

## Practice Questions

1) Which command is used to display the current directory?

- A. ls
- B. cd
- C. pwd
- D. mkdir

**Answer:** a) ls

**Explanation:** The ls command is used to list the contents of a directory.

2) Which file is primarily used to configure yum repositories in RHEL?

- A. /etc/yum.conf
- B. /etc/yum/repos.d/
- C. /etc/apt/sources.list
- D. /etc/yum.repos

**Answer:** b) /etc/yum.repos.d/

**Explanation:** Repository configurations are stored in the /etc/yum.repos.d/ directory.

3) Which of the following is a main function of an operating system?

- a) Compiling programs
- b) Managing hardware resources
- c) Editing documents
- d) Browsing the internet

**Answer:** b) Managing hardware resources

**Explanation:** An operating system manages hardware resources and provides an environment for applications to run.

4) Which command is used to list all Docker containers?

- a) docker ps
- b) docker ls
- c) docker list
- d) docker containers

**Answer: a) docker ps**

**Explanation:** The docker ps command lists all running Docker containers.

5) How do you stop a running Docker container?

- a) docker stop <container\_id>
- b) docker end <container\_id>
- c) docker kill <container\_id>
- d) docker terminate <container\_id>

**Answer: a) docker stop <container\_id>**

**Explanation:** The docker stop command gracefully stops a running container.

Launching Containers

6) Which command is used to run a new Docker container?

- a) docker launch
- b) docker start
- c) docker run
- d) docker init

**Answer: c) docker run**

**Explanation:** The docker run command is used to create and start a new container.

7) How do you run a Docker container in detached mode?

- a) docker run -d <image>
- b) docker run -detach <image>
- c) docker run -bg <image>
- d) docker run -background <image>

**Answer: a) docker run -d <image>**

**Explanation:** The -d option runs the container in detached mode.

8) Which command mounts a volume to a Docker container?

- a) docker mount -v <volume>:<path>
- b) docker run -v <volume>:<path>
- c) docker attach -v <volume>:<path>
- d) docker volume -v <volume>:<path>

**Answer: b) docker run -v <volume>:<path>**

**Explanation:** The -v option in docker run is used to mount a volume.

9) Which command installs Apache Web Server in a Docker container running Ubuntu?

- a) apt-get install apache2
- b) yum install apache2
- c) install apache2
- d) docker install apache2

**Answer: a) apt-get install apache2**

**Explanation:** apt-get install apache2 is the command for installing Apache Web Server on Ubuntu.

10) What is the primary use of the curl command?

- a) File compression
- b) Text editing
- c) Data transfer
- d) Network diagnostics

**Answer: c) Data transfer**

**Explanation:** The curl command is used to transfer data from or to a server.

11) How do you view the logs of a Docker container?

- a) docker logs <container\_id>
- b) docker view <container\_id>
- c) docker log <container\_id>
- d) docker show <container\_id>

**Answer: a) docker logs <container\_id>**

**Explanation:** The docker logs command retrieves logs for a specific container.

Port Number

12) Which command maps a host port to a container port?

- a) docker run -p <host\_port>:<container\_port>
- b) docker port -map <host\_port>:<container\_port>
- c) docker map -p <host\_port>:<container\_port>
- d) docker connect -p <host\_port>:<container\_port>

**Answer: a) docker run -p <host\_port>:<container\_port>**

**Explanation:** The -p option in docker run maps a host port to a container port.

Environmental Variables

13) Which command sets an environment variable in a Docker container?

- a) `docker run -e VAR=value <image>`
- b) `docker run --env VAR=value <image>`
- c) `docker run --setenv VAR=value <image>`
- d) `docker run -v VAR=value <image>`

**Answer: a) `docker run -e VAR=value <image>`**

**Explanation:** The `-e` option sets an environment variable in a container.

14) Which image is used to set up WordPress in Docker?

