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EECE 2160 – Kimani

8:00 am

HW #1

Problem 1

Programs and output:

-bash-4.2$ g++ Question1.cpp

-bash-4.2$ ./a.out

Please enter two positive integers

2

3

Please select an option from the list

1. Print out the number of bytes used to store the following data types: bool, char, int, float, and double.

2. Returns the first number raised to the power of the second.

3. Returns the maximum of the two numbers.

4. Prints out the two numbers in decimal, hexadecimal, octal, and binary formats.

1

You selected option: 1

Number of bytes needed to store the following data types

bool: 1byte

char: 1byte

int: 4bytes

float: 4bytes

double: 8bytes

-bash-4.2$ ./a.out

Please enter two positive integers

2

3

Please select an option from the list

1. Print out the number of bytes used to store the following data types: bool, char, int, float, and double.

2. Returns the first number raised to the power of the second.

3. Returns the maximum of the two numbers.

4. Prints out the two numbers in decimal, hexadecimal, octal, and binary formats.

2

You selected option: 2

The first number 2 raised to the power of the second number 3 is : 8

-bash-4.2$ ./a.out

Please enter two positive integers

2

3

Please select an option from the list

1. Print out the number of bytes used to store the following data types: bool, char, int, float, and double.

2. Returns the first number raised to the power of the second.

3. Returns the maximum of the two numbers.

4. Prints out the two numbers in decimal, hexadecimal, octal, and binary formats.

3

You selected option: 3

3

-bash-4.2$ ./a.out

Please enter two positive integers

30 100

Please select an option from the list

1. Print out the number of bytes used to store the following data types: bool, char, int, float, and double.

2. Returns the first number raised to the power of the second.

3. Returns the maximum of the two numbers.

4. Prints out the two numbers in decimal, hexadecimal, octal, and binary formats.

4

You selected option: 4

Prints the first and second number in decimal format: 30 100

Prints the first and second number in octal format: 36 144

Prints the first and second number in hexadecimal format: 1e 64

Prints the first and second number in binary format: 11110 1100100

Problem 2

Programs and output:

-bash-4.2$ g++ Question2.cpp

-bash-4.2$ ./a.out

Enter a value for Row 1 Col 1: 1

Enter a value for Row 1 Col 2: 3

Enter a value for Row 1 Col 3: 5

Enter a value for Row 2 Col 1: 4

Enter a value for Row 2 Col 2: 2

Enter a value for Row 2 Col 3: 1

Enter a value for Row 3 Col 1: 1

Enter a value for Row 3 Col 2: 2

Enter a value for Row 3 Col 3: 3

1 to print the matrix

2 to tranpose using array indices then print

3 to transpose using pointers then print

1

Your matrix is:

1 3 5

4 2 1

1 2 3

-bash-4.2$ ./a.out

Enter a value for Row 1 Col 1: 1

Enter a value for Row 1 Col 2: 3

Enter a value for Row 1 Col 3: 5

Enter a value for Row 2 Col 1: 4

Enter a value for Row 2 Col 2: 2

Enter a value for Row 2 Col 3: 1

Enter a value for Row 3 Col 1: 1

Enter a value for Row 3 Col 2: 2

Enter a value for Row 3 Col 3: 3

1 to print the matrix

2 to tranpose using array indices then print

3 to transpose using pointers then print

2

Your matrix is:

1 3 5

4 2 1

1 2 3

Tranposing using array indices

Your matrix is:

1 4 1

```
3     2     2

5     1     3

-bash-4.2$ ./a.out

Enter a value for Row 1 Col 1: 1

Enter a value for Row 1 Col 2: 3

Enter a value for Row 1 Col 3: 5

Enter a value for Row 2 Col 1: 4

Enter a value for Row 2 Col 2: 2

Enter a value for Row 2 Col 3: 1

Enter a value for Row 3 Col 1: 1

Enter a value for Row 3 Col 2: 2

Enter a value for Row 3 Col 3: 3

1 to print the matrix

2 to tranpose using array indices then print

3 to transpose using pointers then print

3

Your matrix is:

1     3     5

4     2     1

1     2     3


Tranposing using pointers

Your matrix is:

1     4     1

3     2     2

5     1     3

-bash-4.2$
```

Problem 3

Programs and output:

```
-bash-4.2$ g++ Question3.cpp
-bash-4.2$ ./a.out
Number of Records to read?
5

PRINTING 5 RECORDS!
---------------------
Subaru, Outback, 2016, green
Toyota, Corolla, 2006, white
Dodge, Neon, 1993, pink
Ford, Fusion, 2013, yellow
Honda, Fit, 2015, blue

SORTING RECORDS BY YEAR.....

PRINTING 5 RECORDS!
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Dodge, Neon, 1993, pink
Toyota, Corolla, 2006, white
Ford, Fusion, 2013, yellow
Honda, Fit, 2015, blue
Subaru, Outback, 2016, green

SORTING RECORDS BY MAKE.....
```

PRINTING 5 RECORDS!

Dodge, Neon, 1993, pink

Ford, Fusion, 2013, yellow

Honda, Fit, 2015, blue

Subaru, Outback, 2016, green

Toyota, Corolla, 2006, white

CHECKING FOR DUPLICATES...

No duplicates found

-bash-4.2$ ./a.out

Number of Records to read?

15

PRINTING 10 RECORDS!

Subaru, Outback, 2016, green

Toyota, Corolla, 2006, white

Dodge, Neon, 1993, pink

Ford, Fusion, 2013, yellow

Honda, Fit, 2015, blue

Ford, Expedition, 2009, silver

Toyota, Corolla, 2006, white

Ford, Fusion, 2013, yellow

Jeep, Cherokee, 1999, red

Mazda, Protoge, 1996, gold

SORTING RECORDS BY YEAR.....

PRINTING 10 RECORDS!

Dodge, Neon, 1993, pink

Mazda, Protoge, 1996, gold

Jeep, Cherokee, 1999, red

Toyota, Corolla, 2006, white

Toyota, Corolla, 2006, white

Ford, Expedition, 2009, silver

Ford, Fusion, 2013, yellow

Ford, Fusion, 2013, yellow

Honda, Fit, 2015, blue

Subaru, Outback, 2016, green

SORTING RECORDS BY MAKE.....

PRINTING 10 RECORDS!

Dodge, Neon, 1993, pink

Ford, Expedition, 2009, silver

Ford, Fusion, 2013, yellow

Ford, Fusion, 2013, yellow

Honda, Fit, 2015, blue

Jeep, Cherokee, 1999, red

Mazda, Protoge, 1996, gold

Subaru, Outback, 2016, green

Toyota, Corolla, 2006, white

Toyota, Corolla, 2006, white

CHECKING FOR DUPLICATES...

Ford, Fusion, 2013, yellow

Ford, Fusion, 2013, yellow

Toyota, Corolla, 2006, white

Toyota, Corolla, 2006, white

-bash-4.2$