

1. Create a text file named `emails.txt` containing multiple email addresses, some in uppercase and some repeated.  
Write a Python program to clean the data by converting all emails to lowercase, removing duplicates, sorting them alphabetically, and saving the cleaned list to a new file named `unique_emails.txt`.
  
2. Create a text file named `names.txt` containing a list of names.  
Some names may have extra spaces, inconsistent capitalization (like “aLiCe” or “ bob ”), or appear more than once.  
Write a Python program to clean the data by:
  1. Removing extra spaces.
  2. Converting all names so that only the first letter is capitalized.
  3. Removing duplicate names.
  4. Sorting the names alphabetically.Finally, save the cleaned list into a new file named `clean_names.txt`.
  
3. Write a Python program that creates a list of 5 numbers.  
Ask the user for an index number and print the value at that index.  
If the index is out of range, handle the exception and print `"Invalid index!"`.