

Quiz: OS Basics

Total points **81/81**

Take the quiz solo, but feel free to consult a partner student, the book, the videos or other resources if needed. Re-take quiz if your score is less than 80% or if you just want some more practice.

The respondent's email (**faiyaz@pdx.edu**) was recorded on submission of this form.

Which of the following are Operating Systems? *

| | Operating System | Not an Operating System | Score | |
|-------------------|----------------------------------|----------------------------------|-------|---|
| Android | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| PostgreSQL | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| gcc and gdb | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| Apple OSX | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| Microsoft Windows | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| Microsoft Office | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| Linux | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| GitHub | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |



*

| | Yes the OS plays this role | No this is not part of the OS's role | Score | |
|---|----------------------------------|--------------------------------------|-------|---|
| prevent all uses of I/O devices | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| make hardware easier to use | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| compile high-level language programs to assembly code | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| allow concurrent use of computer systems | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| maintain revision history of software source files | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| enable efficient use of computer systems | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| prevent programmer errors (bugs) | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| protect processes and users from each other | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| encrypt data | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| optimize database queries | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |



✓ "process" and "virtual memory" are examples of what? *

5/5

- ☐ Efficiency
- ☐ Concurrency
- ☐ Resource Management
- ☒ Virtualization Abstractions
- ☐ Synchronization



✓ Two different processes run the same program. Will they share an address space or will each process have its own memory address space?

*5/5

- ☐ They will share the same address space
- ☒ Each process will have its own address space



✓ "The OS can support many concurrent processes and schedules each of them to use the CPU." Is this an example of a mechanism, a policy or an objective? *

5/5

- ☒ mechanism
- ☐ objective
- ☐ policy



✓ "We aim to prevent starvation by ensuring that all processes make forward progress." Is this an example of a mechanism, a policy or an objective? *5/5

- ☐ policy
- ☐ mechanism
- ☒ objective ✓

✓ "The OS process scheduler boosts the priority of any process that has not run during the past 30 seconds so that the process is more likely to run soon." *5/5

- ☐ mechanism
- ☒ policy ✓
- ☐ objective

✓ One OS role is to act as a Resource Manager *5/5

- ☒ True ✓
- ☐ False



✓ As a Resource Manager, one goal for the OS is to make a computer system easy to use. *5/5

☒ True ✓

☐ False

✓ As a Resource Manager an OS must always achieve its primary objective of Performance while all other objectives are secondary. *5/5

☐ True

☒ False ✓



Which of the following are common causes of concurrency in an Operating System (select all that apply)? *

| | Yes, this is a common cause of concurrency in an OS | No, this is not something that by itself causes concurrency in an OS | Score | |
|---------------------------------|---|--|-------|---|
| multiple processes | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| files and folders (directories) | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| multiple users | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| virtual memory | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| interrupts from I/O devices | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| password protection | <input type="radio"/> | <input checked="" type="radio"/> | 1/1 | ✓ |
| the network | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |
| multiple CPUs | <input checked="" type="radio"/> | <input type="radio"/> | 1/1 | ✓ |

✓ Each process has its own virtual memory space. *

5/5

☒ True



☐ False



✓ An Operating System helps multiple processes to share a single physical memory. *5/5

☒ True



☐ False

✓ If Process A uses 10GB of virtual memory, Process B uses 10GB of virtual memory, and the computer has 16GB total physical memory, then... *5/5

☒ the OS can run both processes



☐ the OS cannot run either process

☐ the OS cannot run both processes

This form was created inside of Portland State University.

Google Forms