- a) `wordpress`
- b) `wp`
- c) `mysql-wordpress`
- d) `docker-wordpress`

**Answer: a) `wordpress`**

**Explanation:** The official WordPress Docker image is named `wordpress`.

MySQL

15) How do you start a MySQL container with a specified root password?

- a) `docker run -e MYSQL_ROOT_PASSWORD=rootpassword mysql`
- b) `docker run --mysql-root-password=rootpassword mysql`
- c) `docker run -p rootpassword mysql`
- d) `docker run -root=rootpassword mysql`

**Answer: a) `docker run -e MYSQL_ROOT_PASSWORD=rootpassword mysql`**

**Explanation:** The `-e MYSQL_ROOT_PASSWORD` option sets the root password for the MySQL container.

16) What are the three layers in a three-tier architecture?

- a) Presentation, Logic, Data
- b) Frontend, Backend, Middleware
- c) Client, Server, Network
- d) UI, API, Database

**Answer: a) Presentation, Logic, Data**

**Explanation:** The three-tier architecture consists of the presentation layer, logic layer, and data layer.

17) Which command copies files from the host to a Docker container?

- a) `docker cp <host_path> <container_id>:<container_path>`
- b) `docker copy <host_path> <container_id>:<container_path>`
- c) `docker transfer <host_path> <container_id>:<container_path>`
- d) `docker move`

**Answer: a) `docker cp <host_path> <container_id>:<container_path>`**

**Explanation:** The `docker cp` command copies files or directories between the host and container.

Container Linking

18) Which Docker option links one container to another?

- a) `--link`
- b) `--connect`
- c) `--join`
- d) `--bridge`

**Answer: a) `--link`**

**Explanation:** The `--link` option allows one container to communicate with another.

**19)** What is the default network driver in Docker?

- a) bridge
- b) host
- c) overlay
- d) none

**Answer: a) bridge**

**Explanation:** The default network driver in Docker is bridge

**20)** What does NAT stand for in networking?

- a) Network Address Translation
- b) Network Allocation Table
- c) Network Access Table
- d) Network Address Table

**Answer: a) Network Address Translation**

**Explanation:** NAT stands for Network Address Translation, which is used to remap IP addresses.

SDN

**21)** What is the main goal of Software-Defined Networking (SDN)

- a) To control network hardware directly
- b) To separate the control plane from the data plane
- c) To enhance network security
- d) To simplify network management

**Answer: b) To separate the control plane from the data plane**

**Explanation:** SDN aims to separate the control plane from the data plane to allow more flexible network management.

**22)** What is the purpose of the Docker runtime?

- a) To execute containers
- b) To manage container images
- c) To build Dockerfiles
- d) To provide a web interface for Docker

**Answer: a) To execute containers**

**Explanation:** The Docker runtime is responsible for executing containers.

**23)** What type of functionality can Docker plugins provide?

- a) Networking
- b) Storage
- c) Logging
- d) All of the above

**Answer: d) All of the above**

**Explanation:** Docker plugins can provide various functionalities, including networking, storage, and logging.

**24)** What does DHCP stand for?

- a) Dynamic Host Configuration Protocol
- b) Direct Host Communication Protocol
- c) Dynamic Hardware Configuration Protocol
- d) Direct Hardware Communication Protocol

**Answer: a) Dynamic Host Configuration Protocol**

**Explanation:** DHCP stands for Dynamic Host Configuration Protocol, which is used to dynamically assign IP addresses.



**25) What does DNS stand for?**

- a) Domain Name System
- b) Dynamic Network System
- c) Direct Name System
- d) Domain Network System

**Answer: a) Domain Name System**

**Explanation:** DNS stands for Domain Name System, which translates domain names to IP addresses.

Subnet

**26) What is a subnet?**

- a) A network within a network
- b) A type of physical network cable
- c) A device that connects multiple networks
- d) A protocol for network communication

**Answer: a) A network within a network**

**Explanation:** A subnet is a segmented piece of a larger network.

**27) What is a gateway in networking?**

- a) A device that routes traffic between networks
- b) A security protocol for networks
- c) A type of network storage
- d) A tool for monitoring network traffic

**Answer: a) A device that routes traffic between networks**

**Explanation:** A gateway routes traffic from one network to another.

28) What does IPAM stand for?

