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#!/bin/bash

help=no #initialize variables
long=no
atime=no
day=yes
unit=no
type=no
number=""
directory=no
stringcontrol='^[0-9]+$'

while [ $# -gt 0 ]; do
    if [ $# -eq 1 ]; then
        if [ -d "$1" ]; then
            directory="$1"
            shift
            continue
        fi
    fi

    case "$1" in #case structure for the first argument
        --help) help=yes; break;;
        -l) long=yes; shift;;
        -a) atime=yes; number="$2"; shift 2;;
        -f) day=no; unit="$2"; shift 2;;
        -t) type=yes; ext="$2"; shift 2;;
        -*) echo "$0: Unknown option \"$1\""; exit 1;;
        *) echo "$0: None/No valuable argument \"$1\""; exit 1;;
    esac
done

if [ "$help" = yes -o "$unit" = "--help" -o "$number" = "--help" ]; then
#checking for help
    echo "Usage: $0 [ -a (NUMBER) -f (w or d) -l -t (type) ] [DIRECTORY]"
#$0=name of the scrpit
    exit 0
fi

if [ "$atime" = no -o -z "$number" ]; then #checking for -a and number
    echo "$0: Use -a and provide a number"
    exit 2 #exit bc something is wrong
fi

if [ "$type" = yes ] && [ -z "$ext" ]; then #checking type and ext empty
    echo "If -t is enabled, you have to use an extension, e.g.: '.txt'"
    exit 2
fi

if ! [[ $number =~ $stringcontrol ]]; then #checking for number without string
    echo "\"$number\" is not a valid number for -a"
    exit 2
fi

if [ "$unit" != "no" -a "$unit" != "d" -a "$unit" != "w" ]; then #checking for
the right timeunit
    echo "$0: -f is active, the only time units you can use are \"w\" or \"d\""
    exit 2
fi

if [ "$directory" = no ]
then
    directory="./"
fi

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longls="${long:+-l}"
time="${time:+-atime}"
number="${day:+$number}"
[ "$unit" = w ] && number=$((7 * number))

if [ "$type" = yes ]; then
    result=$(find "$directory" -maxdepth 1 -nowarn $time -$number -type f -name
"*. $ext") #searching for files, conditions: atime...
    if [ -z "$result" ]; then
        echo "$0: Nothing was edited in this directory in the specified time or
the file extension \"$ext\" does not exist."
        exit 3
    fi

    find "$directory" -maxdepth 1 $time -$number -type f -name "*. $ext" -print0
| xargs -0 ls -d $longls #if result isnt empty
    exit 0
fi

result=$(find "$directory" -maxdepth 1 -nowarn $time -$number) #searching for
files without extension
if [ -z "$result" ]; then
    echo "$0: Nothing was edited in this directory in the specified time"
    exit 3
fi

find "$directory" -maxdepth 1 $time -$number -print0 | xargs -0 ls -d $longls
# if result isnt empty
exit 0

```