

Question 1: Explain this following bash script:#!/bin/bashspace_free=\$(df -h | awk '{ print \$5 }' | sort -n | tail -n 1 | sed 's/%//')case \$space_free in[1-5]*)echo Plenty of disk space available;;[6-7]*)echo There could be a problem in the near future;;8*)echo Maybe we should look at clearing out old files;;9*)echo We could have a serious problem on our hands soon;;*)echo Something is not quite right here;;esac

This Bash script checks the available disk space on a system and provides different messages based on the percentage of free space. Let's break it down:

-> `space_free=\$(df -h | awk '{ print \$5 }' | sort -n | tail -n 1 | sed 's/%//')`: Retrieves the percentage of free disk space on the system by using the `df -h` command to display disk usage in a human-readable format. The output is then processed with `awk`, `sort`, `tail`, and `sed` to extract the highest percentage.

-> `case \$space_free in`: Initiates a case statement using the value of `space_free`.

-> `[1-5]*) echo Plenty of disk space available;;`: If the free space is between 1% and 5%, it prints "Plenty of disk space available."

-> `[6-7]*) echo There could be a problem in the near future;;`: If the free space is between 6% and 7%, it prints "There could be a problem in the near future."

-> `8*) echo Maybe we should look at clearing out old files;;`: If the free space is 8% or more, it suggests looking into clearing out old files.

-> `9*) echo We could have a serious problem on our hands soon;;`: If the free space is 9% or more, it warns about a potential serious problem.

-> `*) echo Something is not quite right here;;`: If none of the above conditions match, it prints a generic message indicating that something is not quite right.

This script provides a simple way to assess disk space conditions and issue appropriate messages based on the current usage level.