

OS is an extended virtual machine

- Multiplexes the "machine" between applications
 - Time sharing, multitasking, batching
- · Provided a higher-level machine for
 - Ease of use
 - Portability
 - Efficiency
 - Security
- Etc....

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JAVA – Higher-level Virtual Machine

- write a program once, and run it anywhere – Architecture independent
 - Operating System independent
- Language itself was clean, robust, garbage collection
- · Program compiled into bytecode
 - Interpreted or just-in-time compiled.
 - Lower than native performance

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Issues Legacy applications No isolation nor resource management between applets Security Trust JVM implementation? Trust underlying OS? Performance compared to native

Is the OS the "right" level of extended machine?

Security

- Trust the underlying OS?
- Legacy application and OSs
- Resource management of existing systems suitable for all applications?
- What about activities requiring "root" privileges

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