Mid-term Assignment

Instruction

- Read this instruction very carefully.
- You will name the filename as *[StudentIDNumber]*.c.
- Submit the file *[StudentIDNumber]*.c on iCampus before the deadline.
- You should submit the source code only.
- You may submit partial solution (and you're receive partial credit).
- You may ask questions thru email at atang@skku.edu.
  - But please ask your questions early (otherwise, I may not reply in time before your deadline)
- You may submit multiple versions.
- I will grade the last version before the deadline you submitted.
- Make backup!
- The deadline is 29th April 2020 23:59 pm.

Collaboration Policy

- The work you submit must be the work of your own.
- You are free to give or receive help when doing homework assignments, but you must follow the following restrictions:
- Only the helper can look at the code of others. Student who is receiving help must not look at the code of the helper;
- Student who is receiving help must do all the typing herself/himself. Helper must not touch the computer of the student who is receiving help; and
- All student can not post your code on the web, nor send your code to other students.

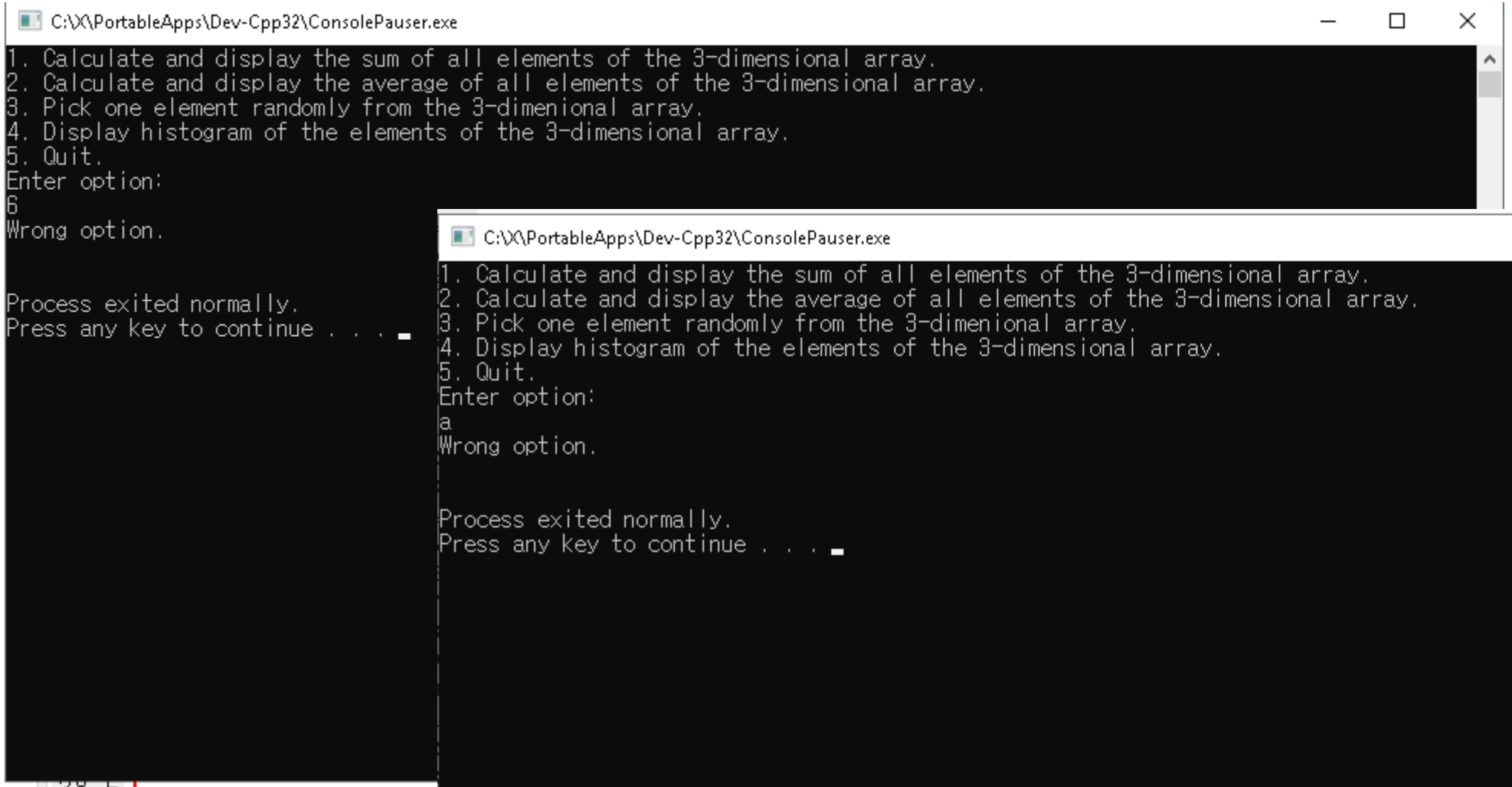
The program

- You will be supplied with a code (midterm.c). You should add your code on top of this code.
- You should add your code, but you should not make change to existing code.
- In the code supplied to you, there is a global 3-dimensional array.
- The dimension of this array is 7x5x10 (matrix[7][5][10]).
- In the code, there are 6 empty functions. You should complete these 6 empty functions.
- You should not modify the main() function.
- Your program will display a menu with 5 options:
  - 1. Calculate and display the sum of all elements in the 3-dimensional array.
  - 2. Calculate and display the average value of all elements in the 3-dimensional array.
  - 3. Pick one element randomly from the 3-dimensional array.
  - 4. Display histogram of the elements of the 3-dimensional array.
  - 5. Quit.

Specifications

- You should submit your source code (otherwise, you'll get a zero).
- In the menu, if the user enter anything except the 5 valid options (1, 2, 3, 4 or 4), your program will display an error message.
- When you calculate the sum and average of the 3-dimensional array (in option (1) and (2)), you should use nested loop. You should not simply list all elements in the array and add them up
  - i.e. sum = matrix[0][0][1]+matrix[0][0][2]+…+matrix[7][5][10] would not be considered as a valid answer.
- The output of your program should be the same as the sample outputs.
- You may create additional functions if you wish.
- You may create additional global variables if you wish.S

Sample Outputs



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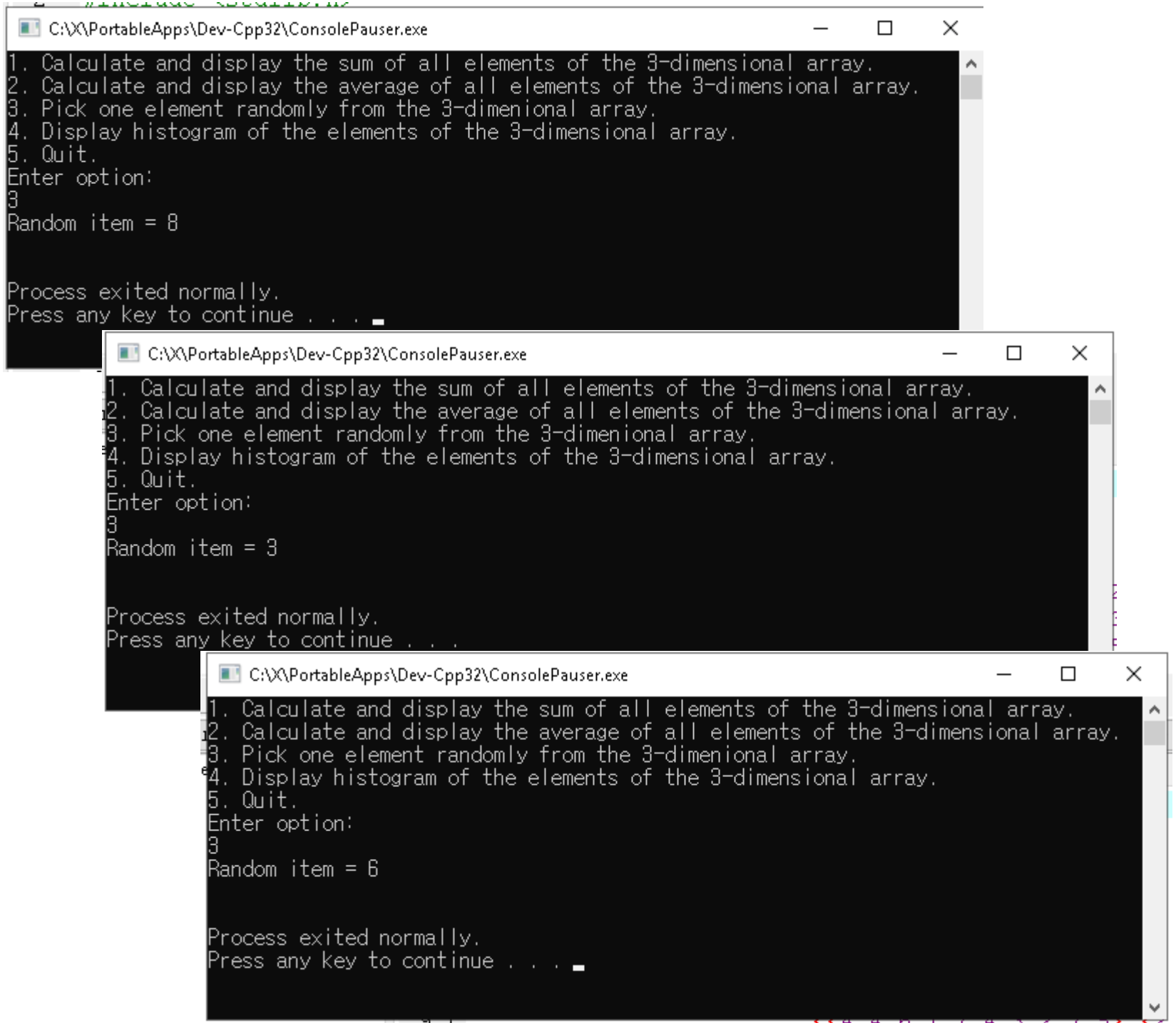

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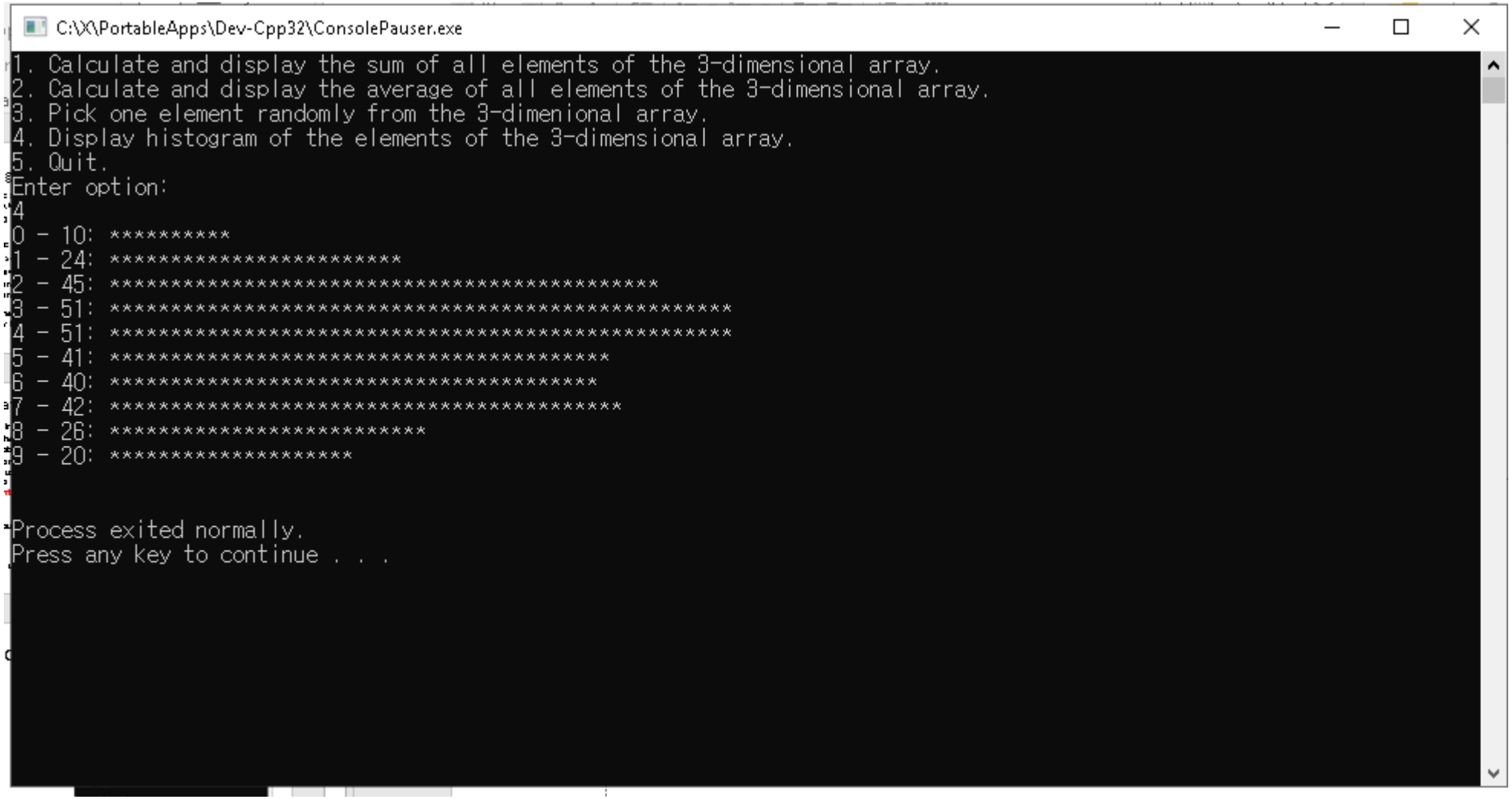

Questions?

- Send to atang@skku.edu