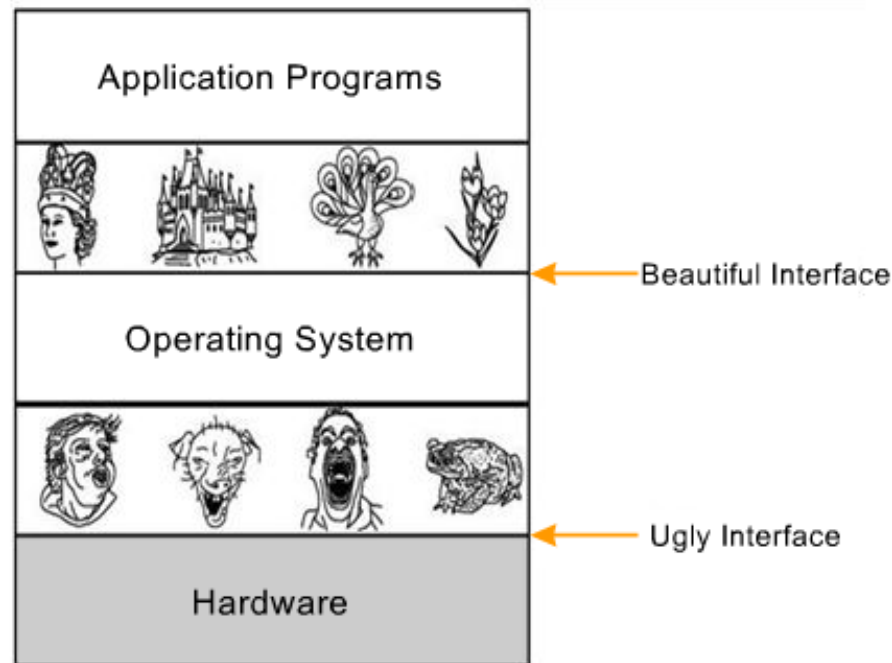


# What is an Operating System? (1/2)

- An **operating system** is a program that manages a computer's hardware. It also provides a basis for application programs and acts as an intermediary between the computer user and the computer hardware.



# What is an Operating System? (2/2)

## Operating system goals:

- Execute user programs and make solving user problems easier.
- Make the computer system convenient to use.
- Use the computer hardware in an efficient manner.

# What Operating Systems Do? (1/4)

## User View

- Users want convenience, **ease of use** and **good performance**.
  - Don't care about **resource utilization**.
- But shared computer such as mainframe or minicomputer must keep all users happy.

# What Operating Systems Do? (2/4)

## System View

- From the computer's point of view, the operating system is the program most intimately involved with the hardware. In this context, we can view an operating system as a **resource allocator**.
- A computer system has many resources that may be required to solve a problem: CPU time, memory space, file-storage space, I/O devices, and so on. The operating system acts as the **manager** of these **resources**.

# What Operating Systems Do? (3/4)

- OS is a **resource allocator**
  - Manages all resources.
  - Decides between conflicting requests for efficient and fair resource use.
- OS is a **control program**
  - Controls execution of programs to prevent errors and improper use of the computer.