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Exercise 1 Worksheet

Exercise 1: Conversion between symbolic mode and octal mode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Row | Symbolic Mode | Octal Mode | Owner | Group | Other |
| 1 | rwxrw-r-x | 765 | rwx | rw- | r-x |
| 2 | r---wx-w- | 432 | r-- | -wx | -w- |
| 3 | -wx-wx--x | 331 | -wx | -wx | --x |
| 4 | r-x-w---- | 520 | r-x | -w- | --- |
| 5 | rwxr-x--- | 750 | rwx | r-x | --- |

Exercise 2 Worksheet

Exercise 2: Conversion between octal mode and symbolic mode

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Row | Octal Mode | Symbolic Mode | Owner | Group | Other |
| 1 | 000 | --------- | --- | --- | --- |
| 2 | 001 | --------x | --- | --- | --x |
| 3 | 020 | ----w---- | --- | -w- | --- |
| 4 | 220 | -w--w---- | --- | -w- | -w- |
| 5 | 300 | -wx------ | -wx | --- | --- |
| 6 | 004 | ------r-- | --- | --- | r-- |
| 7 | 050 | ---r-x--- | --- | r-x | --- |
| 8 | 600 | rw------- | rw- | --- | --- |
| 9 | 007 | ------rwx | --- | --- | rwx |
| 10 | 715 | rwx--xr-x | rwx | --x | r-x |

Exercise 3 Worksheet

Exercise 3: Understanding directory permissions

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Row | Command line | cd top | touch top/file | mkdir top/dir | ls -l top |
| 1 | chmod 000 top | PD | PD | PD | PD |
| 2 | chmod 100 top | OK | PD | PD | PD |
| 3 | chmod 200 top | PD | PD | PD | PD |
| 4 | chmod 300 top | OK | OK | OK | PD |
| 5 | chmod 400 top | PD | PD | PD | OK |
| 6 | chmod 500 top | OK | PD | PD | OK |
| 7 | chmod 600 top | PD | PD | PD | OK |
| 8 | chmod 700 top | OK | OK | OK | OK |

Exercise 4 Worksheet

Exercise 4: Minimum Permissions for common file operations

|  |  |  |  |
| --- | --- | --- | --- |
| Command line | On the source directory | On the source file | On the target directory |
| 1. Copy a file | --x | r-- | -wx |
| 1. Move a file | -wx | --- | -wx |
| 1. Link a file | --x | --- | -wx |
| 1. Delete a file | -wx | --- | N/A |
| 1. Read a file | --x | r-- | N/A |
| 1. Modify an existing file | --x | -w- | N/A |
| 1. Create a new file | -wx | N/A | N/A |