

Name: Charles Zhang

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Question 1:

Statement: Sales Commission Calculator

Pseudo code:

Int a = 0

While a is not -1

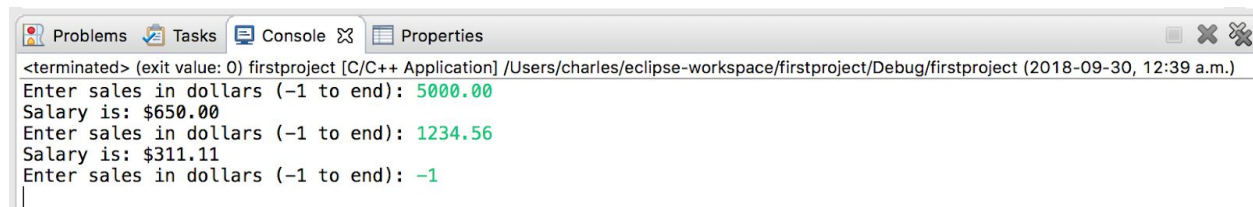
Print: "Enter sales"

Get sales

Salary = 200 + sales times 0.09

Print salary

```
1  /*
2  =====
3  Author      : Charles Zhang 400131890
4  =====
5  */
6
7  #include <stdio.h>
8  #include <stdlib.h>
9
10 int main(void) {
11     //created a variable to store inputs
12     float a;
13     //while loop runs until break
14
15     while (1){
16         //prompts user to enter sales number
17         printf("Enter sales in dollars (-1 to end): ");
18         //stores sales number in variable
19         scanf("%f", &a);
20
21         //checks if sales number is valid. If it is -1 then the whole loop stops
22         if (a == -1)
23             break;
24
25         //salary calculation
26         float salary = 200 + (a * 0.09);
27
28         //prints out final salary
29         printf("Salary is: $%.2f \n", salary);
30     }
31     return EXIT_SUCCESS;
32 }
33
```



The screenshot shows the Eclipse IDE's console window. The title bar indicates the project is 'firstproject' and the application is 'C/C++ Application'. The console output shows the program's execution: it prompts for sales in dollars, calculates the salary, and prints it. The first input is 5000.00, resulting in a salary of \$650.00. The second input is 1234.56, resulting in a salary of \$311.11. The third input is -1, which terminates the loop.

```
<terminated> (exit value: 0) firstproject [C/C++ Application] /Users/charles/eclipse-workspace/firstproject/Debug/firstproject (2018-09-30, 12:39 a.m.)
Enter sales in dollars (-1 to end): 5000.00
Salary is: $650.00
Enter sales in dollars (-1 to end): 1234.56
Salary is: $311.11
Enter sales in dollars (-1 to end): -1
```

Question 2

Statement: Find the Largest Number

Pseudo code:

Variable counter = 0

Variable Largest number = 0

Variable number = 0

While counter is less than 10{

Prompt user to enter a number

Save number to variable temp

Make sure number is not negative

If temp is larger than largest number

Then set largest number to temp

Counter add one

}

Print largest number

```
1 //Name: Charles Zhang 400131890
2
3 #include <stdio.h>
4 #include <stdlib.h>
5
6 int main(void) {
7     //create counter, number, and largest variables
8     int counter = 0, number, largest = 0;
9     //while loop runs until counter reaches 10 times
10    while (counter < 10){
11        //prompts user to enter number of units sold
12        printf("Enter number of units sold by sales person: ");
13        //stores input in number
14        scanf("%d", &number);
15        //checks to see if number is not negative
16        if (number > 0){
17            //if number is bigger than the largest number then largest number becomes number
18            if (number > largest)
19                largest = number;
20            //add one to counter
21            counter ++;
22        }
23        //if invalid input then prompts the user to try again. Program does not break
24        else{
25            printf("Negative numbers are invalid. Try again. \n");
26        }
27    }
28    //prints largest number
29    printf("The largest of numbers is: %d", largest);
30
31 }
```

<terminated> (exit value: 0) firstproject [C/C++ Application] /Users/charles/ecli

```
Enter number of units sold by sales person: 10
Enter number of units sold by sales person: 9
Enter number of units sold by sales person: 8
Enter number of units sold by sales person: 7
Enter number of units sold by sales person: 6
Enter number of units sold by sales person: 5
Enter number of units sold by sales person: 4
Enter number of units sold by sales person: 3
Enter number of units sold by sales person: -5
Negative numbers are invalid. Try again.
Enter number of units sold by sales person: 2
Enter number of units sold by sales person: 1
The largest of numbers is: 10
```

<terminated> (exit value: 0) firstproject [C/C++ Application] /Users/charles/ecli

```
Enter number of units sold by sales person: 5
Enter number of units sold by sales person: 2
Enter number of units sold by sales person: 4
Enter number of units sold by sales person: 7
Enter number of units sold by sales person: 1
Enter number of units sold by sales person: 100
Enter number of units sold by sales person: 3
Enter number of units sold by sales person: 102
Enter number of units sold by sales person: 3
Enter number of units sold by sales person: 27
The largest of numbers is: 102
```

### Question 3

Statement: What does the following program segment do?

Pseudo Code:

For when integer variable starts from 1 and less or equal to 5{

For when integer variable j starts from 1 and less than or equal to 3{

For when integer variable k starts from 1 and less than or equal to 4{

Print \*

Integer k plus 1

}

Puts ""

Integer j plus 1

```
}  
Puts ""  
Integer l plus 1  
}
```

Output: Assuming the code is written properly, meaning the l,j,and k are definied. The output will be

```
****  
****  
****  
  
****  
****  
****  
  
****  
****  
****  
  
****  
****  
****  
  
****  
****  
****
```

This is how the code and output should look it

WEEK 3.2.0

```
1 //Name: Charles Zhang 400131890
2
3 #include <stdio.h>
4 #include <stdlib.h>
5
6 int main(void) {
7     for( int i= 1; i<= 5; ++i ) {
8         for ( int j = 1; j <= 3; ++j ) {
9             for ( int k = 1; k <= 4; ++k ){
10                 printf( "%s", "*");
11             }
12             puts( "");
13         }
14         puts( "");
15     }
16 }
17
```

<terminated> (exit value: 0) firstproject [C/C++ Application] /Users/charles/eclipse-worksp

```
*****
*****
*****

*****
*****
*****

*****
*****
*****

*****
*****
*****

*****
*****
*****
```