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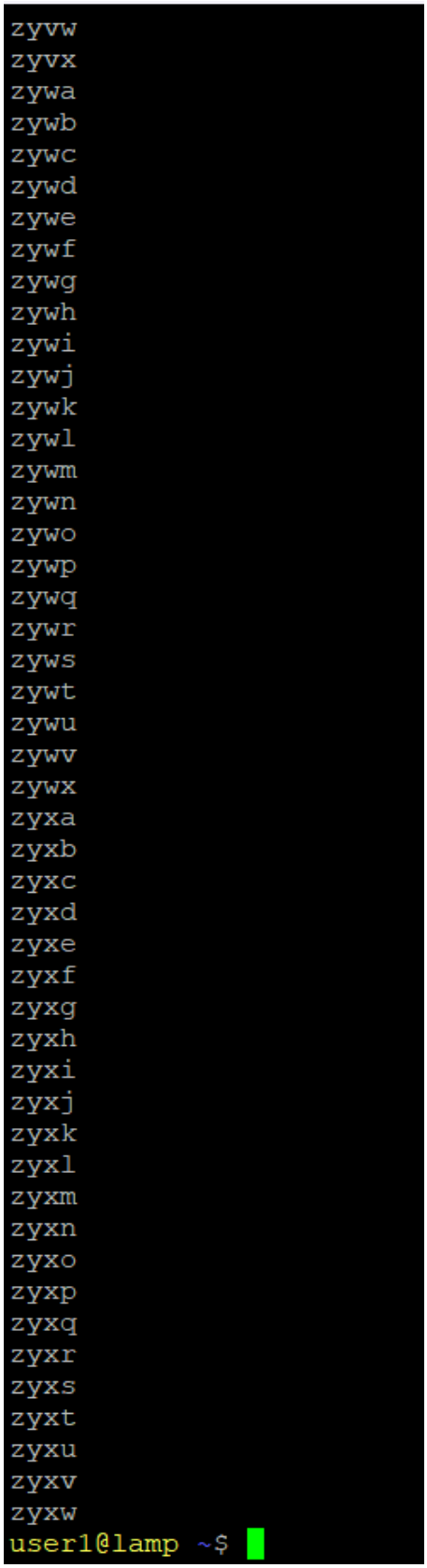
Q1:

Code:

```
#include<stdio.h>

// Function to generate passwords recursively
void generatepasswords(char password[], int used[], int index) {
   static char letters[] = "abcdefghijklmnopqrstuvwxyz"; // Array of lowercase letters
   int i;

   if (index == 4) { // Base case: If the password length is 4, print the password and return
      printf("%s\n", password);
      return;
   }

   for (i = 0; i < 26; i++) { // Iterate through each letter
      if (!used[i]) { // Check if the letter is already used
         password[index] = letters[i]; // Add the letter to the password
         used[i] = 1; // Mark the letter as used
         generatepasswords(password, used, index + 1); // Recursive call to generate the next character
         used[i] = 0; // Backtrack: Mark the letter as unused for the next iteration
      }
   }
}

int main() {
   char password[5]; // Array to store the generated password
   int used[26] = {0}; // Array to keep track of used letters, initialized to 0
```

```
    generatepasswords(password, used, 0); // Call the function to generate passwords
    return 0;
}
```

Screenshot of output:



Screenshot of Bash command.: