

Practical

(1 mark, file to be edited: Q1.c)

Users are required to enter two integer variables a and b using the keyboard (STDIN).

Please check the following conditions:

- If a is greater than or equal to b then print: $a \geq b$
- If a is less than b then print: $a < b$

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Below is an example of how the program will run:

Enter the value 1 for 'a' and the value 4 for 'b'

```
1
4

OUTPUT:
a<b
Press any key to continue . . .
```

Question 2:

(1 mark, file to be edited: Q2.c)

Users are required to enter a non-negative integer variables n using the keyboard (STDIN).

The system displays the sum of the last three even numbers in range from 0 to n .

Below is an example of how the program will run:

Enter the value 6 for 'n'

```
6
OUTPUT:
12
Press any key to continue . . .
```

Question 3:

(1 mark, file to be edited: Q3.c)

Your program allows users to enter 4 characters.

The system displays the entered characters following alphabetical order. There is a space character in between any two adjacent characters.

Below is an example of how the program will run:

```
a
h
b
g
OUTPUT:
a b g h
Press any key to continue . . .
```

Question 4:

(2 marks, file to be edited: Q4.c)

Your program allows users to enter 7 integer numbers into an array.

The system performs selection sorting of the array in ascending order then prints the sorted array. There is a space character between any two adjacent numbers.

Below is an example of how the program will run:

```
1
3
2
6
4
8
10

OUTPUT:
1 2 3 4 6 8 10
Press any key to continue . . .
```

Question 5:

(2 marks, file to be edited: Q5.c)

Your program allows users to enter array of n integers, where n is entered by the user ($n < 20$).

- If the array is symmetric, the program displays: 1
- Otherwise the program displays: 0

Below is some examples:

$n=5$	$n=5$
array = {2,2,3,2,2}, symmetric	array = {2,2,3,4,2}, asymmetric

<pre> 5 2 2 3 2 2 OUTPUT: 1 Press any key to continue . . . </pre>	<pre> 5 2 2 3 4 2 OUTPUT: 0 Press any key to continue . . . </pre>
<p>n=4</p> <p>array = {1,2,2,1}, symmetric</p> <pre> 4 1 2 2 1 OUTPUT: 1 Press any key to continue . . . </pre>	<p>n=4</p> <p>array = {2,2,1,2}, asymmetric</p> <pre> 4 2 2 1 2 OUTPUT: 0 Press any key to continue . . . </pre>

Question 6:

(2 marks, file to be edited: Q6.c)

Your program allows users to enter 5 person names into an array of strings. The program performs sorting of the array in ascending order then prints each element of the array followed by a space character.

Below is an example:

```

John
Joe
Due
Long
Ming

OUTPUT:
Due Joe John Long Ming
Press any key to continue . . .

```

(1 mark, file to be edited: Q7.c)

Your program allows users to enter a string with an odd number of characters ($5 < n < 20$). The program then displays the middle 5 characters of the string.

Below is an example:

```
1hello7
OUTPUT:
hello
Press any key to continue . . .
```