Palomar College

Computer Science &

Information Technology

CSCI 112 Programming Fundamentals I

Chapter 0, 1 - HW 1

1. Why are you taking this class?

2. If a computer executes instructions to sum the contents of memory cells 2 and 999 and store the result in cell 0, what would be the contents of cells 0, 2, and 999?

	Address	Contents	Name	Туре
			(given by programmer)	
	0	-27	num1	int
	1	354	miles	int
•	2	35	count	int
	3	20	distance	int
	4	3	small	int
				int
	999	95	large	int

0: 95+35=130

2: 35

999: 95

What are the names of the memory locations 0, 2, 999?

3. What do you think these five high-level language statements mean and what are the values of x, y, z and kelvin?

Address	Contents	Name	Туре
		(given by programmer)	
0	3	a	int
1	5	b	int
2	6	С	int
3	0	x	int
4	0	У	int
			int
999	0	Z	int
1020	0.0	kelvin	double
1040	20.00	celsius	double

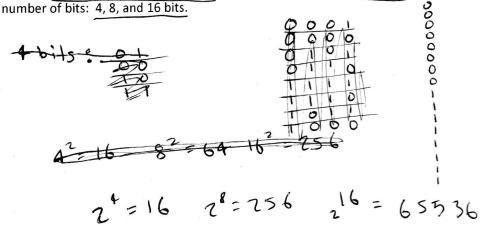
$$x = a + b + c;$$
 $y = x/z;$ $z = z + 1;$ kelvin = celsius + 273.15;
 $x = 1$ kelvin = $2.3.15$

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4. One bit can have two values, 0 or 1. A combination of 2 bits can have four values: 00, 01, 10, and 11. List all the values for four bits. Calculate how many possible values for the following



- 5. Enter the First Program located in the slides; please refer to Software Download hints and best practices. Turn in program as directed by Lab/Team Projects Turn in procedures. This is lab1.
- 6. List two reasons why it would be preferable to write a program in C rather than in the machine language. Typing code in 1's and 0's would be difficulte.

 It would take to long.
- 7. Would a syntax error be found in a source program or an object program? What system program would find a syntax error if one existed?

Both and the word Processor would find a syntax error.

8. Explain the differences among the source program, the object program, and the executable program. Which do you create, and which does the complier create? Which does the linker create?

I creates source | Source program is the spacific code language, compiler creates; object program is the source program that linker creates: was been compiled. The exectable is executable is testing the comptone to execut the program.

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9. Write the pseudocode and then the Converting Miles to Kilometers program.

Input Miles ____

Input Kilometers ___

Miles TO Kilometers ()

Miles TO Kilometer (niles, kilometer);

Porint "Xmiles = X kilometers"

Save output of formula as as X

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10. Write the pseudocode for the following problem:

Write a program that calculates mileage reimbursements for a salesperson at a rate of \$.35 per mile. Your program should interact with the user in the manner:

MILAGE REIMBURSEMENT CALCULATOR

Enter beginning odometer reading===> 13505.2

Enter ending odometer reading ===> 13810.6

You traveled 305.4 miles. At \$0.35 per mile, your reimbursement is \$106.89

INPUTS:

Please input Starting odometer reading —
Save starting odometer readings as Start 000.
Please input ending odometer readings —
Save sending odometer readings as Endoop.

(aculations

End ODO - Start OPO = Total Miles Traveled Total Miles Traved * 0.35 = reimbroment Besults:

Print "you traveled ___ miles"

Print "your reimbursment is ___ A"

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11. Write the pseudocode and plans for the following problem:

A program that estimates the temperature in a freezer (in °C) given the elapsed time (hours) since a power failure. Assume this temperature (t) is given by:

Variables:

Beggining tempative : {
Hours de siècre pour outage:

(al cotations:

[(4/temperature) 2]-20 = T

T= temperature after x amount of his.

Results:

Print Beggining temp: ____ Print Time elapsed: _____ Print current temp: ____

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12. Write the pseudocode and plans to convert a temperature in degrees Fahrenheit to the kelvin scale.

Data Requirement

Problem input: Fahrenheit

Problem output: kelvin

Formula: kelvin = 5/9 (Fahrenheit -32) + 273.15

variables:

F-degines: ___

Kadegrees:

Calculations.

K= = (F-degrees - 32) + 273, 15

Mesol Is:

Point: " Temp. in Fahrenheit:_____