- a) IP Address Management
- b) Internet Protocol Addressing Method
- c) Internet Protocol Addressing Management
- d) IP Allocation Management

**Answer: a) IP Address Management**

**Explanation:** IPAM stands for IP Address Management, which is used to plan and manage IP address space.

29) Which command creates a custom Docker network?

- a) docker network create <network\_name>
- b) docker create network <network\_name>
- c) docker net create <network\_name>
- d) docker network add <network\_name>

**Answer: a) docker network create <network\_name>**

**Explanation:** The docker network create command is used to create a custom Docker network.

30) How can you forward traffic from a specific port on the base operating system to a container port using Docker?

- a) docker run -dit --network=host --name <container\_name> <image\_name>
- b) docker run -dit --expose-all --name <container\_name> <image\_name>
- c) docker run -dit -p <host\_port>:<container\_port> --name <container\_name> <image\_name>
- d) docker run -dit --bind-all --name <container\_name> <image\_name>

**Answer: C) docker run -dit -p <host\_port>:<container\_port> --name <container\_name> <image\_name>**

**31) What is Docker Compose used for?**

- a) Building Docker images
- b) Running multiple containers as a single service
- c) Managing Docker networks
- d) Configuring Docker storage

**Answer: b) Running multiple containers as a single service**

**Explanation:** Docker Compose is used to define and run multi-container Docker applications.

**32) What does YAML stand for?**

- a) Yet Another Markup Language
- b) YAML Ain't Markup Language
- c) Yes And Markup Language
- d) Your Another Markup Language

**Answer: b) YAML Ain't Markup Language**

**Explanation:** YAML stands for "YAML Ain't Markup Language," a human-readable data format.

**33) Which file is used to define a multi-container Docker application?**

- a) Dockerfile
- b) docker-compose.yml
- c) multi-container.yml
- d) container-config.yml

**Answer: b) docker-compose.yml**

**Explanation:** The docker-compose.yml file is used to define and run multi-container Docker applications.

**34)** What is a service in Docker Compose?

- a) A single container
- b) A definition of how a container should behave
- c) A Docker plugin
- d) A networking component

**Answer: b) A definition of how a container should behave**

**Explanation:** In Docker Compose, a service is a definition of how a container should behave in the multi-container environment.

**35)** Which command is used to create a new Docker image from a container's changes?

- a) docker commit
- b) docker save
- c) docker build
- d) docker export

**Answer: a) docker commit**

**Explanation:** The docker commit command creates a new image from a container's changes.

**36)** What is the default name for a Docker file used to build an image?

- a) Dockerfile
- b) Docker.config
- c) dockerfile.txt
- d) Containerfile

**Answer: a) Dockerfile**

**Explanation:** The default name for the file used to build a Docker image is Dockerfile.

37) Which instruction in a Dockerfile is used to specify the base image?

- a) FROM
- b) BASE
- c) START
- d) IMAGE

**Answer: a) FROM**

**Explanation:** The FROM instruction in a Dockerfile specifies the base image to use.

38) Which Docker command runs an image as a container?

- a) docker run
- b) docker start
- c) docker exec
- d) docker launch

**Answer: a) docker run**

**Explanation:** The docker run command creates and starts a container from an image.

39) What is the purpose of the CMD instruction in a Dockerfile?

- a) To specify the command to run within the container
- b) To define the base image
- c) To set environment variables
- d) To expose ports

**Answer: a) To specify the command to run within the container**

**Explanation:** The CMD instruction specifies the command to run when the container starts

**40)** Which Docker command executes a command in a running container?

- a) docker exec
- b) docker run
- c) docker start
- d) docker attach

**Answer:** a) docker exec

**Explanation:** The docker exec command is used to run a command in a running container.

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