Problem Description:

You need to analyze log files that record system access history. Each log contains a timestamp, username, and access type (e.g., "Login", "Logout", "File Access"). Your task is to count how many times each user accessed the system within a specific time range. **Do not miss reading the instructions below.**

Requirements:

1. Write a script called `extract_access.sh` that:

   - Accepts a log file, an access type (e.g., "Login"), and a time range (startHH-endHH). Both ranges are inclusive and are in 24-hour format.
   - Example usage: `./extract_access.sh access.log "Login" "01-05"`
   - Filters lines where the access type matches and the time falls within the range. Example output:

   ```
   johndoe Login
   sidney Login
   johndoe Login
   ...
   ```

2. Now pipe the output of `extract_access.sh` such that:

   - Counts how many times each user accessed the system.
   - Each line first contains the count of the user's access, followed by the username.

   ```
   5 johndoe
   3 sidney
   ...
   ```

   This means that `johndoe` accessed the system 5 times and `sidney` accessed the system 3 times.

Instructions:

- Use `cut` to extract columns or fields. For example, `cut -d' ' -f1` will extract the first field from each line, assuming that fields are separated by spaces. You can also extract multiple fields by specifying a range, like this: `cut -d' ' -f1-3`.

- Numbers with leading zeros are treated as octal by bash. To avoid this, prefix the variables with a `10#` to ensure that they are treated as decimal numbers. For example, if `$x` contains `08`, you can convert it to a decimal number like this: `x=$((10#$x))`.

- The `uniq -c` command only counts adjacent duplicates, so be sure to sort the output before using `uniq -c` to get the correct count of each user's access.

- Once you have found the frequency of each user's access, you may notice some leading whitespace in the output. You can remove this whitespace using the `sed` command. It works like this: `sed 's/<pattern>/<replacement>/'`. For example, `sed 's/^ *//'` will remove leading whitespace from each line.