



Worksheets

Quiz Nix & flakes with Docker

Total questions: 18

Worksheet time: 14mins

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Name Class Date

1. What are the three main components of Nix?

- a) Programming language, package manager, Linux distribution b) Command-line interface, package builder, cloud storage
- c) Operating system, package manager, cloud service d) Package manager, virtual machine, IDE

2. **True or False:** Nix is a general-purpose programming language.

- a) False b) True

3. What type of evaluation does Nix use?

- a) Parallel evaluation b) Lazy evaluation
- c) Sequential evaluation d) Eager evaluation

4. What happens to an expression in Nix that is never accessed?

- a) It is evaluated with a default value. b) It causes the program to crash.
- c) It throws an error d) It is not evaluated.

5. Nix is a purely functional language, meaning it lacks _____ execution.

Ans. _____

6. What will the following Nix code output?

```
let attrs = { a = 15; b = builtins.throw "Oh no!"; };  
in "The value of 'a' is ${toString attrs.a}."
```

- a) "Oh no!" b) The value of 'a' is 15
- c) The code will not compile. d) Error: undefined reference to b

7. How does Nix differ from traditional package managers like dpkg or rpm ?
- a) It modifies the global system state.
 - b) It directly integrates with Docker containers.
 - c) It uses the Nix store to isolate package dependencies
 - d) It does not support versioning of packages.
8. **True or False:** In Nix, different versions of a package are stored in the same location.
- a) True
 - b) False
9. What is a "derivation" in Nix?
- a) A special command in the Nix shell
 - b) A programming construct for exception handling
 - c) A definition for how to build a package, including dependencies and instructions
 - d) A global configuration file for Nix
10. Which directory typically contains the Nix store?
- a) /nix/store
 - b) /var/lib/nix
 - c) /usr/local
 - d) /opt/nix
11. **True or False:** NixOS uses imperative configuration files to define the system state
- a) False
 - b) True
12. What is a key benefit of NixOS's declarative approach?
- a) It ensures consistent system configuration and allows atomic upgrades
 - b) It avoids using configuration files
 - c) It enables a GUI-based setup wizard
 - d) It eliminates the need for package dependencies

13. What are flakes in Nix?
- a) A graphical interface for NixOS
 - b) An alternative to derivations for managing dependencies
 - c) A replacement for the Nix package manager
 - d) Experimental features to simplify sharing and maintenance.
14. Name an attribute typically included in a flake
- a) inputs
 - b) settings
 - c) versions
 - d) configs
15. **True or False:** Flakes are an experimental feature
- a) true
 - b) false
16. What does Nix provide in a Docker environment?
- a) Reproducible runtime environments
 - b) Reproducible build environments
 - c) Advanced networking capabilities
17. Using Nix can help eliminate untrusted dependencies
- a) true
 - b) false
18. What is a key security advantage of using Nix with Docker?
- a) It includes all dependencies automatically
 - b) It ensures that only specified dependencies are included
 - c) It allows the use of third-party dependencies without verification
 - d) It bypasses the need for Dockerfiles