Question 4 [6 Points]

Create a shell script emailcleaner.sh that processes emails.txt.

• Extract all valid email addresses and store them in valid.txt

• Extract invalid email addresses and store them in invalid.txt

 • Remove duplicate entries from valid.txtValid email
format:<letters_and_digits>@<letters>.comUse grep, sort, uniq, and redirection.

Script

```
Question4 >  $  emailcleaner.sh
  1    #!/bin/bash
  2
  3    # Check if emails.txt exists and is readable
  4    if [ ! -r "emails.txt" ]; then
  5        echo "Error: emails.txt file not found or not readable."
  6        exit 1
  7    fi
  8
  9    # Extract valid email addresses
 10    grep -E '^[a-zA-Z0-9]+@[a-zA-Z]+\.com$' emails.txt > valid.txt
 11
 12    # Remove duplicate valid emails
 13    sort valid.txt | uniq > temp.txt
 14    mv temp.txt valid.txt
 15
 16    # Extract invalid email addresses
 17    grep -Ev '^[a-zA-Z0-9]+@[a-zA-Z]+\.com$' emails.txt > invalid.txt
 18
 19    echo "Email cleaning completed."
 20    echo "Valid emails stored in valid.txt"
 21    echo "Invalid emails stored in invalid.txt"
 22
```

Explanation:

grep -E '^[a-zA-Z0-9]+@[a-zA-Z]+\.com$' emails.txt > valid.txt:

    grep : Searches texted based on a pattern

-E - enables Extnedted Regular Expressions

'^[a-zA-Z0-9]+@[a-zA-Z]+\.com$' : (This is regex pattern for valid emails)

In conclusion:

The script validates emails addresses using grep with regular expressions, removes duplicates using sort and uniq, and stores valid and invalid emails into separate files using redirection.

Output:

```
● sudhanshu@Sudhanshus-MacVati Question4 % chmod +x emailcleaner.sh
● sudhanshu@Sudhanshus-MacVati Question4 % ./emailcleaner.sh
  Email cleaning completed.
  Valid emails stored in valid.txt
  Invalid emails stored in invalid.txt
● sudhanshu@Sudhanshus-MacVati Question4 % cat valid.txt
  sudhanshu123@yahoo.com
  sudhanshuverma@gmail.com
  SudhanshuVerma@gmail.com
  user@abc.com
  user@gmail.com
  user1@company.com
  verma99@domain.com
● sudhanshu@Sudhanshus-MacVati Question4 % cat invalid.txt
  sudhanshu_verma@gmail.com
  user@gmail.co
  verma@domain123.com
  sudhanshu@company.org
  user
○ sudhanshu@Sudhanshus-MacVati Question4 % []
                                                          ⌘K to gener
```